



Global VOICE

NO TIME TO WASTE

The emotion pills we are all taking
Presenteeism: A bad business proposition
The Hikikomori Phenomenon – is IT to blame?
How can corporations become more sustainable?
Music Mastery – innately human or also artificial?
Greenflation: The Achilles heel of the green economy?
Sweeping with the Enemy: Coopetition as a strategy for a better world

An alliance with a purpose

THE COUNCIL ON BUSINESS & SOCIETY

Recognising the enormous role business can and must play in helping solve large-scale, global issues facing the world, eight business schools from around the world have formed a partnership: The Council on Business & Society. Through our individual and collective efforts, we strive to create and disseminate knowledge about those issues and train future business leaders capable of and committed to solving them.

THE SCHOOLS THAT MAKE UP THE COUNCIL ON BUSINESS & SOCIETY



- ESSEC Business School, France, Asia-Pacific and Africa
- FGV-EAESP, Brazil
- School of Management, Fudan University, China
- IE Business School, Spain
- Keio Business School, Japan
- Stellenbosch Business School, South Africa
- Trinity Business School, Trinity College Dublin, Ireland
- Warwick Business School, United Kingdom

The partner schools share a commitment to and belief in the power of academic excellence, collaboration, innovation, and transformative leadership. Each is a recognised leader in management education and offers a wide range of business-related degrees and executive programmes.

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THE DEANS OF THE COUNCIL'S MEMBER SCHOOLS



DEAN LUIZ ARTUR LEDUR BRITO,
FGV-EAESP, BRAZIL

"Being recognized worldwide as a think-tank, FGV-EAESP not only produces academic research in management and public policy, but also applies research via its close relation with the corporate world. Its participation in the Council on Business & Society enriches its global vision through the multiple perspectives generated by the Council's initiatives."

DEAN ANDREW BURKE,
TRINITY COLLEGE DUBLIN BUSINESS SCHOOL, IRELAND

"We are the business school at the heart of a world-renowned research-led university located at the centre of a European capital city and a hub for global business. Our approach to education encapsulates a project-based approach where impact on both business and society are key. We encourage our students to graduate with a 'moral compass' to take a step further in order to excel at ethical leadership beyond the realm of the organisation."



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"As a leading European business school at a world-class University, Warwick Business School is committed to developing ideas and people that shape how we do business. We believe in the power of education to create the leaders the world needs to tackle societies' great challenges, such as global warming, ageing populations and increasing inequality."

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"The School of Management, Fudan University joined the Council to communicate, exchange and collaborate with our global partners, absorb advanced management ideas and share China's unique experience. As a leading business school in China, we will make continuous efforts to drive the mutual development of global management education and the social economy."



DEAN LEE NEWMAN,
IE BUSINESS SCHOOL, SPAIN

"IE Business School's mission and purpose are based on the pillars of academic excellence, innovation and entrepreneurship, technology, social responsibility and internationalisation. At IE we firmly believe in the power of the entrepreneurial mindset to change the world for the better. We will keep encouraging students through the COBS initiatives to explore social innovation and entrepreneurial challenges with special emphasis on unconventional approaches to enduring social problems."

DEAN MARK SMITH,
STELLENBOSCH BUSINESS SCHOOL, SOUTH AFRICA

"At Stellenbosch Business School we pride ourselves on our commitment to responsible leadership through teaching, research and social impact. We are committed to making a difference throughout our local, national and international ecosystems and proud to be members of the Council on Business & Society."



DEAN AND PRESIDENT VINCENZO VINZI,
ESSEC BUSINESS SCHOOL, FRANCE, ASIA-PACIFIC, AFRICA.

"At ESSEC, we believe that training students and participants for responsible leadership is key for answering the challenges of a complex world. Together with the members of the Council on Business & Society, we strive to promote responsibility so as to impact today's economy and society, and shape tomorrow's world."

DEAN SAKASUME YU,
KEIO BUSINESS SCHOOL, JAPAN

"As the leading business school in Japan, it is our duty to investigate how business should maintain a balance with global societal issues. We desire to explain to the world what Japan has experienced through rapid growth by means of the Council on Business & Society."



/THE COBS WELCOMES A NEW DEAN



Stellenbosch Business School



MARK SMITH
Dean of Stellenbosch Business School

Stellenbosch Business School has always been a pioneer for management education on the African continent. It was the first school to gain the triple crown of international accreditations. It led the way in placing responsible leadership at the heart of its activities at an early stage. And now, it is advancing the notion of societal impact through its activities and the actions of its almost 30,000 alumni.

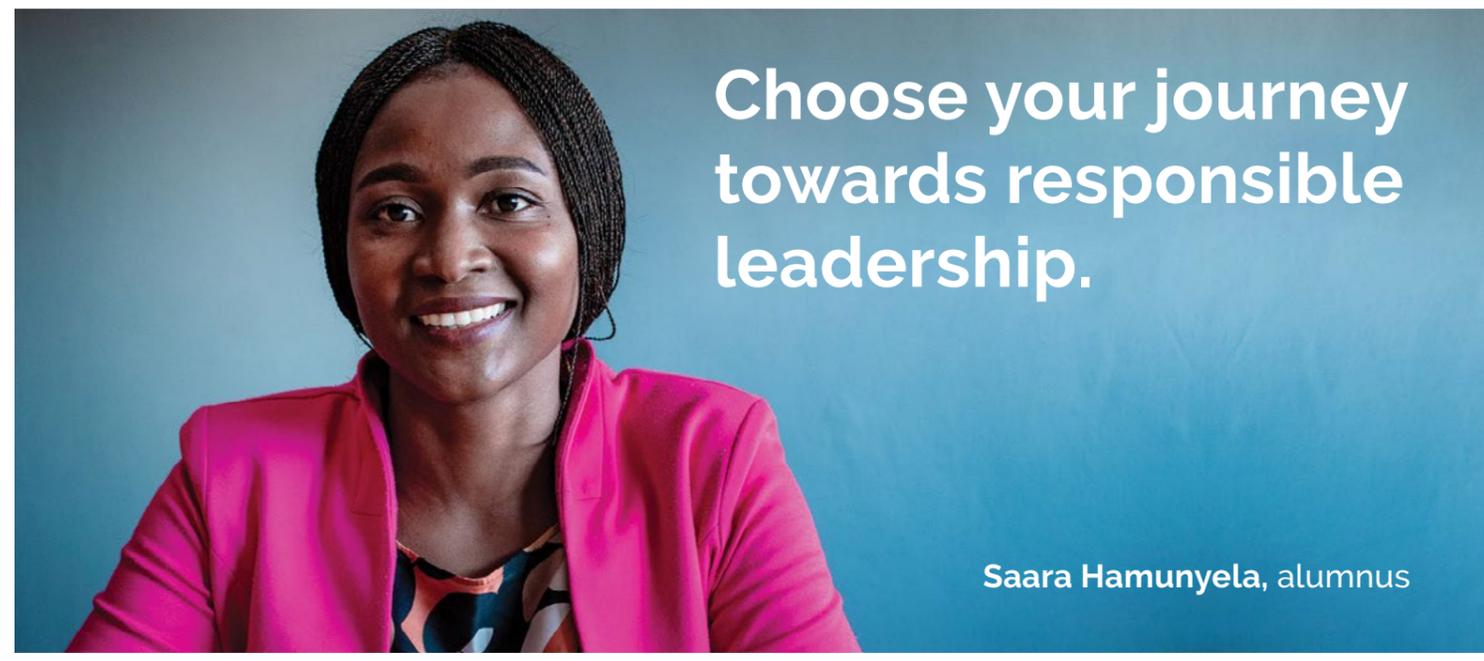
The school is located in the heart of the beautiful Western Cape of South Africa. It is a region characterized by extremes. There are extremes of beauty and inequality, extremes of wealthy winelands and poor informal settlements, and extremes of vibrant diversity and being on the forefront of climate change. All of this is set in the context of a young democracy and transforming nation. Against this background Stellenbosch Business School sees itself as a gateway to Africa for its international partnerships and a gateway to the world for its local and national partners.

It is in these ecosystems at the local, national, and international level that the School seeks to make a difference through its teaching and learning, research and societal impact work. Our unique combination of academic expertise combines future studies, ethical governance, development finance, coaching, entrepreneurship, equality & diversity, and conflict & collaboration.

All of these areas of expertise are imbued with our African heritage and a commitment to responsible leadership.

The priorities for business school in South Africa are aligned with those of other leading schools and, at the same time, somewhat distinct from those elsewhere in the world. We face the challenges and opportunities of a new and young democracy. We face the challenges of climate change and possibilities of developing climate resilience. We face the challenges of inequalities and the hope of working to promote inclusion, entrepreneurship, and responsible leadership

In joining the Council on Business & Society we feel that we have found an alliance of leading business schools from across the world committed to similar values, goals, and initiatives. We are very proud to be the new African partner. For us, this represents the great opportunity to work with like-minded schools committed to responsible leadership. We can learn from our shared experiences of business and management teaching and research spanning the globe. We also have important contributions to make in terms of sharing our own knowledge, research, and experiences from Africa. Indeed, Africa as a continent and African societies have much to teach the world in terms of humanity, resilience, and diversity. We are looking forward to the sharing the journey with the CoBS Alliance.



Choose your journey towards responsible leadership.

Saara Hamunyela, alumnus

The world is fraught with challenges and an abundance of potential to choose a more desirable future of all. Against a backdrop of climate change, inequality, and the struggle against gender-based violence, it is crucial that the business you choose challenges you to change the world. This is why Stellenbosch Business School is so strongly committed to delivering learning experiences that will help you to become a responsible leader.

Choose the future. Choose your Future. Choose Stellenbosch Business School.

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/EDITORIAL



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Business with a Wider Mission: Inclusive growth and the B4IG initiative

In the past, most people used to think that the solution for many of the world's problems was economic growth. The more, the better. Simplifying a bit, growth would equal to shared prosperity, anywhere, anytime. It seemed as obvious as the law of gravity. Thus, in poor countries, the consensus was that faster economic growth would almost automatically imply higher living standards for all the members of society. And in rich countries, it also seemed obvious that economic growth would improve the lives of all, including those who are relatively poorer.

While these expectations could have been proven right at some point, the fact nowadays is that economic growth, either in rich or developing countries, does not necessarily lead all people to be better off. Social unrest in many parts of the world is a testimony to the challenge of achieving both economic growth and a balanced distribution of income. The sad truth is that we can too frequently have a kind of economic growth that mostly benefits a small part of the population, leaving most of the rest behind.

An unprecedented international coalition

Facing this global challenge, the coalition Business for Inclusive Growth (B4IG) was launched during the G7 Biarritz summit (2019) by some of the largest global companies and the OECD, as well as several international organisations, foundations and trade union organisations to address inequalities of income and opportunity throughout the world. B4IG represents an unprecedented collective effort driven by the ambition to scale up business action on inequality, human rights in direct operations and in supply chains, diversity, equity and inclusion, the future of work, and the green transition, among others.

A central feature of the B4IG coalition is the willingness to share best practices, innovate, deploy pilot programs and explore adapted metrics to evaluate the concrete efforts. Otherwise said, the coalition intends to use the best available professional practices to track, monitor and improve its inclusive business actions. B4IG also intends to work in close partnership with policymakers and public officials to advocate for systemic change and inclusive business practices.

Science, education, business

As such, the ongoing partnership with the CoBS makes a lot of sense. The CoBS, as an international alliance of business schools working in Sustainability and CSR, is an obvious academic partner for such an initiative that is well aligned with its mission. The CoBS intends to contribute to B4IG in two ways. First, by the involvement of professors of its member schools in B4IG working groups. These working groups address many pressing issues, some of them much in line with the expertise of those professors. Second, by preparing research briefings, based on the latest research carried out in the CoBS member schools. These research briefings correspond to the B4IG pledge areas and reflect B4IG's willingness to put in practise the latest scientific expertise to advance inclusive growth.

Achieving growth, particularly in emerging countries, remains a necessity. At the same time, it is essential for this growth to be inclusive, thus benefitting all members of society and not only a happy few. Thus, the B4IG coalition intends to be a step in this promising direction. And the CoBS is honoured to be a part of it.



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**BUSINESS FOR INCLUSIVE GROWTH:
SCALING UP BUSINESS ACTION ON INEQUALITY**

**THE INCLUSIVE BUSINESS LANDSCAPE IS CONSTANTLY
EVOLVING AS MORE COMPANIES PAY CLOSER ATTENTION
TO THEIR IMPACT ON SOCIETY.**

Business For Inclusive Growth stays at the forefront of what is transpiring globally, communicating developments on methodologies, inclusive business practices, and B4IG's role in scaling up business action on inequality through their newsletter.

**A KNOWLEDGE-DEDICATED EMAGAZINE
WITH A TRULY
INTERNATIONAL PERSPECTIVE**

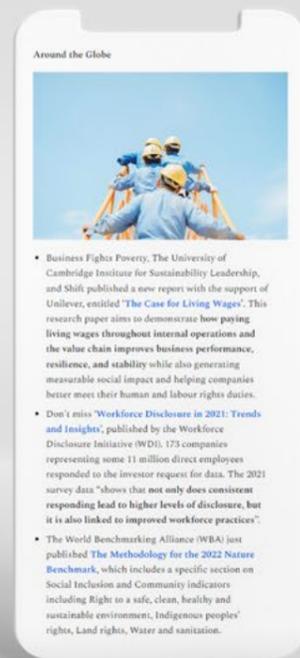
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258,000
ALUMNI

32,650
STUDENTS & PARTICIPANTS



TO STAY INFORMED OF B4IG'S ACTIONS AND NEWS RELEVANT TO INCLUSIVE BUSINESS PRACTICES, SIGN UP FOR THE B4IG NEWSLETTER HERE: B4IG.SUBSTACK.COM



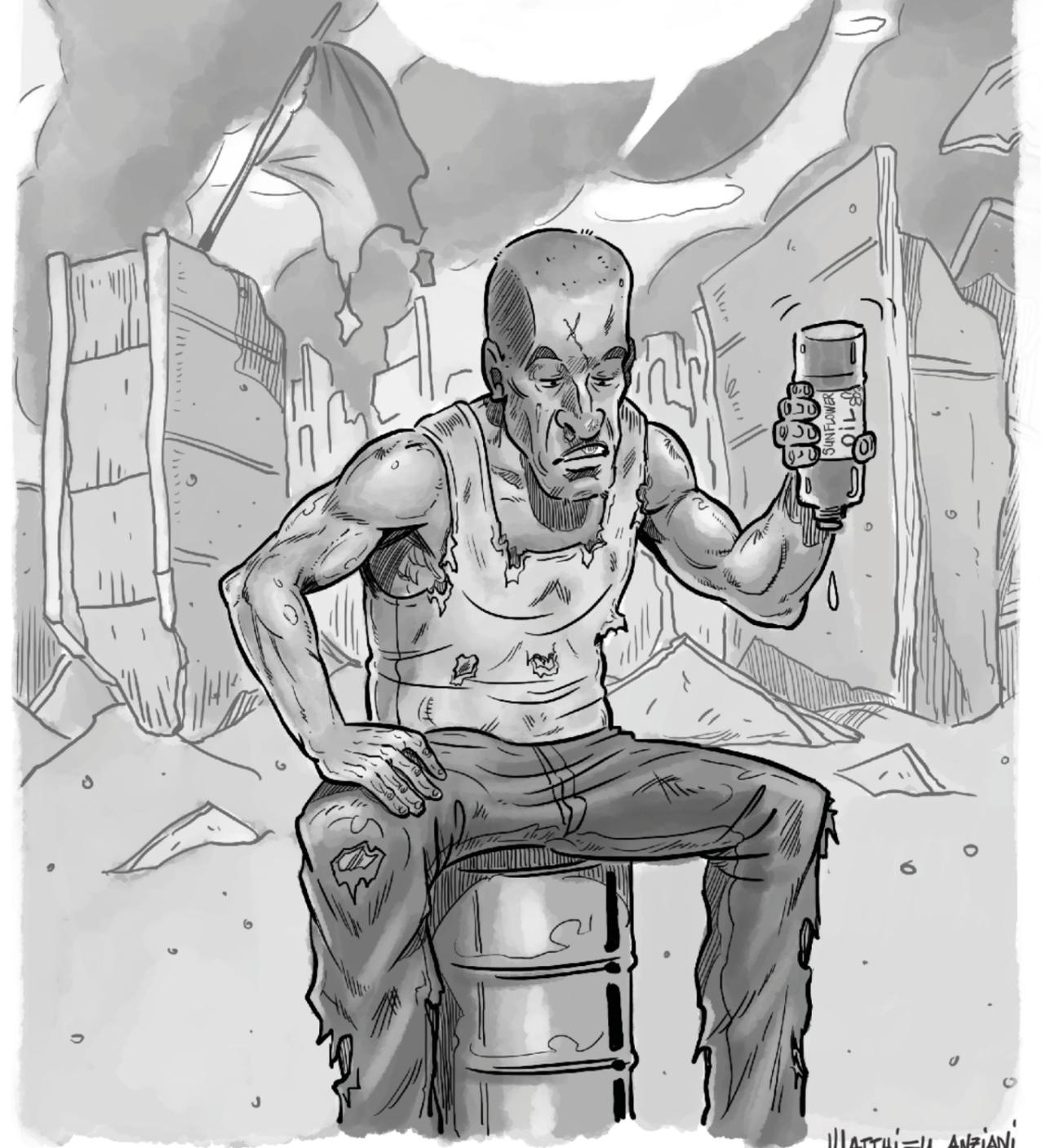
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TRUTH WILL RISE ABOVE
FALSEHOOD AS OIL ABOVE WATER.



2022

WE DON'T
HAVE ANY OIL.



||| ATTHIÈU ANZIANI

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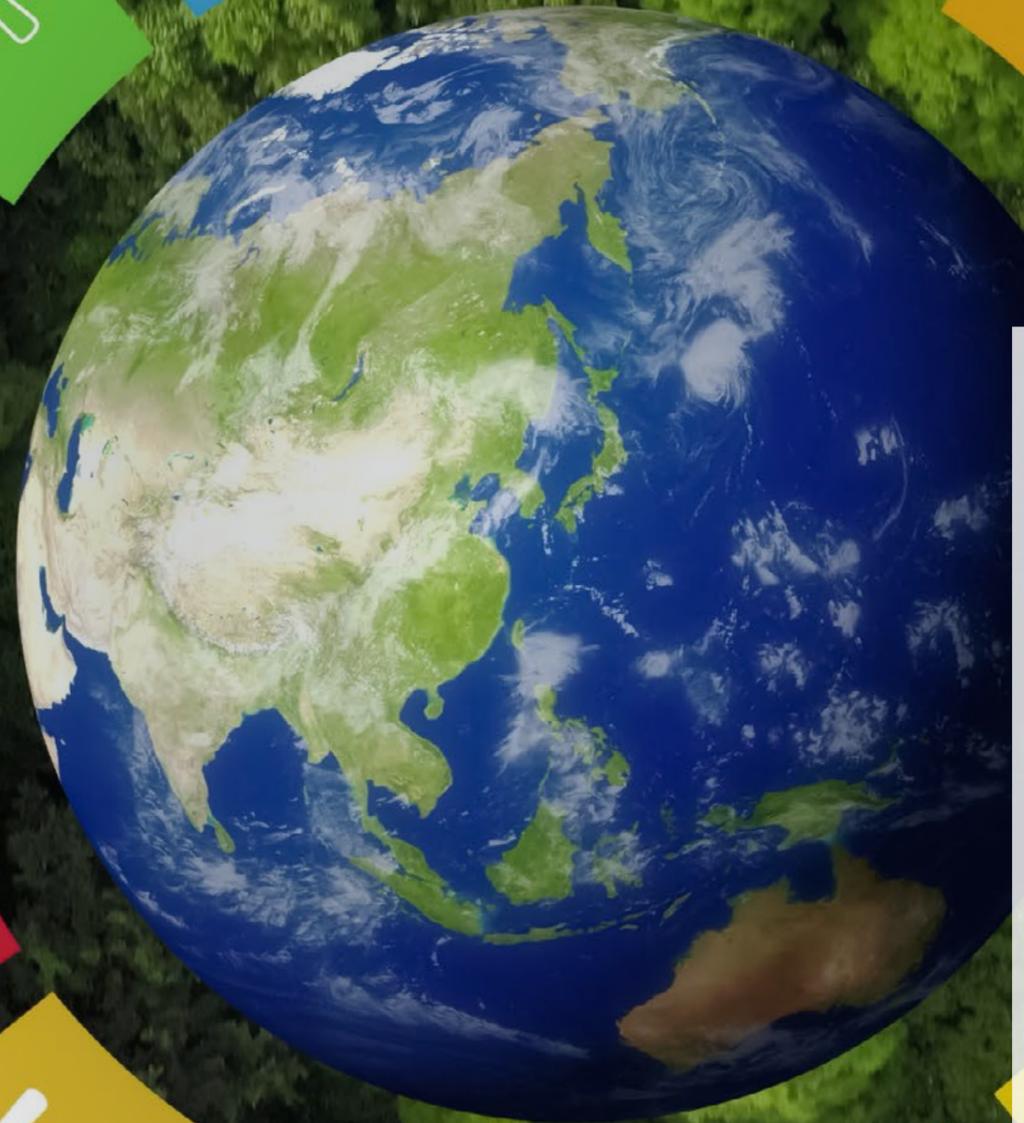
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THE HIKIKOMORI PHENOMENON – IS IT REALLY TO BLAME?



Jan Ondrus, Associate Professor of Information Systems and Associate Dean of Faculty at **ESSEC Asia-Pacific**, shares initial research into the Hikikomori phenomenon – the gradual withdrawal into the virtual world and behavioural extremes – and the influence of IT.

Related research: *Hikikomori and Technology-Enabled Escapism: An Affordances and Constraints Perspective*, by Ha Eun Park, Barney Tan, Felix Tan, Jan Ondrus, and Takahiro Kato delivered at the *Forty-First International Conference on Information Systems, India 2020*.

NOT-SO-SPLENDID ISOLATION

Experiencing lockdown during the worst days of the COVID-19 pandemic, many of us might, on at least one occasion, have faced a strange sense of splendid isolation – sometimes even utter loneliness as the mandatory month or two passed by. But imagine such isolation – self-imposed, this time – for stretches of at least 6 months at a time. And with the passing of days, weeks and months, gradually withdrawing into the confines of a single room. In touch through connected devices, yet with friends becoming first virtual meet ups, then one by one artificial in the form of identities and characters created in a video game. Science fiction? Not really. This is the world of the Hikikomori, a phenomenon of our modern, digitalised society that now afflicts more than an estimated 2 million people throughout the world.

“IT has the potential to bring vast numbers of people together in virtual socialization and also inhibits physical – some may say *real* – socialization.”



© YUJI KAWAKI

IS IT TO BLAME?

Originating in Japan, the term relates to an affliction – an extreme form of pathological withdrawal or social isolation – above all characterised by physical isolation in one's home. We might immediately imagine a teenager engrossed in an online game, but the phenomenon also touches the adult world. In 2019, a Japanese government survey revealed that over half a million recluses existed in the 15-35 age bracket. A further survey in 2015 showed that just over 600 thousand adults – aged between 40 and 64 – also fell into the category dubbed "adult Hikikomori" (Wikipedia). And the disorder is not only Japanese, but international – recognised as existing in most digitally connected countries in the world including the USA, China, South Korea and the countries of Europe.

Other addictions indeed exist – internet addiction or online gaming, for example – but Hikikomori is different in that on a diagnostic level it is the long-term isolation and recoil from socialization that significantly characterise it. Many have pointed to information technology being a root cause of this illness. But is that so?

For Prof. Jan Ondrus at ESSEC Business School Asia-Pacific and his fellow researchers, the question is more nuanced. On the one hand, IT has the potential to bring vast numbers of people together in virtual socialization. On the other, it also inhibits physical – some may say *real* – socialization. There is no doubt that digital technologies have influenced the appearance of the Hikikomori disorder, though Prof. Ondrus sees a chink in the argument. For him, whereas research has focused on the antecedents, consequences and treatment of the affliction, little has been done to explore how – or to what extent – the mechanisms of IT can cause someone to become a Hikikomori. After all, not all of us who have access to the internet necessarily do.

WHAT WE KNOW ABOUT HIKIKOMORI

Previous studies have shown that Hikikomoris tend to use the internet extensively and it has been recognised as one of the key catalysts for its development. School truancy is one consequence, not holding down a job another. Sufferers are a solitary lot, rarely having groups of friends and subject to loneliness – spending upwards of 12 hours a day on the computer – as well as a lack of ability to express their emotions which may end up in extremes of physical violence towards family members.

Therapy has focused around family support groups, counselling either over the phone or face-to-face, and art therapy. It is interesting to note that the Pokémon GO mobile app game has even been tried as a means to help those afflicted to socialize, though trials proved disappointing – users ending up staring into their own screens despite being physically in the same room. And although face-to-face therapy coupled with home visits seems to be a preference, there is no consensus among medical experts on which treatments are most effective.

EXPLORING THE IMPACT OF IT

Profs. Ondrus, Kato, Barney Tan, Felix Tan and researcher Ha Eun Park bring our attention to research factors they call *IT affordances and IT constraints*. Basically, IT offers an environment and tools that enable users with positive opportunities – IT affordances. On the flip side of the coin, IT creates limitations that prevents a user from doing things – IT constraints. As such, the researchers argue that we cannot simply claim IT to be a root cause of the Hikikomori syndrome *per se*, but study the influence of IT through the lens of opportunities and constraints as it triggers both *intended and positive*, and *unintended and negative* outcomes for users.

In a nutshell, using IT and digital devices can be positive for some, and negative for others.

Prof. Ondrus and his colleagues tie in this approach with evidence gleaned from data and tailored questionnaires from the Yokoyoka Hikikomori Support Center based in Fukuoka, Japan, one of the most successful centres for treating the disorder.

IT designers and developers enable users to connect to each other, interact and obtain online visibility. Often, the applications and games launched on the market also offer varying degrees of involvement and interaction – from fully-fledged proactive engagement through posting comments, discussion themes, catchy videos or taking on a virtual alter-ego, to being a passive onlooker, fan or follower and in some cases lurker. One argument frequently advanced in the face of criticism – or perhaps even as a safety measure against abuse – is that IT often provides the user with a choice: either that of being visible or remaining invisible online.

But by offering the world a space for people to meet online, the double-edge sword of IT also – through the unintended constraints it induces – leads to encouraging an absence of physical relationships. Indeed, virtual socializing makes it more difficult to see and feel non-verbal messages such as gestures, voice tone, eye contact and emotion, let alone smell them – for example, the emotions generated through perfume, good cooking, the presence of flowers or even odour signals transmitted through the body such as fear, attraction, or warmth and openness. As a result, trust is more difficult to foster and with it long-term relations. Loneliness and, eventually, social withdrawal might also occur as result. All in all, in an increasingly complex and faster world, coupled with the fear of physical contact caused by COVID-19 pandemic and other diseases, such a temptation to turn to easier, more convenient and "more hygienic" means of establishing relationships is very real.

IT AND THE THREE STAGES OF HIKIKOMORI DEVELOPMENT

While Prof. Ondrus and his fellow researchers are still carrying out ongoing research, their initial findings point towards IT influencing Hikikomori development through presenting a series of "IT Escapes" as the disorder progresses. These escapes are relational, emotional, and spiritual, with each escape becoming more influential at a different stage in development of the disorder, be it *Pre-Hikikomori*, *Nascent Hikikomori* or final-stage *Pathological Hikikomori*.

These unintended IT escapes can be taken through the influence of a number of factors which the researchers call Hikikomori Drivers – which then ultimately lead to negative physical and social outcomes.

These include withdrawal into isolation, with those suffering from Hikikomori also showing other forms of behaviour outside of the social norm – barricading themselves in their rooms, cutting contact with friends, parents and family members, failing to turn up to school or work and disinterest in holding down a job.

Drivers – or the latent, pre-conditioning influences that may lead a person to enter the Hikikomori cycle – can simply be a matter of having access to the Internet. A traumatic childhood experience constitutes another – be it rejection or bullying at school. A third driver can be disrupted family dynamics stemming from parents divorcing or separating – or even an overdependence on one’s parents. And finally, the cultural environment too plays a part, countries or social groups characterised by conformity and collectivism seeming to have a higher tendency to trigger the disorder. In short, the availability of IT coupled with negative family, school, working environments and stressful life events open up a road that leads to Hikikomori. Moreover, the influence of these drivers are significant throughout the three stages of the disorder.

The Pre-Hikikomori stage, for example, sees people engaging in social media networks or virtual worlds that, gradually gains importance to begin to replace face-to-face contact. In the Nascent stage, people become increasingly more comfortable with conversing and expressing their emotions in the virtual space and begin to withdraw – the virtual relationships becoming more intimate than their physical relationships.

As such, despite the intention of IT to bring people together to socialize, it actually exacerbates the progression of loneliness and withdrawal. As stage 3 kicks in – Pathological Hikikomori – extreme and problematic behaviours begin to occur along with complete immersion and preference in the virtual over the physical world. Online gaming and virtual reality simulators are the main means of escape, with Hikikomoris even ending up marrying a “virtual waifu/husband” – a virtual animated wife or husband).



THE REALITY OF THE UNREAL

IT does influence the emergence of mental frailty and disruption – as manifested in its most extreme form in the Hikikomori. Moreover, as humans, we tend to see IT devices and technologies as somehow set solid and unchangeable once launched. But this research and its findings hint that such IT creations, in a sort of nightmare sci-fi scenario, do in many ways take on a life of their own.

One could argue that machines and technology – much like philosophies and dogmas in the real world – are in themselves not necessarily harmful, the harm coming when they are used and interpreted by humans for other ends. But this too, may reinforce the argument that innovators and creators would be wise to blend into their designs an essential reflection on the possible and unintended uses their non-human offspring might spawn. ///

KEYS TAKEAWAYS

- Hikikomori, a phenomenon of our modern, digitalised society, now afflicts more than an estimated 2 million people throughout the world.
- It is an affliction – an extreme form of pathological withdrawal or social isolation – characterised by physical isolation in one’s home and extremes of behaviour.
- Many have pointed to information technology being a root cause of this illness.
- IT has the potential to bring vast numbers of people together in virtual socialization and also inhibits physical – some may say *real* – socialization.
- IT through the lens of opportunities and constraints as it triggers both *intended and positive*, and *unintended and negative* outcomes for users.
- Therapy has focused around family support groups, counselling either over the phone or face-to-face, and art therapy.
- IT influences Hikikomori development through presenting a series of “IT Escapes” as the disorder progresses.
- These escapes are relational, emotional, and spiritual, each escape becoming more influential at a different stage in development of the disorder: *Pre-Hikikomori, Nascent Hikikomori or final-stage Pathological Hikikomori*.
- IT innovators and creators would be wise to blend into their designs an essential reflection on the possible and unintended uses their software generates.

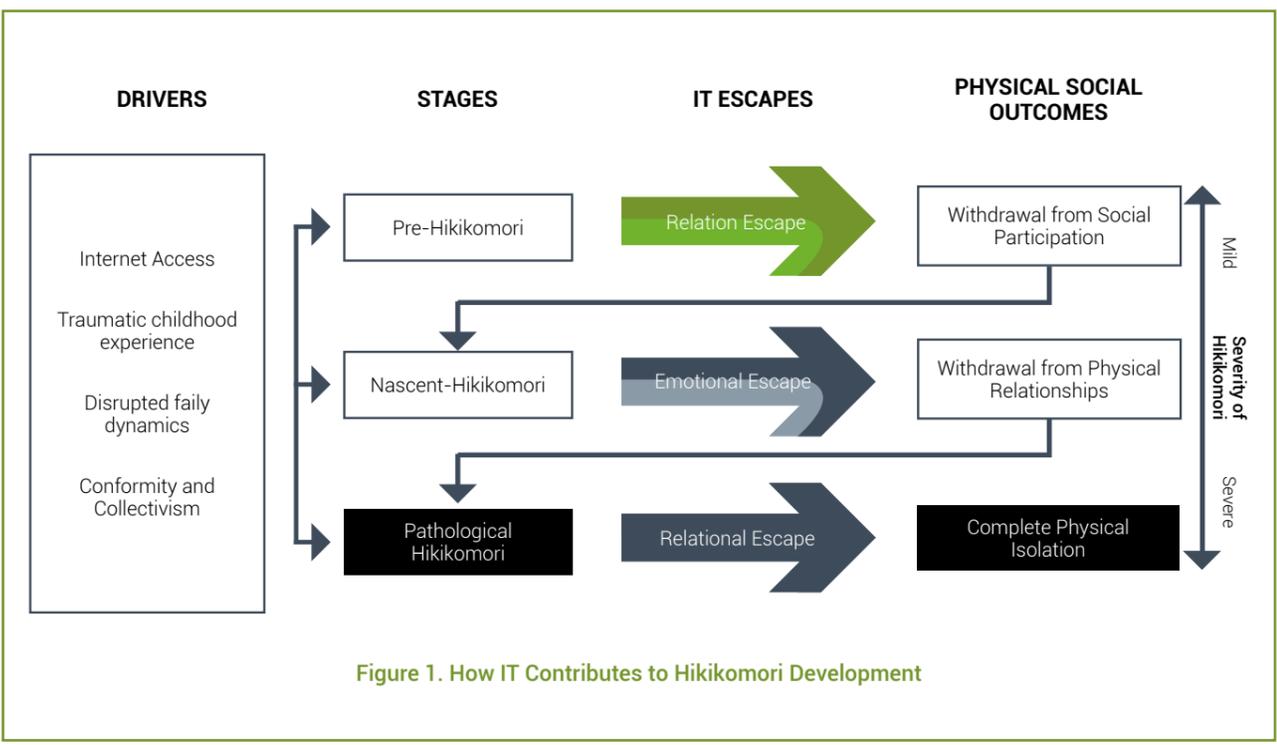
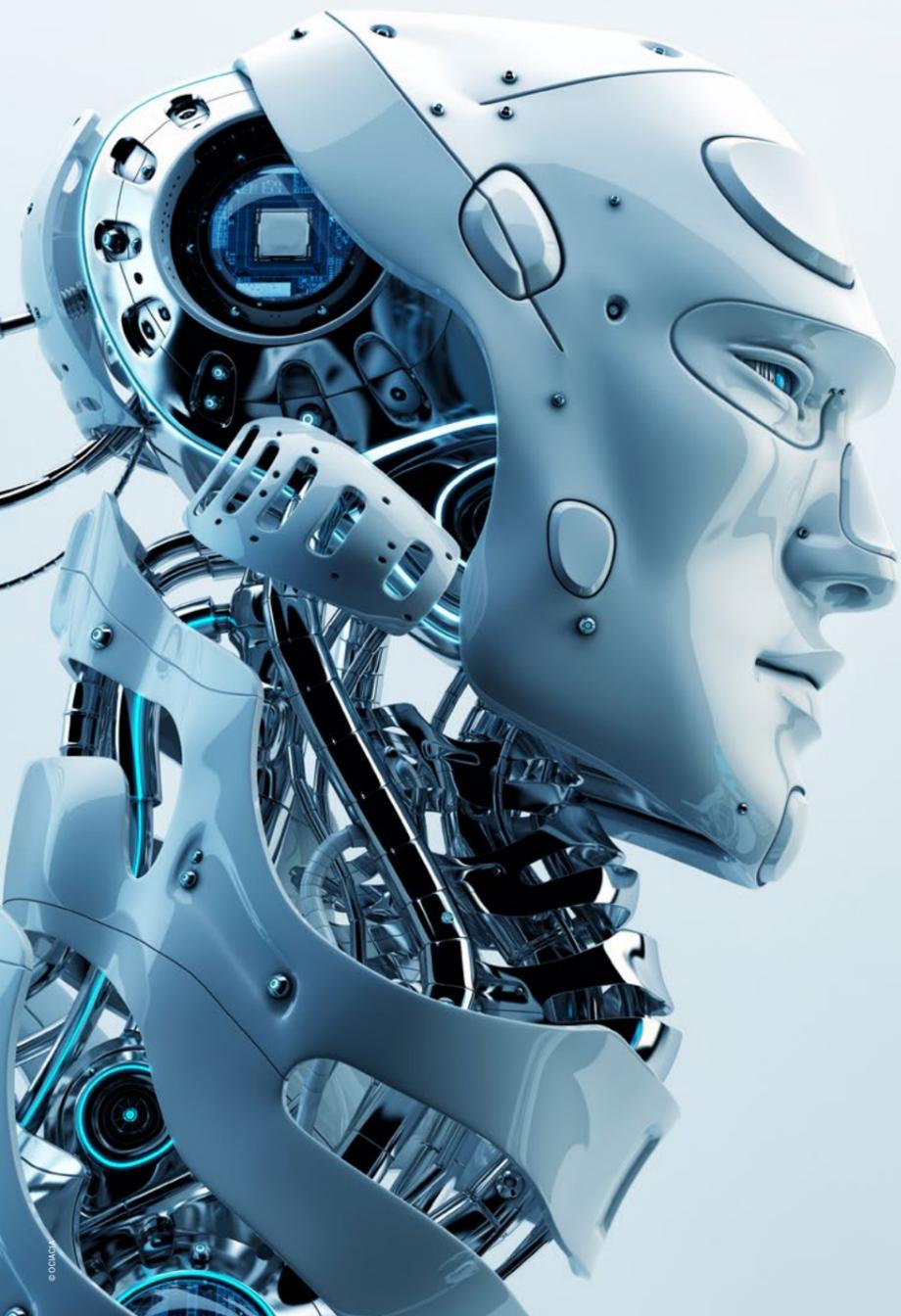


Figure 1. How IT Contributes to Hikikomori Development

AI AND ETHICS: HOW TO BREAK OUT OF THE MATRIX



Nicolas Julien, MiM-ENSAE

student, **ESSEC Business School** Runner-up in the

2022 student CSR article competition, explores the fears and preconceptions of AI and calls for stakeholder cooperation to tackle the possible risks that AI may bring.

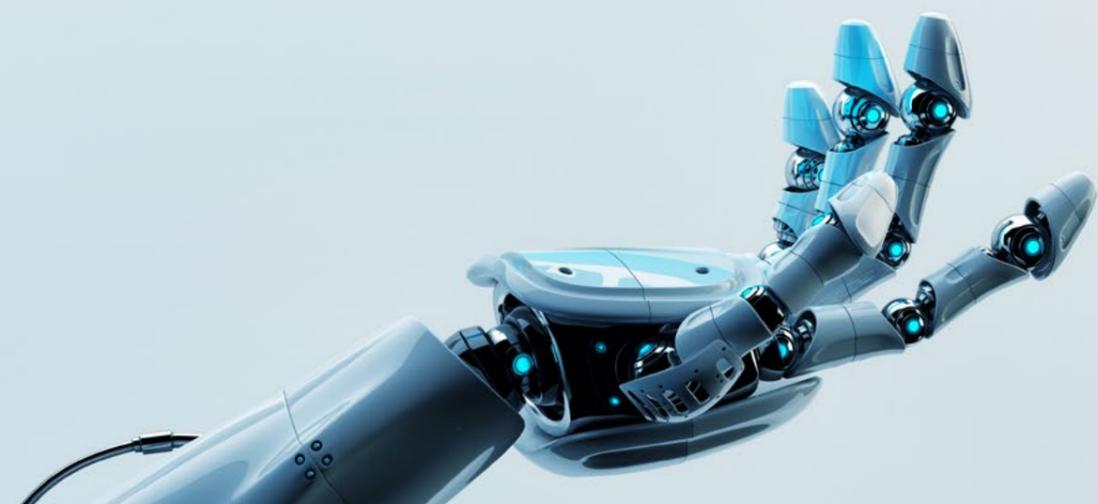


AI is ultimately a very opaque tool that few people understand.

Are you afraid of Artificial Intelligence? You are likely to be sceptical and concerned about the significant advances of this mysterious and unfamiliar technology, suspicions that are warranted. But what exactly do we have to fear? Usually, we are afraid it will transform in an uncontrollable force, cause mass unemployment, or fall into the wrong hands. In 1968, Stanley Kubrick already showed the dangers of artificial intelligence with the character HAL 9000 in 2001: A Space Odyssey. Since then, questions and concerns about this technology have continued to grow with its large-scale deployment. But what are the real ins and outs of artificial intelligence today? What is the potential negative social impact of AI, and what are the possible solutions accordingly?

AI IS EVERYWHERE

What if AI is already governing us? Indeed, it is likely that you strongly underestimate how pervasive algorithms are in your life and society. For example, how often have you interacted with an AI today? Don't forget all the Google searches, articles or videos from social network newsfeed suggestions, your route recommended by a travel app, the price of your Uber ride, etc. We interact with AIs daily without even realizing it. More importantly, we must consider the bigger picture as banks, financial markets, medical research, the automobile





industry, and corporate marketing departments are all spheres where AI sits in on a large scale as one of their main working tools.

In short, as Dr. Fei-Fei Li, Co-Director of the Stanford Institute for Human-Centered Artificial Intelligence, says, "AI is everywhere. It's not this huge, scary thing in the future. AI is here with us". The democratisation of such a powerful tool then inevitably brings about negative social impacts that are already observable today.

AI: A THREAT TO HUMANITY?

To understand the genuine negative social impacts of AI, one must first take a step back from the fantasies of an AI that turns against humans. AI is merely a set of statistical tools and matrix calculations, very powerful, but which can't compare to the calculation capacity and complexity of the human brain. Today we are only at the stage of "weak" AI, specialised in solving a single specific task, which requires data scientist's supervision. Consciousness, self-awareness and freewill in machines are all far beyond the capabilities of science today. Therefore, ideas that AI will turn directly against its creators like Frankenstein's monster will remain science-fiction for a long time to come.

AI: A THREAT TO OUR JOBS?

Another irrational fear is that machines will replace employees, leading to mass unemployment. Three-quarters of US adults believe AI will "eliminate more jobs than it creates", according to a Gallup poll. However, in reality, AI will probably create more jobs than it destroys. Interestingly enough, the same Gallup poll revealed that fewer than a

quarter of people worried that automation would affect them personally, which illustrates how irrational we are when estimating the impact of AI. In terms of numbers, the consulting firm PwC evaluates that in the UK, 7.2 million jobs will be created for 7 million destroyed. Like any technological transition, AI will inevitably lead to a profound transformation of the labour market which is more of a challenge to overcome than a real negative social impact.

AI: A WEAPON OF MASS NUISANCE?

In reality, the main social dangers of AI seem to come from its use by humans. As with any powerful tool, artificial intelligence can be used for the wrong purposes and thus have a negative impact. Perhaps the most telling example is that of China, whose embrace of AI enables it to assert its totalitarian vision and objective of mass surveillance. The widespread monitoring of the population is made possible by visual detection algorithms. No wonder Premier Li Keqiang stated that "the development of AI is a priority for the Chinese state".

At the individual level, there is also no shortage of misuse. Imagine waking up one morning and discovering a video of yourself praising racism circulating on the net. Although you never shot the video or uttered such words, it looks very realistic because it was generated by an AI. Dystopian, isn't it? Such an application actually already exists, under the name FakeApp. More generally, deepFake, which consists of simulating false, ultra-realistic videos, can be extremely dangerous as it acts as an engine for inappropriate purposes like spreading misinformation, promoting an ideology or committing cyber-harassment.

THE REAL PROBLEM ORIGINATES IN THE WEAKNESSES AND FLAWS OF AI

Beyond misuse by humans, AI itself has flaws and vulnerabilities, which, if left unchecked, can generate significant social risks. AI always works with a database from which it can learn. The main problem with this is that an AI is very sensitive to the data it is fed. When the data is biased, the AI will reproduce the bias. It is very common for an AI to over-generalise a database, which means that it relies too much on the patterns observed in the database provided to it. This problem is called "overfitting" and is closely monitored by data scientists to ensure that each algorithm is correctly generalizable, which is called "robustness". This explains why data is considered the "Achilles' heel of AI".

AI REPRODUCES HUMAN ERRORS

The most telling examples are the cases of racist AI and discriminatory algorithms. For example, in 2016, ProPublica researchers showed that an algorithm assessing the recidivism risk of criminals in the United States obtained different results for people of different skin colours with exactly the same profiles. The problem is that the AI performs better with this built-in racism, because social-economic parameters such as poverty, which mainly affects black people, can lead to more recidivism. An AI has no ethics; it only strives for performance, without differentiating between causality and correlation. Therefore, a human decision based on AI recommendations, such as a judge's sentence, could then result in detrimental discrimination. Today, many firms use such algorithms to make decisions: for example, Amazon was strongly criticised in 2018 because its recruitment algorithm suffered from gender bias. Another example is Microsoft's artificial intelligence, 'Tay',

which self-taught itself to speak from Twitter data, and made racist comments in less than 24 hours. Thus, AIs present the significant risk of amplifying social divides and generating discrimination. The AI era is pushing us more than ever to rethink our human values and ethics, as we cannot outsource our responsibilities to machines.

FRIEDMAN'S SHAREHOLDERS 2.0

Nowadays, the major AI players, such as GAFAs, do not consider the social impact that the use of their algorithms can have. Facebook, for example, deliberately offers content that is both pleasing and shocking to users, even if it is actually misinformation leading to a large-scale propagation of fake news. The GAFAs seek to maximise their performance, user retention and engagement, by any means. Moreover, the algorithms lead to "filter bubbles" in that they isolate you from information and perspectives you haven't already expressed an interest in, which in turn threaten critical thinking. In 2018, Google also exemplified its disregard for negative social impacts when it fired its two directors of its ethics and AI team, Timnit Gebru and Margaret Mitchell, the two directors of its ethics and AI team, within two months. Google, the company that designs the most sophisticated AI and controls the most information flows, has literally dismantled its own ethics.

All this shows that the AI giants can be considered as shareholders 2.0, in the way Friedman conventionally considers shareholders, in that they are only seeking for profitability and monetary gain at the expense of a healthy fabric of society.

STAKEHOLDERS TO THE RESCUE

The challenge now is to identify what solutions exist that can limit the negative impacts of AI and the Shareholder 2.0 mentality driving it. We need to change gears and transfer to a stakeholder system, wherein each actor has the capacity to act responsibly.

First of all, the academic sphere is mindful of the conflicting forces between ethics and IA and put in place numerous initiatives. These involve taking a step back, such as with the Ethics and Society Review at Stanford University whose system requires AI researchers seeking funding to assess their work for any potential negative impact on society before being green-lighted for funding. Researchers are also turning to pinpointed research on how to better secure data in the face of ethical dilemmas, as is the case with the WeBuildAI initiative, a collective and participatory framework that enables people to build algorithmic policy. By compiling the views of different stakeholders on ethical dilemmas, researchers construct a computational model that enables an AI to make recommendations that are both efficient and ethical. A similar project exists to create an algorithm that recommends videos by assessing their ethical and social impact, called Tournesol. You can participate right now, by rating YouTube videos on how recommendable, actionable, educational, or entertaining you think they are.

Secondly, projects like WeBuildAI or Tournseol therefore also require individual commitment: we can all help limit the negative social impact of algorithms. More generally, it is important that we use AI-related tools responsibly. This requires an effort to think critically, to get out of our "filter bubble", and step out of our matrix. We thus become better informed while we in turn teach the algorithms that the content they send our way is not always the content we want.

Additionally, firms and their employees must also learn to assess the negative social impact of their algorithms, and stop focussing only on profitability and performance factors. They must consider ethics in their processes and become accountable through transparency. We are witnessing a trend towards uniting a common will among tech giants to address these issues, for example with the creation of the Partnership on AI coalition by Amazon, Apple, Facebook, Google, IBM, and Microsoft, which focuses on the development of benchmarks and best practices for AI. This is a good starting point, but we still have a long way to go.

Finally, it is essential that the governments require more regulation of GAFA. The European Union is taking the lead, notably with the creation of the RGPD, a regulation aimed at controlling the use of data in general, or with the publication of a White Paper by the European Commission's, which proposes a framework for managing these new tools in a responsible manner. States must therefore remain at the forefront of AI issues while consulting specialised experts, so that they can play an active role in regulating and monitoring the use of AI.

THE IMPORTANCE OF EDUCATION

The engagement of all stakeholders will only be possible with an awareness of the issues at stake in AI. By persisting as a source for fantasies and preconceptions, AI is ultimately a very opaque tool that few people understand. The use of deliberately vague lexicon such as "neural network" or "deep learning" leads to a misunderstanding of how to approach AI and understand its dangers.

An employer like Amazon refusing to employ someone because they are black would immediately fall into illegality and cause a scandal. However, this does not apply to AI, as it is still very much misunderstood today. Thus, NGOs are emerging such as the AI Impact Alliance, which organises workshops and conferences on AI strategies and solutions in order to increase AI's impact on social welfare and raise public awareness on the conflicts between ethics and AI.

In conclusion, there is a genuine effort to educate and raise awareness on the issues posed by AI that we all need to embrace. And the good news is that by reading this article, you have already taken a step in the right direction. ///



KEYS TAKEAWAYS

- Although conscious AI directly harming humans remains science-fiction, it is possible for some to use this tool for the wrong purposes.
- Flaws come directly from the AI's operation itself such as being too sensitive to data, which can lead to a serious impact on society with a perpetuation of discriminations.
- Tech firms today do not consider enough the negative social impact they often wreak by using AI, and are only focused on performance indicators.
- It is possible for all stakeholders to start acting more responsibly at their level in their approach to AI.
- Many stakeholders are unaware of their power and the real dangers of AI. Education and awareness raising of all stakeholders on this subject is crucial. We need to understand the matrix in order to get out of it.



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THE ELEPHANT IN THE UNITED NATIONS' ROOM



André Shimzu, FGV-EAESP

Winner of the 2022 student CSR article competition, tackles the climate crisis from a fresh angle – that of political populism and how it prevents united climate action.

As for climate changes, scholars already have a consensus about what needs to be done: reduce greenhouse gasses emissions until worldwide energy generation becomes net zero-carbon. This objective needs to be reached before it becomes too late, and it is only possible with wide cooperation of a diverse set of stakeholders – namely governments, companies, political parties, non-governmental and international organizations. However, an elephant in the room that no one wants to talk about sits right in the United Nations building, in the very discussion room where national leaders discuss dealing with global warming. The elephant of the global alt-right rise blocking the real capacity of the efforts to revert climate changes.

It happens because there is little effectiveness of the actions to solve this problem without the participation of the two largest American countries: The United States of America and Brazil. Both have essential roles in global environmental protection. First, they are among the most polluting countries in the world being respectively in the 2nd and 12th positions (GLOBAL ATLAS CARBON, 2022). Second, the USA has an immense potential to develop sustainable technology and help other countries with investments in their environmental areas. Third, Brazil has one of the largest green areas in the world, Cerrado and Amazonia, which must be protected to avoid climate change.

“
An important detail is that the elephant cannot be defeated directly.
”

Why is there an elephant in the UN room, if they are so important for this discussion? Because both are on the main stage of a political phenomenon that attacks democratic principles, the scientific community, and the logic of international cooperation: the alt-right denialist populism represented by Jair Bolsonaro in Brazil and Donald Trump in the USA. More than just denying the necessity of reaching Net-zero carbon emissions, these movements attack all the bases that sustain the efforts against climate change.

A RECENT PAST

Climate change is a serious and urgent problem that is no longer debated in the scientific environment, only in politics (FANCELLI, 2021). These two presidents have been discrediting science to gain arguments on political discussion among their follower base. The way in which those two led their countries during the Covid-19 pandemic shows the deadly consequences that alt-right denialism presents and why this problem needs to be resolved – else, there will be no effective progress on environmental causes. Trump stated in February 2020, without evidence, that the virus would be weakened by the change of seasons because the heat should cause negative effects on the virus. He also lied by announcing several times that the pandemic was under control, defending that the USA was the country with the lowest daily death rate in the world (PAZ, 2020), where actually it was the country with the most Covid-19 deaths in the world.

In Brazil, Bolsonaro made many similar statements. Even further, he encouraged his supporters to invade hospitals to check if the media was not lying about Covid hospitalizations; often defended the use of medicines such as Hydroxychloroquine in medical protocols to treat Covid-19, even when researchers indicated that these were not effective; and did not reply to 53 e-mails from Pfizer about

purchasing vaccines. Further, he stated that: "As for Pfizer, it is clear in the contract: 'we are not responsible for any collateral effect'. So, if you become a Crocodile this is your problem. If a woman grows a beard or if a man starts to speak with high tones, Pfizer has nothing to do with it". (AOS FATOS, 2022).

The two presidents demonstrated arguments and actions in common: discrediting science; repeating that their government was doing well while avoiding the critics; blaming the media; spreading lies and distortions about facts through their social networks. But they did not start to act this way with the pandemic – they were already ruling their countries with denialism. What the pandemic did was just to show that these leaders would defend their ideologies even if they cost hundreds of thousands of lives: it is happening with Covid-19 and has not been different with climate changes.

Condemning actions like these should be something common in any functional justice system. However, when such actions come from heads of state of two influential countries, condemning these actions becomes difficult. Moreover, they have the legitimacy of votes and expressive popular movements to support them, while their belligerent way to govern makes any negotiation or cooperation for the environmental cause unfeasible.

It is true that Donald Trump lost the elections in 2021. Also, Jair Bolsonaro will probably lose the presidential elections in 2022 according to recent electoral research in Brazil. Although, do these facts mean the end of the alt-right, which is not just an American phenomenon? Sadly, solving the horror of this recent past is more complex than just winning an electoral process.



CAN ELECTIONS STOP THE ALT-RIGHT PHENOMENON?

They cannot. That is the answer of Michele Prado, a Brazilian writer who researched different alt-right groups. In her book "*Tempestade Ideológica*" (Ideological Storm), she states that this movement is bigger, older, and independent of its leaders. In the Brazilian case, the author highlights that the bases of what would become Bolsonaroism have been widespread since 2004 by Olavo de Carvalho, a self-styled philosopher who deeply influenced the president and his followers. Moreover, Prado said that it is Bolsonaroism that needs those groups and not the other way around (PRADO, 2021).

In 2020, the message of the United States elections was that Trump lost, but Trumpism did not (TACKETT, 2020). Research revealed that 56% of the politicians elected by the republican party believe mostly or partially in QAnon theory, which believes in the existence of a wide organization composed of artists and politicians from the Democratic party that worships Satan and develops a scheme of child trafficking and paedophilia in the world (RUSSONELLO, 2020). Besides the population, at least two dozen Republican candidates who believe in the conspiracy ran for congress seats in 2020. Two of them won (BERGENGRUEN, 2021).

Even away from their presidential posts, their influence remains in politics and among the population. And, the environmental cause requires efforts from the whole population in daily decisions like consuming habits and recycling. These changes are difficult to make even among non-denialists as soon as they demand to give up habits that always existed in their lives. However, in the case of people blinded by denialist ideologies, which is an expressive and organized part of the population as Trump's election had shown, this challenge becomes even harder.

WHAT CAN BE DONE?

The German government established a partnership with the USA to combat radicalism and, consequently, the alt-right development in their countries. The subject is so important that this program received an investment of one billion euros to strengthen research and initiatives toward democracy. They select subjects such as racism, gender inequality, extremism, democracy prevention, and others to develop research to understand and deal with the alt-right.

One of the main objectives of this program is to help these countries to develop an education towards radicalism prevention as those movements are recruiting and radicalizing teenagers using social networks. In this way, education is a fundamental aspect to develop a civic-mindedness that knows how to deal with social networks, fake news, scientific facts, tolerance of differences, and the seriousness of climate change.

Another important element is to demobilize this movement through the improvement of the relationship between entrepreneurs and anti-democratic politics. The American elections in 2020 were the most expensive in history, costing approximately 14.4 billion dollars (HILLSTROM, 2021). It is improbable to reach this quantity of resources just with spontaneous acts from citizens. These numbers are just a symptom of the lobby influence from main donors, usually businessmen, in political decisions. Regularizing lobbies is necessary to end this kind of relationship that makes it possible to benefit companies who support politicians that are going to destroy the bases of democracy and the efforts for the environmental cause. Even being a hard decision, this funds needs to be prohibited or at least hampered because they are being used to conduct the world to a global collapse.



DEALING WITH THE ELEPHANT

The elephant in the UN room seems invincible by its sovereign right and democratic legitimacy. It came to stay and there is no way to easily take it out of the room. The best thing to do is to research and learn how to deal with it: limit its movement; define strategies for media and the population to deal with offenses and threats; pressure the financial sectors that profit from these politicians; establish laws and protocols to identify and punish efficiently cases of denialism that can put the population in dangerous situations. Step by step, this elephant is going to lose its strength until it becomes possible to execute the plans of net-zero carbon.

An important detail is that the elephant cannot be defeated directly. The best way to combat it is by engaging people in their daily lives; educating them about their usage of social networks; preventing radicalism in schools; teaching them to identify and deal with conspiracy theories when someone from their circle starts to believe in them. It is in the private spaces where radicalism can be weakened because the elephant is strengthened when discussed under spotlights, regardless of the arguments.

In other words, our society needs to achieve a different level of maturity, which will need efforts from all sectors of society. It is similar to the environmental cause. In other words, solving the problem of alt-right rise and climate changes requires similar, synergic, efforts, even being different subjects. Both are difficult, urgent issues, without clear answers. On the upside, however, it is possible to deal with both simultaneously.

The elephant should not be understood as a wholly different problem from climate change, it is just a different part of the same problem which is not receiving the necessary attention. Dealing with the elephant is not another problem to solve beyond the environmental cause, but actually, a more efficient and holistic way to understand and solve it. ///

KEYS TAKEAWAYS

- The alt-right rise in the global political scenario acts like an elephant blocking international efforts to revert climate changes.
- What happened in Brazil and in the USA in recent years shows how dangerous denialism can be by discrediting science and spreading conspiracies and lies among the population.
- This elephant and the greenhouse gasses emissions can only be resolved through a wide cooperation of several stakeholders such as governments, political parties, entrepreneurs, and civil society. As they need similar efforts, the solution for both of them pass through similar paths.
- The best way to deal with these problems is to research about it and develop in society a civic-mindedness that knows how to deal with social networks, fake news, scientific facts, and the seriousness of climate change. This mindset needs to be developed in the population but also in all society' sectors.



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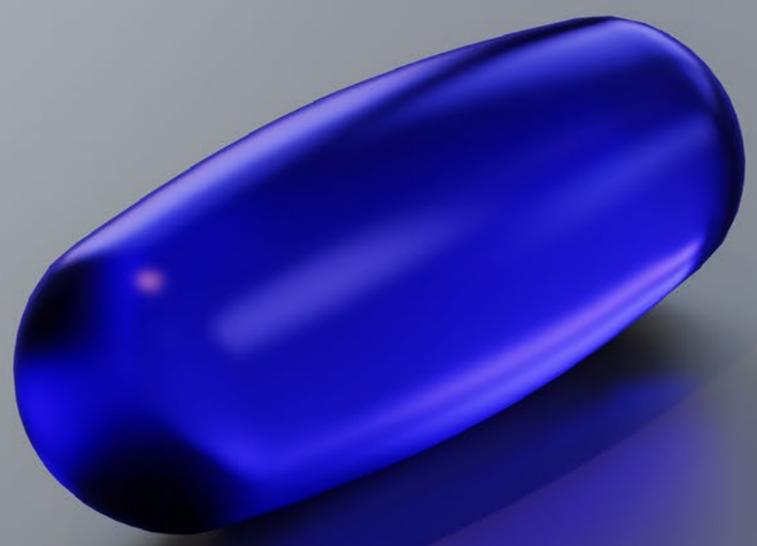
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THE EMOTION PILLS WE ARE ALL UNKNOWINGLY TAKING



Lee Newman, Dean of **IE Business School** and Professor of Behavioural Science and Leadership, explores how we can recognise the negative and send out the positive in our work and daily lives.

Originally posted in video format, with kind acknowledgements to [IE Insights](#).

You may not know it, but every day – at work and outside work in your daily life – you’re taking two types of pills: the blue pills, and the red pills. When someone gives you positive feedback for a presentation you made yesterday, it feels good and you feel proud. That’s a positive emotion, that’s a blue pill. And, when someone steals your credit in front of the boss, that’s a big red pill – negative emotions that typically last for a very long time.

So, what’s critical – and we know from behavioural science – is that this ratio of blue to red makes a big difference in your daily life, in your performance, in the way that you think, and in the way that you behave.

DIAL UP THE BLUE, DIAL DOWN THE RED

So our goal is to dial up the blue and dial down the red. What happens when we have a lot of blue? Well, we’re more creative, we’re more innovative when we face difficult challenges. In contrast, when we run into a lot of red emotions, our attention narrows, we tend to find and focus on the differences we have with other people, we’re less creative or less innovative, and we tend to interpret the neutral behaviour of other people negatively – even if it’s not there.



We can change the way in which we handle negative emotions.



So, our mission is to dial up the blue and dial down the red at work and outside work on a daily basis. Practically, how could you do that?

HANDLING EMOTIONS

Well, we can look for ways to find positive moments in our day. We can take time out in difficult moments to breathe, to meditate, to take a walk in nature. Or, we can socialise – for many of us, socialising is a great way to diffuse negative emotions and create positive emotions. We can also work to handle negative emotions differently. It's very difficult to get rid of those people who cause negative emotions in our lives, and it's equally difficult to eliminate all of the stressors in our daily lives. But we can change the way in which we handle negative emotions. We can choose our battles more carefully. We can talk them through with other people. And learn to just let things go in those difficult moments.

GIVING OTHERS POSITIVE VIBES

But it's not only about you – it's about other people. You've probably never thought about it, but you are actually giving out blue pills and red pills to your colleagues and people in your daily life. So your mission, I would suggest, also ought to be thinking about how you can give out more blue pills and fewer red pills. How might you do that?

Humour is a great way to give other people blue pills. Positive feedback to other people – we don't take the time to do it enough – and it's a great way for you to hand out blue pills on a daily basis. The red pills you are handing out are typically little bad behaviours that you and all of us have in the workplace. We don't listen to each other carefully, we micromanage sometimes, other times we're multi-tasking and spending too much time on our mobile phones and not enough time with our colleagues, listening.

So these are examples of ways that you can affect the lives of other people at work and outside of work to dial up their blue and dial down their red. So I hope you'll take those practical ideas and start today in re-thinking the role of positive and negative emotions in your daily life. And I also hope that today – is a great day. Just say no to red pills! ///

Watch Prof. Lee Newman's video version of this article on IE Insights.



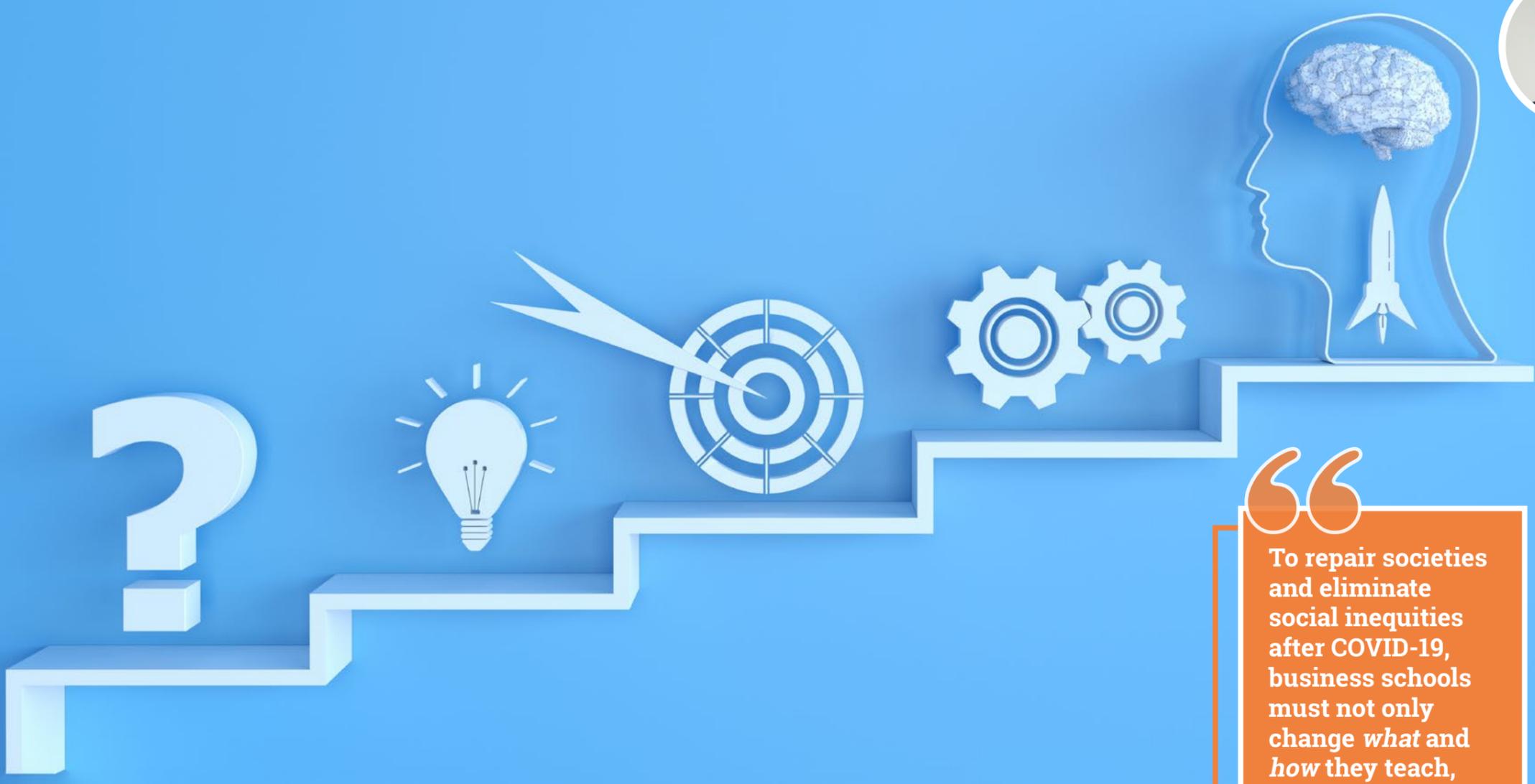
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HOW TO SURVIVE A PANDEMIC AND OTHER CLASSES YOU MISSED IN BUSINESS SCHOOL



The consequences of the COVID-19 pandemic have reached every corner of the world, increasing poverty, inequality, and social vulnerability, even in wealthier countries. As **Michael Castellano**, **International MBA** student at **IE Business School**, explains, business schools have a fundamental role to play in addressing these problems and repairing societies—if they do their job right.

“
To repair societies and eliminate social inequities after COVID-19, business schools must not only change *what* and *how* they teach, but also who they teach and *who* teaches.”

RESULTS OF PANDEMICS MAY VARY

In October 2020, Fareed Zakaria penned an opinion piece in the Washington Post noting “pandemics should be the great equalizer,” but COVID-19 was not. Although 95% of all countries experienced economic contraction due to the pandemic, it became painfully clear as the crisis dragged on that the virus disproportionately impacted certain communities over others. Instead of affecting all people equally, COVID-19 deepened socio-economic divides around the world and brought an additional 97 million people into extreme poverty in 2020 alone.



Now, more than two years since the onset of COVID-19, we can see how the world has forever changed. The experience demonstrated that our systems were much more fragile than we knew, and the pandemic aggravated issues around injustice and inequality that were already bubbling below the surface. As a result, many have cast aside hopes of returning to pre-pandemic normalcy, advocating instead for a new normal that remedies the former system through innovation.

EDUCATION AS THE GREAT EQUALIZER

The virus may not have affected everyone equally, but education can serve as an anecdote and a true equalizer in society. Education can equip all people with the tools to lift themselves up from their circumstances. The pandemic also underscored that business contributes meaningful solutions in times of need. Consider the ways that business principles transformed the course of the pandemic, from rapidly scaling up production of life-saving vaccines, coordinating complex supply chains of personal protective equipment, or marketing risk-mitigating behaviors to the public.

Business schools occupy an important position at this intersection between business and education, and therefore have an essential role to play in guiding the response during the remainder of the COVID-19 pandemic. Moreover, trends

indicate that conflict, uncertainty, and instability will continue to define global affairs, meaning business schools will have a unique opportunity to create the leaders of tomorrow. Arming students with a well-rounded business education will prepare them to tackle future issues and generate a ripple effect with the potential to transform companies, communities, societies, and indeed the world.

BUSINESS SCHOOL 2.0

The insecurity of recent years has encouraged many individuals at all stages of their careers to rethink their relationship to work and question their contributions to society. This has led to an unprecedented wave of career changers and new enrollees in MBA and other continuing education programs. Yet, as the world economy shifted during the COVID-19 pandemic, how did business schools respond? Did academic institutions continue teaching an antiquated paradigm of maximizing profit at all costs, or did they innovate to meet the moment? The following section offers three high-level recommendations for how academic institutions can forgo the old methods of operating and re-envision a business education amid crises.

1. Teach a Pandemic Pedagogy: A wise professor once said, “We don’t need more accountants or financial analysts: we need leaders.” The Millennial generation currently comprises the bulk of the workforce, and as they rise in corporate ranks,

they carry with them the countless experiences of crises, recessions, and conflict that have defined their generation. To prepare younger generations to lead in an increasingly uncertain world, business schools must revise their curricula. This involves developing a “pandemic pedagogy” and philosophy of education that is rooted in the present, yet designed for the future. A business school curriculum should become crisis-proof, prioritizing soft skills, critical thinking, and resilience strategies for the future of work.

Above all, business schools must integrate Environmental, Social, and Governance (ESG) principles into academic studies, as well as classes in business ethics and humanities that coach students to become more empathetic and just human beings. This can include service-learning components, in which students employ business principles to uncover tangible solutions to real-world problems, while deepening their awareness of socio-economic inequities. At IE Business School, courses such as “Marketing Strategies for Sustainability” and “Social Entrepreneurship and Impact Investing” attract as much interest from students as other traditional business courses. According to Dr. Rachida Justo, Professor of Social Entrepreneurship at IE Business School, “The escalation of human-made socio-environmental challenges has pressured the business world to deemphasize individualistic, profit-prioritizing, and sometimes unethical mentalities. Business schools have the power and responsibility to develop the capabilities of future entrepreneurs in using business acumen to solve

environmental, social, and/or economic problems and apply scientific and technological innovation for impact.”

2. Diversify the Campus Community: To repair societies and eliminate social inequities in the aftermath of COVID-19, business schools must not only change what and how they teach, but also who they teach and who teaches. For example, in the United States, every generation is more diverse than the last; however, recruitment into top MBA programs has not kept pace. Although individuals who identify as Black, Indigenous, and People of Color (BIPOC) comprise 39% of the US population, they represent less than 25% of students enrolled in US MBA programs. To truly foster a more equitable society, educational institutions must embrace diversity among the campus community and seek out students from underrepresented and/or historically marginalized backgrounds.

According to Paula Fonseca, an International MBA student at IE Business School, “Diversity enriches the educational experience because we are able to derive our learnings not only from business cases, but from the lived experiences of our classmates and colleagues.” Diversity of lived experience not only brings perspective to academic material, but also offers a nuanced understanding of overlapping concerns that effect a particular community. In this sense, universities should not only promote diversity among the student body, but also among the faculty and visiting lecturers. Instead of being an archetypal ivory tower, business schools should uplift the first-hand experiences of atypical instructors, such as visiting lecturers from disenfranchised communities leading seminars on topics related to social and economic equity. Consider the 2022 viral tweet from a professor at Wharton School of Business in which she remarked that 25% of her students believed the average salary in the US exceeds six figures, when half of all Americans earned less than \$35,000 USD in 2019. Even a top-notch education cannot prepare students to be leaders if they remain disconnected from the world in which they will lead.

3. Measure Achievement through Impact: Finally, if colleges and universities want to make a positive difference in the world, they must measure institutional achievement through impact. This means adopting a new set of performance indicators. Prominent rankings of business schools and MBA programs have historically evaluated institutions based on metrics such as the average starting salary and bonuses of recent graduates and mean GMAT scores of the student body. For MBA students in the class of 2022 and 2023, studying for the GMAT meant multi-tasking during a pandemic, political crises, and other unprecedented hardships. In fact, for students in certain regions of the world, sitting for the GMAT may have been their first time in public after the onset of the pandemic. Standardized tests have long been criticized as biased and poor predictors of a student’s performance, but the pandemic makes an even stronger case for eliminating the exam and other barriers to entry for certain students.

Furthermore, if business schools are to be thought leaders and foster more equitable societies, perhaps salary-based indicators are not the best measurement of success. Instead of awarding accolades based on earnings, universities should consider non-financial indicators that bear in mind the positive contributions of graduates to their communities. In the aftermath of COVID-19, as the world grapples with social, economic, and political challenges, encouraging students to pursue non-traditional, less lucrative vocations, such as public policy or elected office, non-profit leadership, or social entrepreneurship might not garner top rankings, but is certainly a laudable achievement. Rather than deemphasizing these careers, business schools should create a pathway for future transformational leaders and put people and the planet before profits.

REIMAGINING A MORE EQUITABLE FUTURE

In a follow-up opinion piece leading up to the release of his book *Ten Lessons for a Post-Pandemic World*, Fareed Zakaria optimistically observed, "The pandemic upended the present, but it's given us a chance to remake the future". Although COVID-19 disrupted ways of life, toppled economies, and amplified social vulnerability, it has given the world a chance to change course. In this moment, business schools have a unique opportunity to leverage their expertise at the intersection of education and business to derive efficient and productive ways to advance economic empowerment, alleviate poverty, and achieve social objectives. By teaching timely course material, incorporating historically marginalized and underrepresented individuals, and assessing achievement through social impact, business schools can prepare the leaders of tomorrow and reimagine a more equitable future for all of us. ///

NEW NORMAL

KEYS TAKEAWAYS

- The pandemic did not impact all communities equally, but deepened pre-existing inequities, the ripple effects of which will continue for generations.
- Business schools occupy a unique position at the intersection of business and education have a fundamental role to play in repairing societies in the aftermath of COVID-19.
- To prepare students for a world of uncertainty, business schools must create a "pandemic pedagogy", grounded in the present, but built for the future
- Embracing diversity among the campus community and emphasizing the lived experiences of students and faculty enriches learning and fosters empathy.
- If colleges and universities want to make a difference in the world, they must measure institutional achievement through impact, using a new set of performance indicators.

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PRESENTEEISM: A BAD BUSINESS PROPOSITION



Can there be a worthwhile tradeoff between work and health? Professors **Wladislaw Rivkin, Trinity Business School, Stefan Diestel, University of Wuppertal, Fabiola H. Gerpott, WHU—Otto Beisheim School of Management, and Dana Unger, The Arctic University of Norway**, explore why presenteeism occurs and how to combat it.

Related research: *Should I Stay or Should I Go? The Role of Daily Presenteeism as an Adaptive Response to Perform at Work Despite Somatic Complaints for Employee Effectiveness*, Wladislaw Rivkin, Stefan Diestel, Fabiola H. Gerpott, and Dana Unger; Online First Publication, March 17, 2022.

THE 800-POUND GORILLA

For most readers, working in a state of ill health may not be an alien event. In fact, most of us are used to and expected to push through with the work, especially when on a deadline. However, not many of us may be aware of the name for this phenomenon – Presenteeism – also referred to as the 800-pound gorilla in the business and corporate world.

The reason it is referred to as such is due to the tremendous costs for employees such as increased burnout, impaired workability, and productivity loss which in turn and most importantly reflects as costs for the organisation.

“Presenteeism may help employees achieve their goal for the day, but more often than not it has a spillover effect.”

Beyond the moral obligation of organisations and managers to safeguard the health of their employees, there is also concrete evidence that engaging in and encouraging presenteeism has grave consequences both in the short and long term. So why exactly do some organisations encourage it and employees engage in it?

OBVIOUS BUT OBLIVIOUS – WHY PRESENTEEISM OCCURS?

Researchers until now have identified macro-level determinants that are detached from the individual level of the employee. At the job level, work demands such as role demands, long work hours, and time pressure, and at the organisational level, working in the private sector and organisational size are some of the factors that are attributed to presenteeism.

However, this rich understanding does not contribute to the fluctuations within the individual at a personal level. For instance, an employee suffering from chronic health complaints has to engage in presenteeism over the long term to produce a performance that is comparable to that of an employee who is less affected by such complaints.

One of the major determinants of presenteeism, the researchers found, was the amount of work progress in the concerned day. It is indeed understandable that employees would prefer to work even in a state of discomfort when the amount of work is overwhelming and would rather rest when the workload is manageable.

And as we are socially conditioned throughout our life, it is unsurprising that how others perceive us is also a crucial determinant of presenteeism. In order to answer the dreaded yet pointless question of *'what would my colleagues and manager think?'*, most employees engage in presenteeism especially when the workload is too much to 'prove their worth'.

LONG TERM PHENOMENON? NOT QUITE

Irrefutable proofs from various studies have reinforced the fact that the estimated costs of presenteeism potentially exceed those of absenteeism. Presenteeism not only directly impairs the ability to work – making more errors because of the inability to concentrate while working – but can also compromise physical and psychological recovery processes.

For a long time, people in the scientific community assumed that presenteeism is a relatively stable phenomenon that only fluctuates over longer time frames such as months or years. However, recent studies have shown that presenteeism is a dynamic behavior that can fluctuate across shorter time frames such as days.

To illustrate, consider an employee experiencing a headache. After a few hours, the headache may either have gotten worse or better. In both cases, presenteeism is likely to be reduced as either the employee stops working due to a continued prevalence of the health complaint (absenteeism) or continues working as the experience of ill-health has passed.

SPILLOVER EFFECT

Engaging in presenteeism may help employees in achieving their goal for the day, but more often than not it has a spillover effect. Most human beings have a fixed reserve of self-regulation and self-control for a given period of time. And it is uncommon for an average human to have an infinite amount of willpower.

When engaging in presenteeism employees are forced to reach deep into the reserve of self-regulation and deplete most of their resources. They use the resources to refrain from focusing on and/or distracting from ailments and tending to their complaints by taking breaks or contacting the doctor.

What follows this day of self-regulation and suffering is usual absenteeism or a day of mediocre productivity since presenteeism usually spills over to the next working day. Even though the recovery process might happen between these days, especially during sleeping hours, it is seldom complete and effective.

It is saddening that employees may find these findings eye-opening. Often when they think there is a trade-off between taking care of themselves and being efficient, there is no trade-off at all: when ill, protecting and preserving their health today means avoiding negative work-related consequences tomorrow.

BAD MANAGER = BAD CULTURE = BAD COMPANY

Any employee would swear by this: Employees leave (bad) managers, not (bad) companies. Since they have the front seat view to an employee's working state, managers are the ones who can help as well as further hurt the employees when they engage in presenteeism.

Managers should be vigilant about this since not all somatic complaints are visible and apparent. They can offer targeted support to employees who feel unwell by giving positive feedback about their achievements. They can also instruct an employee to stop working if it becomes evident that they are engaging in presenteeism.

Managers can also highlight that presenteeism is not rewarded but in fact, disapproved. This is usually achieved through flagging presenteeism behaviour when an employee engages in it as well as walking the talk and setting example themselves by not engaging in presenteeism.

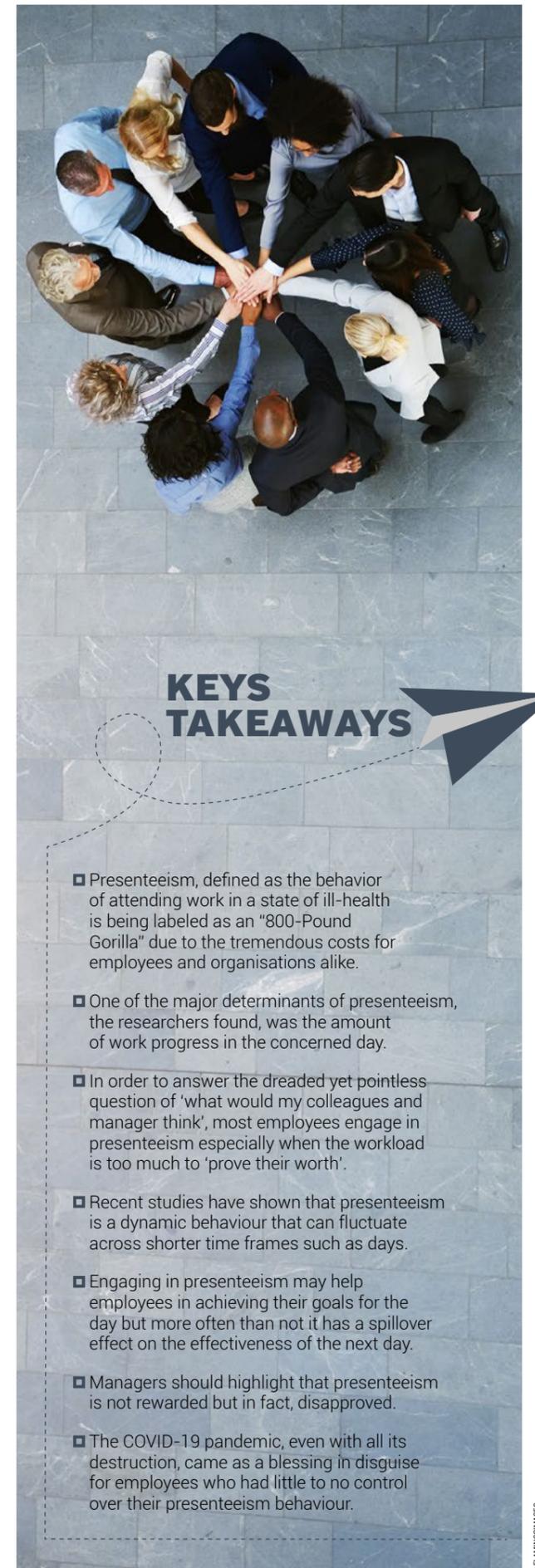
In reality, however, the hands of the manager are usually tied, having to abide by company policy and rules. In this case, managers can encourage employees to only work on inherently enjoyable work tasks when engaging in presenteeism. As they say, where there is a will, there is a way.

EMPLOYEES AS FAMILY

The COVID-19 pandemic, despite the tragic losses it caused, came as a blessing in disguise for employees who had little to no control over their presenteeism behaviour. The flexibility to work from home, which is now likely to be a permanent feature of the corporate world, has more or less effectively addressed the problem of presenteeism.

However, to have a real and sustainable change, there needs to be mutual acknowledgment between employees and management (including managers) that this is a real issue. On their side, employees should be encouraged to speak up about their problems and rights to avoid adverse effects on their health – which in turn affects the companies' productivity.

In a nutshell, management would do wise to treat their employees as family, especially in the current complex and challenging situation and age. Various reports state that employees are increasingly seeing work as a means to live their lives and not the other way around. And if the job does not offer flexibility, purpose, and compassionate leadership, companies might find it difficult to attract and retain employees in the not so far future. ///



KEYS TAKEAWAYS

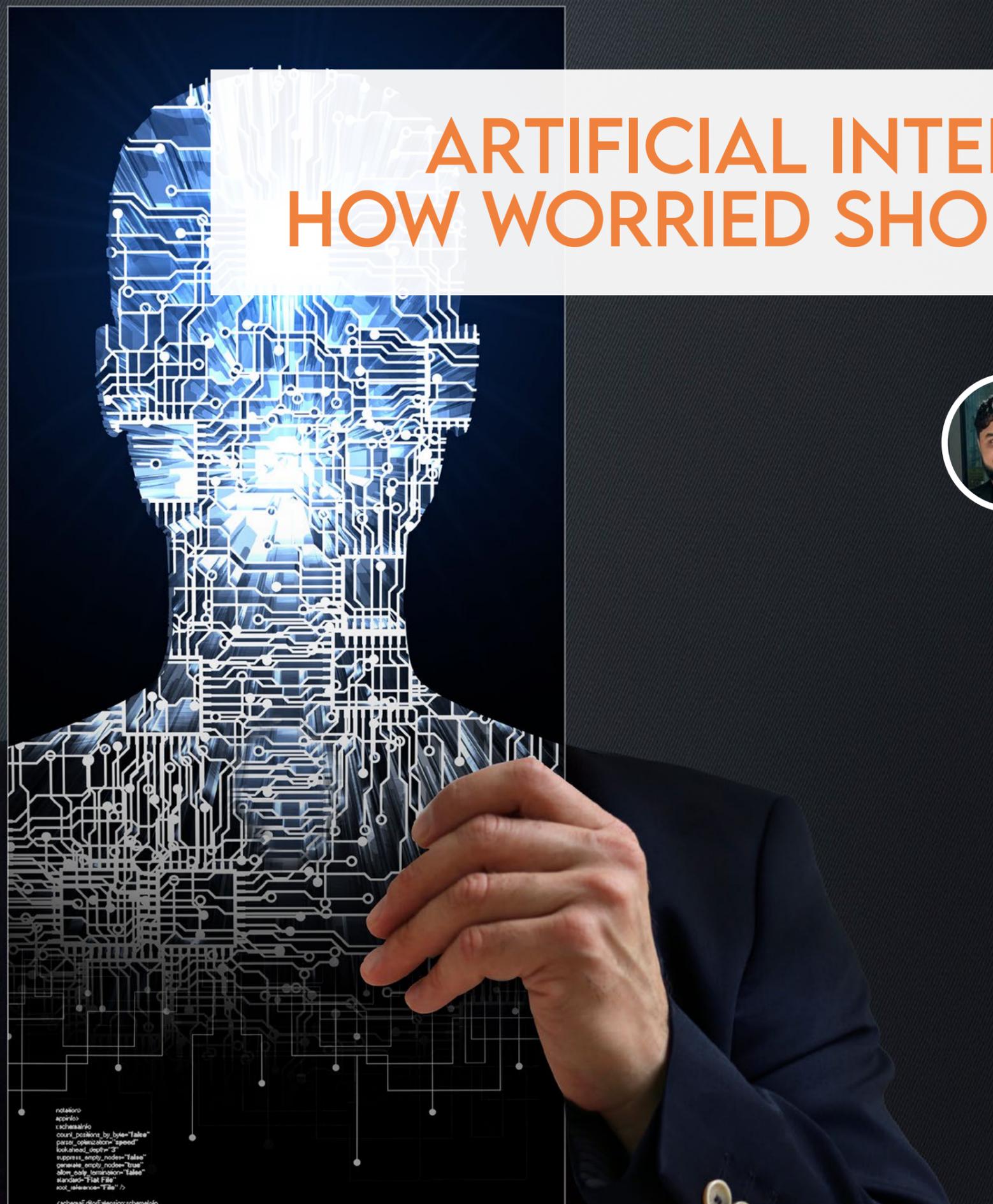
- Presenteeism, defined as the behavior of attending work in a state of ill-health is being labeled as an "800-Pound Gorilla" due to the tremendous costs for employees and organisations alike.
- One of the major determinants of presenteeism, the researchers found, was the amount of work progress in the concerned day.
- In order to answer the dreaded yet pointless question of 'what would my colleagues and manager think', most employees engage in presenteeism especially when the workload is too much to 'prove their worth'.
- Recent studies have shown that presenteeism is a dynamic behaviour that can fluctuate across shorter time frames such as days.
- Engaging in presenteeism may help employees in achieving their goals for the day but more often than not it has a spillover effect on the effectiveness of the next day.
- Managers should highlight that presenteeism is not rewarded but in fact, disapproved.
- The COVID-19 pandemic, even with all its destruction, came as a blessing in disguise for employees who had little to no control over their presenteeism behaviour.



ARTIFICIAL INTELLIGENCE – HOW WORRIED SHOULD WE BE?



Fighting human bias and prejudice within AI systems is important.

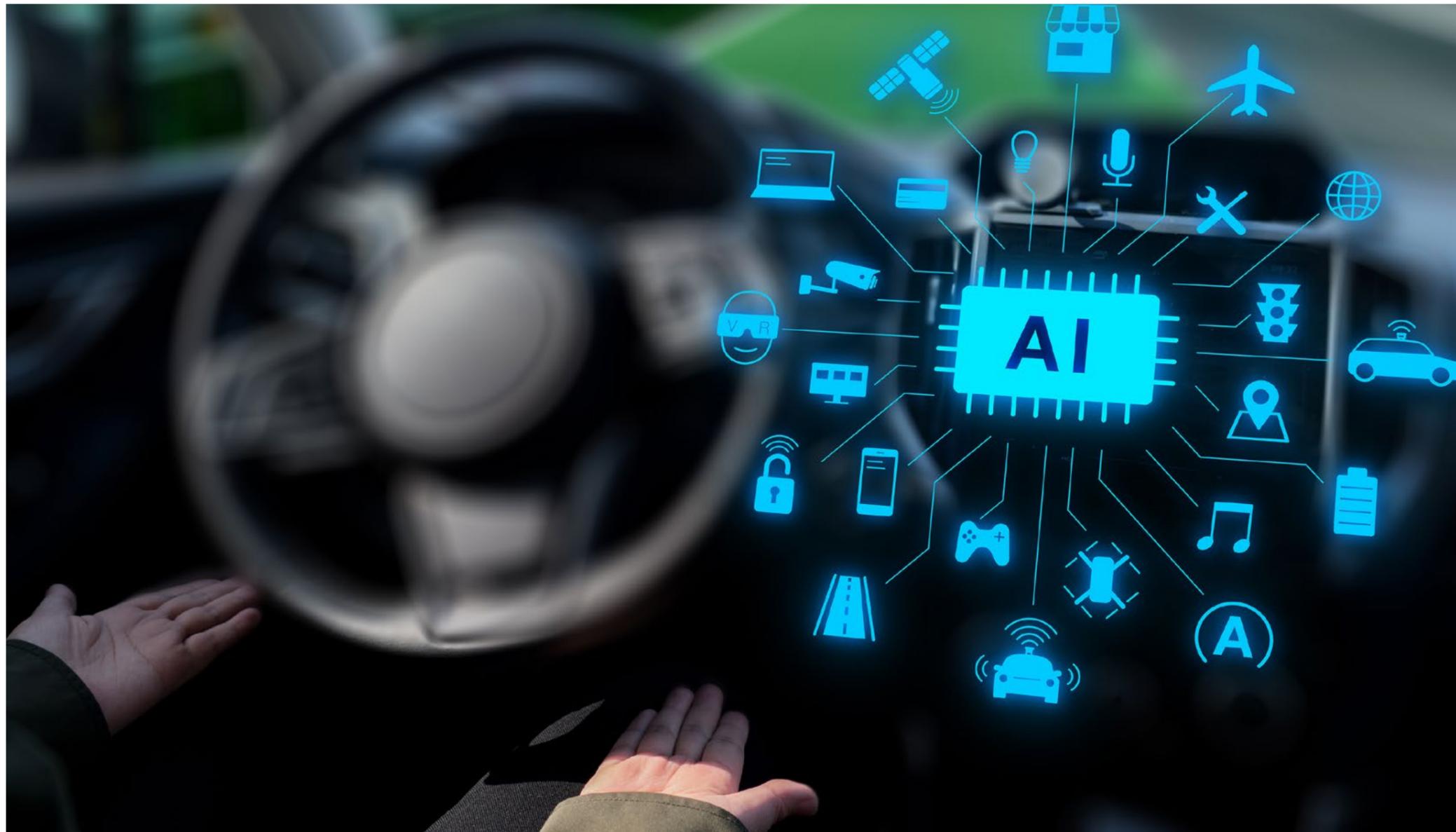


Samuel Varkey, Trinity Business School winner of the CoBS 2022 student CSR article competition, highlights three core issues that shape people's misconceptions about AI – deepfake, prejudice and self-driving cars – and which business and society must address.

Artificial Intelligence or AI is a term that is heard a lot in today's world. Many do not know exactly what it actually is, but everyone knows that it is definitely having an impact on our daily lives. In fact, AI is all around us. The shows that Netflix recommends to you and your voice assistants like Siri and Alexa are all examples of Artificial Intelligence. In fact, Tesla's self-driving car seems to be the next AI revolution that will dominate the coming years (McFarland, 2021). However, with the rise of AI, there are several dangers and negative social impacts that can rise. In this article, we will be looking at the most pressing issues that can rise due to AI and how we can solve them.

DEEP-FAKE IT TILL WE MAKE IT?

We all may have seen the video of historical leaders singing a song together as a joke (Bananamare, 2021). Or we may have come across the video of former US President Barack Obama 'insulting' the then current US President Donald Trump (BuzzFeedVideo, 2018). What do both these videos have in common? The answer – both videos combined have approximately 20 million views. But there is another commonality between the two videos that is probably one of the greatest dangers that humankind may face – Deepfake technology.



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Deepfake technology is defined as when one person's face or voice is replaced with another subject in order to create a fake scenario (Sample, 2020). In the two above examples, none of the people are actually performing the actions as the video shows. Barack Obama is not publicly 'insulting' his successor and the current world leaders definitely did not come together to sing a song. While the world initially found this funny, everyone was quick to point out the dangers of such a technology.

According to a Wall Street Journal article, a German energy firm paid £200,000 into a Hungarian bank account after being called by a scammer who used deepfake to mimic the voice of the company's CEO (Catherine Stupp, 2019). In today's digital world, where media platforms like Instagram, TikTok and YouTube are dominating, deepfake technology sets a dangerous precedent. What is even more dangerous is that these deepfake videos are extremely easy to make.

According to a Guardian article, it only takes a few easy steps and software (which is readily available) to create deepfakes (Sample, 2020). Deepfake is a dangerous tool that can create havoc upon society. When Elon Musk smoked a joint on a live show, Tesla's stock price crashed (Neate & Wong, 2018). In a world where such small actions can have severe consequences, one can only imagine the threat that deepfake technology brings.

So, how exactly can we counter deepfake? There are multiple solutions for this and one of them is the use of technology. The US Defence Advanced Research Projects Agency (DARPA)'s Media Forensics department awarded non-profit research group SRI International three contracts for research into the best ways to automatically detect deepfakes (Bocetta, 2019). Furthermore, Researchers at the University of Albany discovered that analysing the blinking pattern of the individuals can help identify if the video is a deepfake or not (Li et al., 2018). However, according to Siwei Lyu, one of the aforementioned researchers, media literacy is the most important step to be able to combat this problem (Cartwright,

2020). A lot of people are unaware of deepfake technology and can be easily fooled. Therefore, efforts must be taken to make people aware and instruct them to be more cautious with the videos they view on a daily basis. An additional technological solution that can be helpful in the case where deepfake video gets past detection technology is reverse searching (Engler, 2019). With the help of reverse searching, or reverse image search, people can upload images to understand the exact source of the image. This can be used by people to understand the source of the media that they consume. There is a gap existing in this space in that reverse video searching is still not possible (Engler, 2019). Due to the fact that most deepfakes are videos, it is essential to build technologies that can reverse search videos.

AI AND PREJUDICE

Racism is unfortunately still one of the problems that humankind is yet to solve. But what if even the AI systems built around us projected racism? This nightmare scenario

is indeed a reality. At the end of the day, AI algorithms are built by humans, which leads to AI learning the biases and prejudices owned by their creators. One example of this is PredPol, a software developed by the LAPD (Los Angeles Police Department) to predict the areas where crime is most likely to occur. The software predicted that crimes are most likely to occur at areas where the majority of the residents were non-white. Another AI software that showed bias and prejudice is COMPAS, an algorithm used in the US to predict the likelihood of a criminal reoffending. However, this algorithm predicted a higher likelihood of reoffending for African Americans and lesser for white men (Larson et al., 2016). Certain AI systems have also proven to be misogynistic. For example, gender recognition AI systems showed an accuracy of 99% for white-skinned men whereas the accuracy dropped to 35% for dark-skinned women (Timothy Revell, 2018). Further examples of misogyny by AI occur during Google Image searches for the term 'CEO'. Only 11% of the search results comprised pictures with women, whereas 27% of CEOs in the US are female (Daniel Cossins, 2018). Furthermore, a different study showed that men were more likely to be shown in higher paying jobs than women (Datta et al., 2014).

These examples prove that fighting human bias and prejudice within AI systems is important, or else it can have serious consequences. One solution to this is to include larger and diverse datasets when training the algorithm (Harini, 2018). This will enable the algorithm to learn from a diverse dataset and as such make the model less biased. Another solution is to ensure gender and racial diversity within the team that develops these algorithms. As mentioned earlier, these algorithms show prejudice due to the humans creating them. Therefore, to solve this problem, we go to the source and ensure that there is diversity within the team that develops such algorithms. This may not fully eliminate the problem, but it is a step closer to mitigate such bias from occurring. Finally, the algorithms should be tested on diverse datasets in order to ensure that there are no unnecessary prejudices occurring. In the above example of the gender recognition system, had the AI system been tested on people from multiple ethnicities, rather than just on white-skinned men, the errors would have been identified and the system would not have gone into production.

SELF-DRIVEN OR SELF-DESTRUCTION?

As mentioned earlier, Tesla's self-driving cars will most probably revolutionize the world in the coming few years. However, as one may assume, driverless cars bring a lot of new problems to solve. One CNN correspondent tried using the self-driving feature of the Tesla car and the car nearly crashed into a construction site, tried to turn into a stopped truck and attempted to drive down the wrong side of the road (McFarland, 2021). Furthermore, the vehicle also expressed a lot of hesitancy, especially in heavy traffic. Another situation that has not been solved yet with respect to self-driving cars is their decision making. You may be familiar with the hypothetical scenario set during ethics lectures where you need to kill 1 person or 20 people and students have to make a choice.



This same scenario is given to the software of self-driving car – and it can lead to severe consequences. One study shows that the self-driving car is trained to protect the driver rather than reduce the overall casualties during a crash (GREG KEENAN AUTO, 2017). One way to solve this problem is to make self-driving cars 'utilitarian', where the car does not prioritize the life of the driver and tries to reduce the overall damage. Another potential solution would be to allow the human to take control whenever necessary. For example, if the road ahead is undergoing construction, the human should be able to gain control and navigate safely (Jonathan O'Callaghan, 2020). Furthermore, the car should be trained in diverse environments, especially with unpredictable situations like higher traffic etc. so that it can learn how to navigate through such scenarios.

One important solution to combat the negatives of AI as a whole is to ensure correct ethics and standards. One way to do this is to collaborate with the Government to create an Office of AI, similar to what is happening in the UAE (Minevich, 2020). The purpose of this office is to propose policies to create an A.I.-friendly and safer ecosystem (Artificial Intelligence Office, 2021).

AI has a lot of revolutionary applications that can improve our lives significantly. But if left unmonitored, it can cause unprecedented issues that will taint society for a long time. The most pressing issues are Deepfake technology, Prejudiced AI, and Self-Driving cars. We have proposed solutions for these problems, but as we all know, implementing solutions is a challenge in itself. A common misconception is that AI will take over the world. However, if it does, the root cause of this will be humankind. Our goal is to build AI that will support humankind and allow the development of our planet and civilization, rather than something that will grow to destroy its own creator. ///

KEYS TAKEAWAYS

- Deepfake Technology can create unprecedented challenges and tacking it is one of the major AI challenges.
- Bias and Prejudices occur in AI systems due to the existing bias of the researchers developing the AI.
- Self-driving cars are not yet ready to be launched on a full scale. Research must be conducted to improve its safety and to eliminate prior programmed biases.
- Monitoring AI systems by the government is essential, similar to what is being done in UAE.
- Larger and unbiased data sets must be used while training and testing the AI.
- AI Research and Development teams must have diversity in order to mitigate biases occurring in the AI algorithms.

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ARTIFICIAL INTELLIGENCE – HOW WORRIED SHOULD WE BE?



Yulan Guan, School of Management Fudan runner-up in the 2022 CoBS student CSR article competition, explores the technical and ethical arguments in the AI and immortality issue, and reflects on the lessons to be learnt from Leonardo da Vinci and Michelangelo.

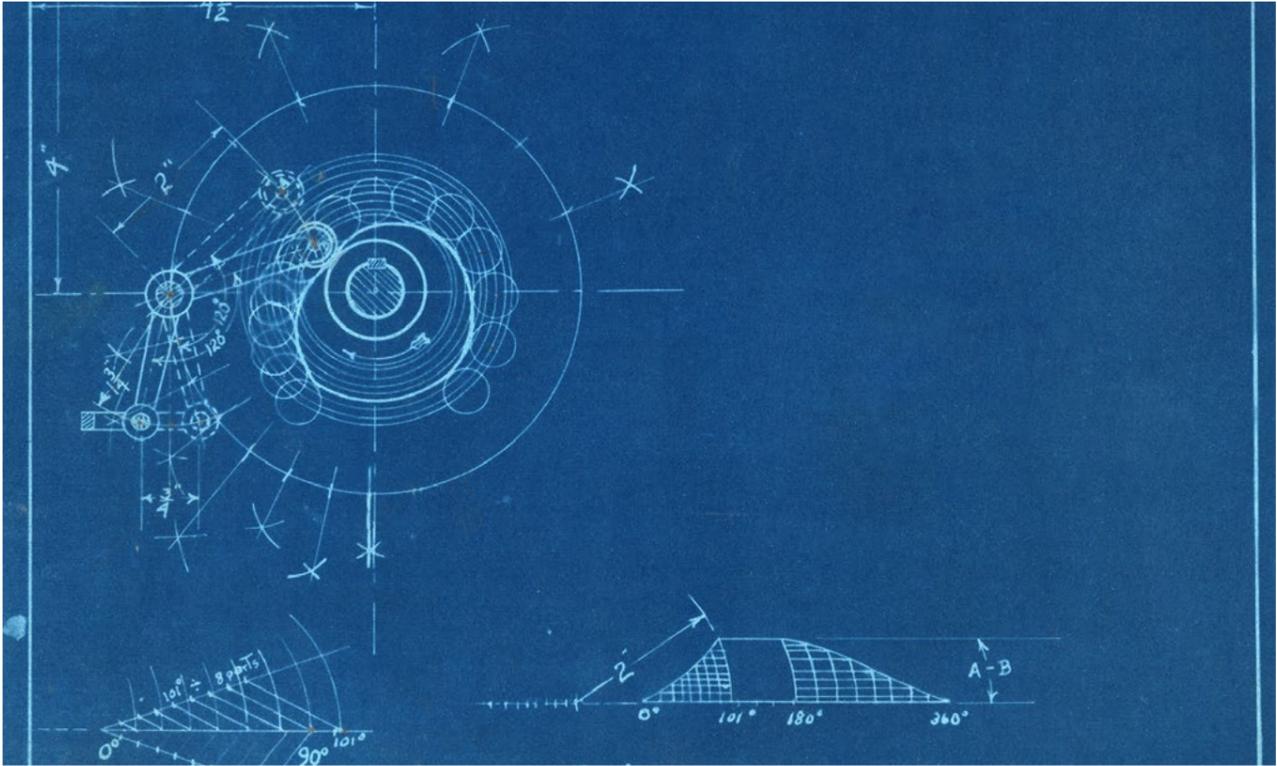
Imagine a world in which your mind could live forever. Uploading and archiving your mind to create a digital agent which is integrated with AI technology. And the digital agent can behave and think just like you do.

Researchers believe that this kind of digital immortality will be a feature of the near future (Kurzweil, 2006). Human beings' wish to be immortal probably started a long time ago, whether in eastern or western cultures. 2,200 years ago, Qin Shi Huang, the first emperor of the Qin dynasty in Chinese history, was desperately obsessed with seeking an elixir which would have let him live forever. The legendary King Arthur from British culture sought the Holy Grail to pursue his eternal youth. Nowadays, in a modern society in which digital immortality is offered by AI technology, the question begs: shall we take it or not?

THE HISTORY OF ARTIFICIAL INTELLIGENCE

The term "Artificial Intelligence" was selected by Dr. John McCarthy to name his research field at the Dartmouth conference of 1956, regarded as the birth of AI (Buchanan, 2005). The assertion from that conference that "every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to

“
Death may be the fairest procedure for mankind in all societies.”



simulate it" (McCarthy, 1955: 13) opened the first generation of general AI research. Researchers at that time were optimistic about developing in just a few decades a machine with human intelligence. It was thought that HAL 9000 from the famous science fiction and the movie 2001: A Space Odyssey, a machine with human intelligence or even exceeding human intelligence, could be created by the year of 2001. However, it turned out that they underestimated the difficulties in making things happen. The field of study then transformed into narrow AI research without the intention of making machines with cognitive abilities, and in the 1990s achieved big commercial success across industry by improving processes and increasing efficiency. Nowadays, the general AI research wave seems to be making a comeback with technologies like big data, deep learning, and neural network paving the way. Topics such as the artificial brain, brain simulation, and mind uploading are increasingly discussed. And countries and companies are putting a lot of money to launch projects in the field.

The US launched the Brain Initiative and the EU the Human Brain Project both in 2013, followed by Japan's Brain/MINDS Project in 2014. The China Brain Project launched in 2018, targets research into the neural basis of cognitive functions and driving AI through computer simulation. A US company called LIFENAUT allows people to upload their personal data from all kinds of sources in order to create a digital back-up of their mind. LIFENAUT's so-called mind uploading experiment is to test whether a software-based mind appears to have a consciousness that is equivalent to that of its brain-based person predecessor (Rothblatt, 2012: 141). If the hypothesis is validated, it will be considered as the digital immortality of human beings. Obviously, AI technology has brought lots of technical and economic benefits, but along with it come a plethora of legal, social and ethical issues, especially when AI is applied to human immortality.

QUESTIONS FOR THE WHOLE SOCIETY

Can digital immortality be regarded as one human right requirement to be explicitly safeguarded and included in a Universal Declaration of Human Rights? And can the right to the pursuit of immortality be considered law by countries in the same way as the right to the pursuit of Happiness in the United States Declaration of Independence? Maybe the answer is no. Based on current human knowledge, the truth is that every human being dies. For thousands of years, with the development of technology, human lifespan has greatly extended. But for technology to make people live forever, no matter what form of human immortality, means totally changing the course of nature and cannot be regarded as an endowed human right.

Digital immortality achieved through AI technology will trigger subsequent social and ethical problems. Data privacy, data control and misuse, data bias and discrimination are issues that have already occurred and which have led to legislation and regulation. Should digital immortals be treated like human beings and granted social identities? Who will own personal data after death – the heir or the AI company? People with power and wealth swarming into countries allowing digital immortality may result in social instability. These questions are related to ethics and the constitution of modern societies. And the key solutions should be on a governance level.

First, digital immortality should be defined explicitly and the boundary of AI applications well-defined. Second, digital immortality should be considered in a broader context as one part of building a community with a shared future for mankind. Governance should be planned both nationally and internationally.

Third, legislation and regulation should be developed to make AI technology work for good in a society, where technologies bring universal benefits to every person fairly. Last, legislation and regulation should be updated with the emergence and development of every new technology, including changes in moral preference.

QUESTIONS FOR THE INDIVIDUALS

Can AI substitute human intelligence? Will your digital immortal truthfully reflect the real you? Digital immortality may result in human beings relying too much on AI and ignoring the development of human potential. This is a great threat to human intelligence and a generator of harm to the development of civilized society. Generally, a human being only exploits less than 10% of his or her total intellectual capability. There are very few people in history like Leonardo da Vinci and Michelangelo, who developed more of their potential during the High Renaissance and created great works driving civilization. As a famous painter, Leonardo was also dubbed a Master of Water and master of topographic anatomy. During his life in Milan, he listed a total of 36 his talents in a resume to apply a job for Sforza, including science, technology, medicine, architecture, music and painting. Leonardo achieved these talents by curiosity, observation, and experiment – factors that have been neglected by modern human beings and prove difficult for digital immortals to acquire or simulate. The greatness of Michelangelo derived from the philosophy presented by his masterpieces, which can make people think about life. He sculpted one of his best-known works the Pieta at the age of 23.

After being famous early, competing with elder contemporary Leonardo da Vinci, and facing death, Michelangelo gained more and more thoughts and insights on life and started the journey of going beyond himself at the age of 65. He sculpted another three works for the Pieta until the end of his life at the age of 88, showing his understanding and thinking about life and death. There is reason to doubt that digital immortals could not reflect Michelangelo because digital immortals will not die. AI cannot substitute human intelligence. Its role should be a supplement and enhancement of it.

EFFICIENCY AND FAIRNESS IN A SOCIETY

The emergence of new technologies is always fascinating and exciting. New technology is a driving power for improving social efficiency. We should embrace new technology all the time while being cautious and careful with its application. Policymakers play crucial roles in designing related governance mechanisms to secure a "good AI society" (Cath, 2017). For the time being, we don't know when the singularity will come. It may be near or far away. However, the social and ethical consequences of digital immortality should be taken into consideration right now. What we know for sure is that not every human being will achieve digital immortality. Death may be the fairest procedure for mankind in all societies. ///

KEYS TAKEAWAYS

- AI technology has brought lots of technical and economic benefits, but along come with lots of legal, social and ethical issues.
- AI technology applying to digital immortality naturally brings ethical issues related to the constitution of modern societies. The key solutions should be on a governance level, where the boundary of AI applications should be well-defined and digital immortality should be considered under the framework of building a community with a shared future for mankind.
- AI cannot substitute human intelligence. Its role should be a supplement and enhancement of human intelligence. Human beings should focus on developing more of our potentials instead of relying too much on AI.

EMBRACING THE INEVITABLE DIGITAL REVOLUTION: BUILDING A HARMONIOUS SOCIETY WITH AI



The forthcoming digital revolution is the key to both the door of happiness and Pandora's box. **Dongdi Chen, Warwick Business School**

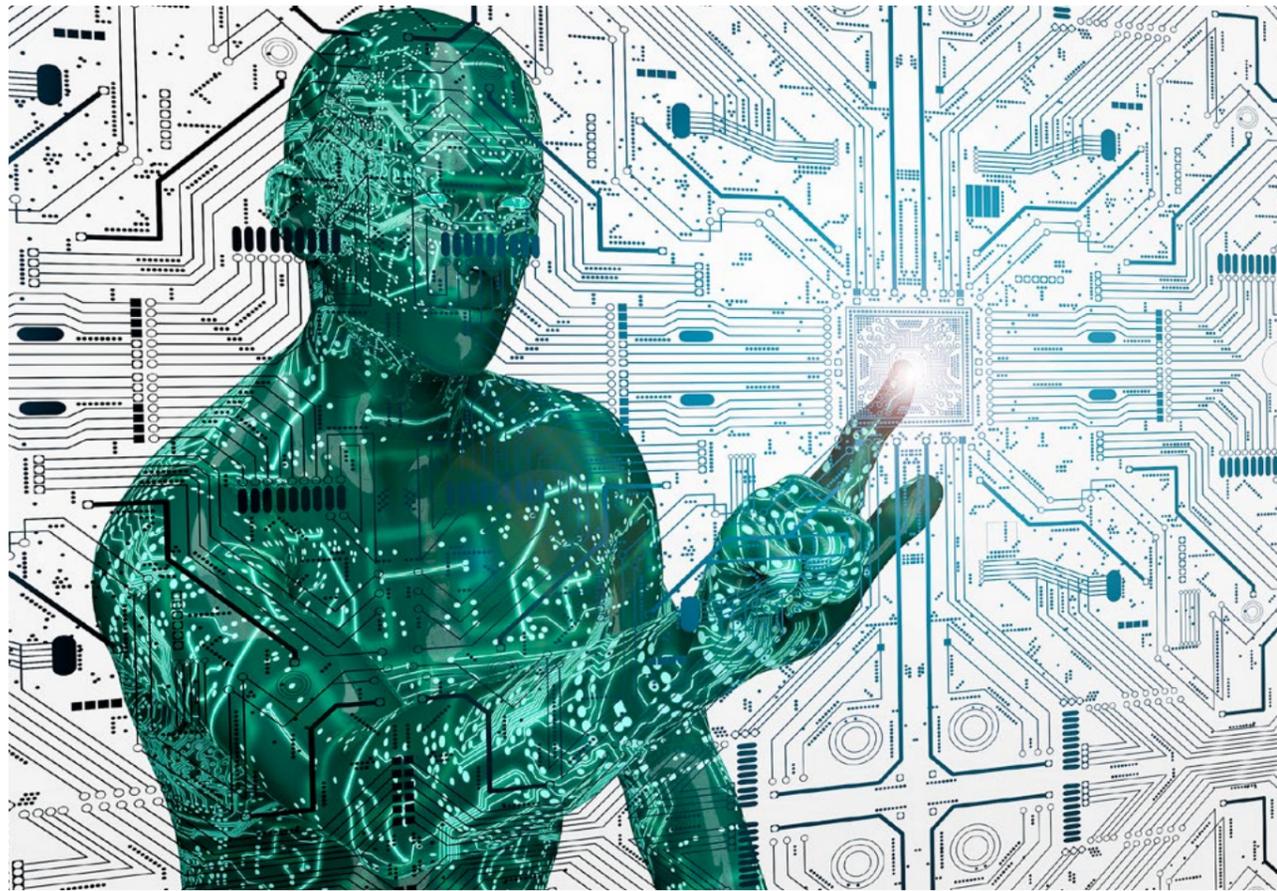
Runner-up in the CoBS 2022 student CSR article competition, opens it all up.

Have you ever been shocked by benevolent ideals of AI in fantasy films, such as Star Wars C-3PO & R2D2 and Wall-E, which reflect the hope, dreams, and anticipation of AI? And whether you were surprised that a common purchase on Amazon platform could bring an amazing series of customized services, like extensive recommendations catering to your preferences? These are just two microcosms of AI-based functionalities in the era of digitalization, one of the most typical characteristics of the 21st century. Similar to the disruptive impacts of the Industrial Revolution in the 18th century, the digital revolution has exploited the power of computers to substitute, supplement and amplify the routine mental tasks performed by humans (Makridakis, 2017) as well as seamlessly incorporating AI into our daily lives, ranging from the management of social networks (Gadek et al., 2018) to organizational decision-making behaviours (Jarrahi, 2018), especially making predictions for sophisticated social or natural phenomena (Armstrong 2014).

In terms of data-based powerful intelligence and automation capabilities, current research has reached an emerging consensus that advanced digital tools may offer substantial economic benefits, particularly boosting productivity levels and elevating GDP growth trajectories through 24/7 automation capabilities and relatively precise decisions based on data analysis, which frees workers from monotonous jobs and makes them gain unprecedented opportunities to



It is vital that the development and application of AI technologies are shaped by a diverse range of voices.



enjoy a higher quality of lives. However, as a coin has two faces, novel social issues arise with the widespread use of AI & automation robots too, and the most prominent problems that should be taken into account can be attributed to the following three categories: Unemployment and Income Equality, Cybersecurity and Privacy, and Ethical Issues represented by bias and discrimination. In the following paragraphs, we will analyze these sources respectively to figure out their interrelations and causes respectively, based on which we will then carry on exploring effective methods to properly deal with the emerging social problems as well as ensure smooth digital transformation from the perspectives of corporate and government governance.

ANALYSIS OF SOCIO-TECHNICAL PROBLEMS: THE CONFLICT OF HUMAN-MACHINE INTERACTIONS AND MISMATCH BETWEEN TECHNOLOGIES AND SOCIAL INSTITUTIONS.

The first two industrial revolutions in human history, whether the Age of Steam or the Age of Electricity, unexceptionally took at least 200 years to promote the transformation of human society, during which people had gradually formed an entirely novel way of working and living with steam engines as well as electricity (Peters, 2020). However, in recent years, the rapid development of digital technologies represented by AI with strong flexibility and disruptive power have generated novel definitions of work, organization, and lifestyle, which

caused a mismatch between digital technologies and current inflexible social institutions that developed and stayed in the industrial age – thus causing negative social problems and conflict of human-machine interactions.

Among three categories of social impacts, the first and foremost one is massive technical unemployment and accompanying income inequality. As mentioned, a majority of the work required by the economy of the industrial age is fundamentally routine (Ford, 2013). Due to its repetitiveness and low level of skill, an increasing number of labour-intensive agricultural and manufacturing industries have gradually adopted automotive robots to engage in manual work and replace lower-skilled labour to reduce labour costs (Goyal and Aneja, 2020). To considerable extent this results in higher unemployment and disruptive changes in existing-working position. For instance, the U.S and Japan installed one automatic vending machine for every 50 labourers to save human power (DecResearch, 2020). Moreover, accompanying the change in work is a worsening income distribution structure and income inequality. As companies continue to displace workers with robots and automatic machines on a large scale, increasing demand and limited talent supply significantly enhance the income level of high-tech talents and simultaneously widen the income gap between high-and-medium-skill and low-tech workers (Schang and Almirall, 2021).

Moreover, if the intelligent functions of AI are used unreasonably and illegally, they will exacerbate existing social problems and lead to devastating consequences, especially

in the areas of Cybersecurity and social ethics through which people easily recognize the pain points of society. On the one hand, a social network is one of the vital features of the novel ecology of work in the digital era, of which cybersecurity and core interaction are two interrelated sides. With the emergence of digital platforms and cloud technologies with powerful storage capabilities, the information and knowledge sharing of B2B, B2C, and C2C have shown exponential growth (Vuori and Okkonen, 2012). In this case, a large number of potential hackers have attempted to utilize AI to identify vulnerabilities existing in the network and then carry out data theft and privacy violations. This not only violates the interests of individuals and organizations but also worsens the instability of the network society, especially within widely used software systems like Zoom, thus making AI-enabled cybersecurity a social issue.

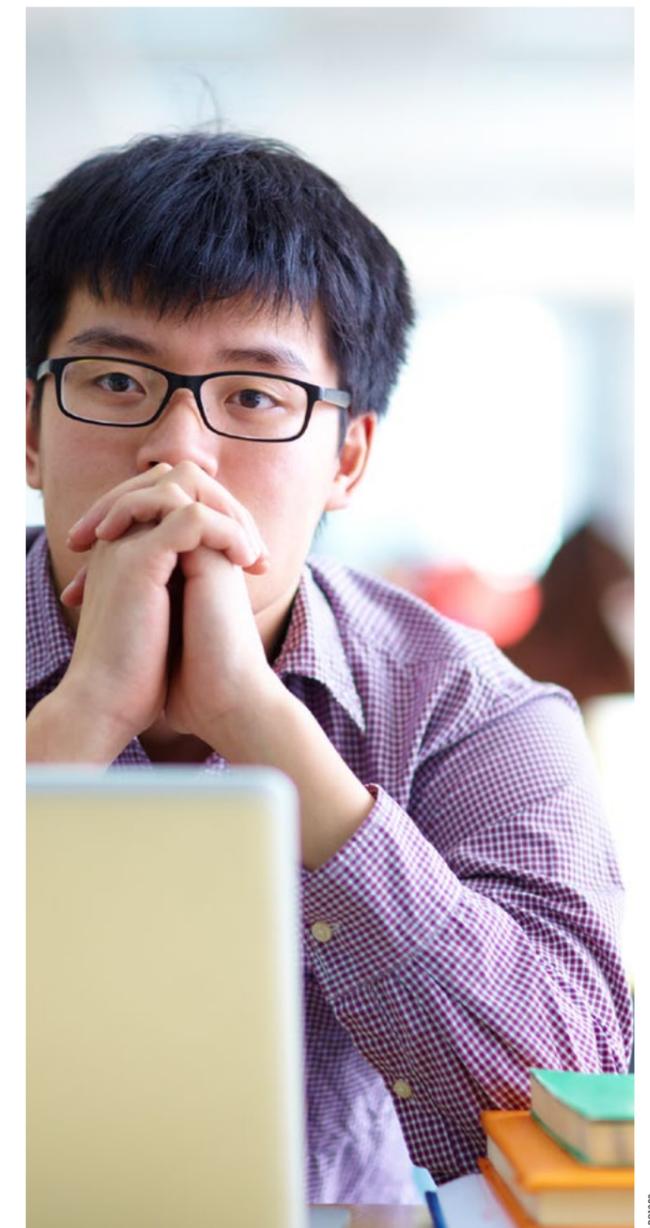
On the other hand, just as technically sound cloning technology cannot pass the test of social ethics, AI unexceptionally raises ethical concerns owing to the bias and discrimination in machine learning algorithms. In recent years, gender and racial discrimination have constantly emerged in several popular AI application fields, such as AI-added resume screening, facial recognition, and criminal assessment of the judicial systems. Particularly, a typical example concerned is that the news feed algorithm of Facebook had distributed deliberate fake news stories and misinformation that unfairly biased voters against Hillary Clinton and influenced the election outcome in favour of Donald Trump while increasing societal divisions among Americans through “filter bubbles” (Isaac, 2016). As such, because these algorithms are designed by conscious humans, they will inevitably, and often inadvertently, reflect societal values, biases, and discriminatory behavior.

SOLUTIONS: BUILDING A BETTER WORLD WITH AI REQUIRES THE CONCERTED EFFORTS OF ENTERPRISES AND GOVERNMENT

As Elon (2021) pointed out, “AI doesn’t have to be evil to destroy humanity if AI has a goal and humanity just happens to come in the way”. It is the same case when it comes to AI or even nuclear weapons, the fact being that technology itself is neither good nor evil. Overall, the above social problems are not caused by AI itself but are rooted in the improper use of AI and the conflict between innovative technologies and the current social system. Therefore, the key idea of mitigating these negative effects lies in the combination of two main strategies: the formulation of AI usage norms and the regulation of human-machine relationships, which require the joint participation of enterprises and government.

Firstly, AI-induced technical unemployment could be categorized as structural unemployment, the solution to which lies in the promotion of knowledge sharing and human-machine interaction by enterprises and the employment promotion policies of the government. On the one hand, if a firm is thinking of adopting AI to reduce costs in the future, the leadership term should take an overall view of current working positions within the organization’s strategic

framework to seek an effective human-machine collaboration mechanism. Here, human and digital workers play to each other’s strengths and cover their weakness simultaneously, instead of rudely replacing human labor with AI. In addition, enterprises should provide employees with necessary AI skills training and sufficient education programs, so that employees can build trust and recognition of AI based on their full understanding of AI. On the other hand, for high-risk occupations affected by automation, such as manufacturing, the government should proactively invest in diverse types of vocational training programs, thus developing varieties of useful courses for workers to help them easily adapt themselves to new technological job positions. Finally, firms should assume corporate social responsibility actively within the framework of social security policies to offer material aid to groups or communities affected by temporary unemployment, thereby reducing the income gap to a certain extent and supporting social stability during businesses’ digital transformation (Siegrist and Cvetkovich, 2000).



Moreover, in addressing AI-enabled cybersecurity and privacy issues, technical support from enterprise and the social regulation guarantee are also the key. Interestingly, AI is both a facilitator for cyberattacks and a dedicated supporter for effective cyber defence. In terms of efficient data processing capability and ongoing learning features of AI, firms could not only identify unknown threats and existing vulnerabilities through automatic network tracing and research, but also secure authentication anytime a potential user attempts to log into their accounts via AI's facial recognition or fingerprint scanners functionalities (Daniel, 2021). However, the smooth operation of sustainably effective cybersecurity programs is inseparable from external institutional guarantees, which necessitates AI and Privacy Protection legislation. The government should promptly enact and modify laws and regulations documents to offer external support for network security and privacy protection that caters to the needs of data and privacy protection.

Furthermore, as mentioned above, AI ethics are fundamentally derived from the ethics of creators in the context of organizational and social ethics, and, like a mirror, the technologies reflect a narrow and biased vision of current society. Therefore, to solve the problem of social prejudice and discrimination caused by AI, eliminating discrimination in the code design of machine learning algorithms is a direct technical measure from the enterprise perspectives. Meanwhile, the elimination of gender and racial discrimination through moral education and regulations is a more critical solution to the root cause. On the one hand, enterprises should strengthen self-regulation to standardize organizational ethics, especially carrying out strict supervision in the design and application of AI technologies, thus making these digital workers comply to basic business ethics: fairness and inclusivity; transparency, privacy, and interoperability; collaboration between people and AI systems; and the trustworthiness, reliability, and robustness of the technology (Parloff, 2016). On the other hand, anti-discrimination education and legal norms should be promoted actively at the level of government to contain any conscious or unconscious discriminatory behaviour, and thus enable each individual to equally thrive in society.

HOW TO BETTER EMBRACE CHANGES IS THE MOST SIGNIFICANT LESSON AI WILL TEACH US

In conclusion, the societal issues raised by AI illustrate an important truth: it is vital that the development and application of AI technologies are shaped by a diverse range of voices including social scientists, ethicists, philosophers, economists, lawyers, and policymakers in addition to engineers and corporations (Knight Foundation, 2017). Embracing disruptive technologies, together with allowing social systems and mindsets to actively adapt to such changes, could maximize the dividends brought by transformation to some degree. Moreover, this may be the crucial lesson that AI brings us in addition to technological assistance. ///

KEYS TAKEAWAYS

- As the core technology of the digital age, AI has greatly promoted economic development and liberated people with its data-based powerful intelligence and automation capabilities.
- Unemployment and Income Equality, Cybersecurity and Privacy, Ethic Issues represented by bias and discrimination are three prominent social issues brought about by AI.
- Human-machine collaboration and AI skills training at the enterprise level along with employment protection and promotion policies at the government level are short-term feasible solutions to alleviate technical unemployment.
- In response to cyber security and privacy violations, the government needs to proactively take legal measures to assist enterprises' AI-based cyber defence systems.
- In order to eliminate AI bias and discrimination, enterprises should carry out strict supervision in the design and application of AI technologies according to business ethics and government regulations.
- The harmonious coexistence of AI and society requires participation of a wide range of social entities in the development and application of AI.

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AI AND ITS PROBLEMS – AN UNAVOIDABLE REALITY OR A DYSTOPIA?



David Santos, IE Business School

BBA student finalist in the CoBS 2022 student CSR article competition, clears the mist on AI and contends that legislation, education and setting society's values have a vital role to play.

From Alan Turing's paper "Can machines think?" written in 1950 until present time, AI has experienced an exponential and vertiginous evolution. AI went from programming a computer to able to play chess in 1957 to online assistants like Siri or Alexa integrated into our phones. And the truth is, AI has not hit the ceiling yet and we will not stop witnessing the countless disruptive possibilities yet to come.

Interacting with AI technology in devices in our daily life is more common than ever, even if we do not notice it. Have you ever thought about how Netflix can recommend you the best choices for your taste? Or how social media tailors content to submerge you in their platforms for as long as possible? All these examples are part of how AI has been gradually introduced into our lives. This undeniable increased use of it has provoked the rise of ethical and social concerns regarding the implementation and use of AI. Can AI turn our lives into a dystopian science-fiction movie or it is just the worst of omens? And if that were the case, how could we tackle that situation? This article aims to answer these questions.

RIGHT HERE, RIGHT NOW

Knowing where AI is at the moment and where can it go is the key to identifying the potential social negative impact that it can cause. Artificial Intelligence has not deployed its fullest potential yet. To understand where AI is at the current moment and where it can be in a (not so distant) future, differentiation among the different types of AI is needed.



It is important to raise awareness about the upsides and downsides that new technologies could have.



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There are four types of AI sorted into two different groups: the machines that we have already created and the machines that have not been built yet.

The first group, the one composed of the machines that we already have, is made up of reactive machines and limited memory machines. Reactive machines execute specific actions – the computer playing chess, for instance, receiving stimulus from a player, and the computer responding with the most suitable options. Limited memory machines are those capable of performing determined actions after collecting data and making predictions that will enable them to respond (Hintze, 2016). Self-driving cars are the flagship example of this type of AI, which can already be seen on roads using sensors to collect data regarding current traffic, road limitations, and other vehicles. All this information collected by self-driving cars is stored for a limited amount of time. It is transient, as opposed to the human experience of driving which gradually improves.

The second group, composed of machines that do not yet exist, is divided into the theory of mind and self-awareness, which are concepts that have not been developed as of now. The theory of mind attempts to aid machines to understand the fact that living things have feelings and emotions, stating that there will be a moment in which machines will be able to identify other's thoughts. This would imply that machines could adjust their behavior and the way they interact with others depending on what they perceive from around them. The last step for Artificial Intelligence after having implemented the theory of mind concept to machines, and perhaps the potentially most dangerous one, is self-awareness. Self-awareness consists of providing human awareness to a machine, a more advanced consciousness than the one explained in the theory of mind. This advanced consciousness would mean for a machine to be given self-awareness of itself, being aware of its own processed emotions while understanding external stimuli and the emotions involved in them (Hintze, 2016).

It is undeniable that AI has gradually contributed to the improvement of our welfare up to the present. For instance,

during the recent pandemic the world suffered, AI enhanced the achievement of medical goals: reporting accurate information and increasing the efficiency and the speed of the medical processes and research efforts. Firstly, on a molecular scale, it helped with vaccine discovery and testing. Secondly, on a clinical scale, it contributed to hospital capacity planning, which was clearly exceeded. Finally, on a societal scale, it offered reliable forecasts and predictions of COVID-19 cases while fighting against infodemiology, an information overload at anyone's fingertips (Bullock et al., 2020).

CAN ANYTHING GO WRONG?

In 2018, Elon University and Pew Research Center published the results of a survey that asked technology experts among others if people would be better off or not in 2030 with the presence of AI. Results were as follows; 63% of respondents answered that people's lives will be improved thanks to AI while the remaining 37% answered just the opposite (Anderson et al., 2018).

What AI can offer so far has been proven during the last years, not only during the pandemic but also contributing to the achievement of the Sustainable Development Goals (SDGs), among other examples. In this sense, AI has enabled the creation of projects related to the aim of advancing into a more sustainable model of cities by reducing waste or increasing the efficiency of processes like commuting (Gupta et al., 2022). Without any doubt, it is among the greatest disruptive technologies of the last few years. Therefore, the question arises: What can go wrong with AI?

Since AI is not completely developed, we cannot safely measure to what extent AI could affect our lives. However, to the point at which it has been developed, we can identify the impact that is currently having on our society as well as on what could result. Within the 37% of the survey respondents with a negative perspective regarding AI, some experts like John Sniadowski or Erik Brynjolfsson stated that AI, if not used correctly, would contribute to a faster and more intense concentration of wealth and power. This was the most recurring problem found in the survey caused by the AI as it could provoke a massive increase of inequality between the group of people that control this technology and the rest.

As it happens when implementing a disruptive technology, it is difficult to identify in time the long-term hidden negatives. This concern was seen after implementing the internet in our lives when problems like internet addiction or information overload appeared in our lives for the first time. When implementing new technology into our lives, the purpose is to make our lives easier. AI is not an exception. It aims for making the world a better place to live by reducing diseases, diminishing waste, ending inequality, and improving our quality of life. Unfortunately, certain problems can appear down the road, as has happened in the past.

Since the implementation of AI, many jobs have been replaced by machines, making them outdated. Examples include customer support robots or self-driving cars, replacing human assistants and drivers respectively. Due to this technological shift, a fear of losing your job and being replaced by a machine has appeared in society.

Plus, AI has raised concerns about data privacy. To what extent can companies know and control our data? Data has been deemed the new currency of the Fourth Industrial Revolution, in which AI and Big Data play a key role. While you are reading this article, a huge amount of data is being collected by cookies and then processed by multiple companies and servers for different sorts of purposes. Implementing AI in our world implies assuming that we will have to share our data as it works hand in hand with big data. However, it does not mean that all is fair. There have to be limits that aim to protect the user and their personal information.

WE ARE NOT HEADING FOR A DYSTOPIA

Even though we cannot draw an accurate picture of how the future will be, we can try to do so in the near future on the basis of what we have so far. Artificial Intelligence has been created by humans with the objective of improving our day-to-day lives. Hence, if it is created by humans, we should always have control over it to ensure that its objective is always met and it is not used for other purposes. Understanding how far AI could go and its wide-ranging possibilities demonstrate that at a certain point it could exceed human intelligence and capabilities.

To avoid this dark scenario and the problems it would entail, we need to ensure that technology matches society's values in every process it is required. But it is not also a matter of knowing those values, it is all about spreading them amongst society as well as providing such society with a critical and ethical sense. Bryan Johnson, founder and CEO of Kernel, said in his interview for Pew Research's survey that the solution lies in prioritizing human quality of life over human improvement. Failing to do so would lead to human irrelevance as fast progress would be over individualized welfare.

As said before, to prevent a small group of people who owns this technology concentrating more power and wealth, we, as a society, have to establish and clarify our values. AI is a powerful technology that should only be used for fair purposes that legitimize its use. The government then has to play a key role in raising awareness from the beginning, integrating ethics and technology-awareness programs in schools. If people know when technology is being used unfairly, they will be able to identify such conduct and stop it on time.

Regarding the growing fear of job loss, the disappearance of certain jobs is inevitable, but that does not mean that it is the end of the labor market as we know it. According to Gartner Inc, the AI industry will create more jobs than it eliminates, with more than 2 million new job positions in 2025 (Loten, 2017). Therefore, the solution is to acknowledge this shift in the labor market and adapt our education systems so that they can teach the right skills.

New technologies have meant a very abrupt and fast change for us. For this reason, legislation has not been updated accordingly and we face dangerous legal loopholes. The fourth industrial revolution has to be accompanied by enforcement of regulation in order to protect the user and avoid increasing the inequality gap. Companies using big data and artificial intelligence need to be clear on how are they going to use data and for what

purposes. Above all, users need to have full control of their data, meaning that they could stop sharing it with firms and eliminate their digital fingerprints. To ensure this, legislation needs to be prepared to face all types of issues regarding data policies so that the user is protected in each step of the process.

A BRIGHT FUTURE

As a society, we need to take advantage of all the opportunities that technology offers us. In this scenario, AI is a technology that provides a wide variety of possibilities, some of them still unimaginable. Not only that, it is our responsibility to use all these new means for fair purposes to prevent bigger issues. Unfortunately, despite the fair use of AI, problems like job loss, wealth concentration, and data abuse could appear either way. For this reason, it is important to raise awareness about the upsides and downsides that new technologies could have. Governments that succeed in doing so will give society a better chance to live together with AI and make the most of it. ///

KEYS TAKEAWAYS

- AI has not developed its full potential yet. In the upcoming years we will see the theory of mind and self-aware machines.
- Humans have created AI to improve our world and so far, it has achieved great accomplishments
- Problems like concentration of wealth, job loss and data privacy issues need to be addressed on time.
- The improvement of human's life should be the priority at all times.
- Legislation and education need to be adapted to the current technologies in order to be prepared to face potential problems
- AI and big data are the engines of the fourth industrial revolution and will play a key role in the upcoming years.

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SWEEPING WITH THE ENEMY: COOPETITION AS A STRATEGY FOR A BETTER WORLD



Doctor **Jako Volschenk**, senior lecturer in Strategy & Sustainability at **Stellenbosch Business School**, recently published a study on “The value implications of coopetition”. We interviewed him for the CoBS Mag.

Sweeping with the Enemy: Coopetition as a strategy for a better world by Dr Jako Volschenk with kind acknowledgements to Prof. Adrian Zicari. **Related work:** The Value Implications of Coopetition included in the *Routledge Companion to Coopetition Strategies*.

The CoBS: Dr. Volschenk, in your study you present the idea of coopetition in an attractive light. How would you distinguish competition from collusion? How to make sure it is not the case?

Dr. Jako Volschenk: One could see coopetition and collusion as respectively the virtuous and non-virtuous sides of the same phenomenon. In fact, some authors argue that while some level of competition remains, one should see collaboration as coopetition rather than collusion.

Moreover, there are a number of characteristics that one can use to identify collusion versus competition. For instance, collusion usually requires a level of concealment. Thus, members of cartels often have to deal with the trade-off between secrecy and efficiency. There are other traits that we could discuss, but in short – I would ask whether the collaboration between competitors is for the benefit or the detriment of consumers.

Collusion usually entails either an agreement around geographic areas where partners may agree not to operate, or to agree on prices (i.e. price-fixing) in some other cases. This means that consumers are robbed from choice in a



When it comes to solving environmental or social issues of mutual interest, my competitor is also often my ally.



specific region or they are robbed from a lower price, or even sometimes of quality. But this does not need to be the case. For instance, when Toyota, Citroen and Renault worked together to design a more fuel-efficient small car, consumers benefited from a better product as well as a lower-cost vehicle.

One aspect that I find very interesting is that both collusion and cooperation often happen away from consumers. For instance, it is usually not in the interest of companies like Citroen, Toyota and Renault to tell consumers that they are essentially buying the same vehicle. This would dilute the brand value for each of these car companies. The same is true for collusion – companies for obvious reasons would not like it to be known that they work together.

My own research, on the other hand, is focused on how companies collaborate with competitors to solve environmental problems of mutual interest. Quite often it is to the benefit of these companies to publicly announce their collaboration in order to maximize brand image benefits. Take environmental certifications like the Marine Stewardship Council as an example. It is an initiative of a number of companies in the fishing industry working together to protect the reputation of the industry. There would be no point in hiding the collaboration from consumers.

VALUING INTANGIBLES FOR OPTIMISED DECISION-MAKING

The CoBS: You point to the creation of other forms of value, not only financial. How would you estimate those forms of value?

Dr. Jako Volschenk: This question is continuously under focus, not only in business schools, but also in industry. It is an important question because unless we include other forms of value in our decision-making we may be making suboptimal decisions. Climate change is one of the biggest market failures in the history of mankind because we failed to value the damage we do.

How do we value one litre of recycled water? For someone living next to a clean mountain stream that water may be worth very little, whereas that water may be priceless to someone in a region that is suffering from heavy oil pollution in their drinking water. How do we even start measuring quality of life? The same ambiguity in value is present when we value good health and the happiness of a community.

Furthermore, when it comes to environmental value we should admit that nature has value – even if there is no-one counting. We are unfortunately prone to think of nature only in terms of anthropogenic value. The objective is not to put value on all these different categories but to acknowledge their existence in our decision-making.

Besides, a litre of clean recycled water could protect the reputation of a mining company in the same oil polluted region and hence it can be valued to some extent.

Having said all that, whether companies should reduce their environmental impact is unquestionable from an ethical point of view. But I believe the corporate world will act much quicker if we can show the value of those actions.

COMPETITORS AS ALLIES IN RESPONSIBLE BUSINESS

The CoBS: You raise the issue of stakeholder salience (i.e. who the stakeholders are). Particularly, you emphasise the role of competitors as stakeholders. This is unusual! Could you please explain this interesting point?

Dr. Jako Volschenk: I'm happy you noticed this aspect in my research. In an ever-more complex world our competitors are often also our customers. Take for instance Apple and Samsung and how they both collaborate and compete with each other.

I believe we are in a post-competition era. While competition brought us more efficiency, lower prices and choice, collaboration with competitors can further deliver on these. Furthermore, there are problems that we are unable to solve on our own.

Specifically, when it comes to solving environmental or social issues of mutual interest, my competitor is also often my ally. In South Africa, the fishing companies on the West coast of the country collaborate to protect the fishing resources by helping government with determining and enforcing of quotas. They do this for the protection of their own interest, but they also realise that they would not be able to accomplish this on their own. We could use this as evidence that the tragedy of the commons can be avoided by the "citizens" of the industry when they collaborate.

Another example is the Glass Recycling Company in South Africa, that acts as an industry body to raise awareness amongst people about glass recycling. By raising public knowledge about recycling they ultimately reduce the cost of glass for the industry as well as provide a source of legitimacy for glass users. Again this is an example of industry players collaborating around a common concern.

The CoBS: At the very beginning of the chapter, you put forward the case of a wine bottling company that wanted to reuse empty bottles. Could you tell us how it went? How did they create value for themselves, for competitors, and for society?

Dr. Jako Volschenk: Sadly, that example was never successful. It did however stimulate my own thinking around what could be done when industry players collaborate and it did pave the way for my research in this area. In fact, it was the frustration about the lack of progress that galvanized me to investigate further.

I do believe there is scope for such an initiative still, but vested interests and poor reverse logistics hamper the idea. Fortunately, 80% of glass in South Africa is reverted away from landfills, and ultimately find their way back to the glass producers. ///

KEYS TAKEAWAYS



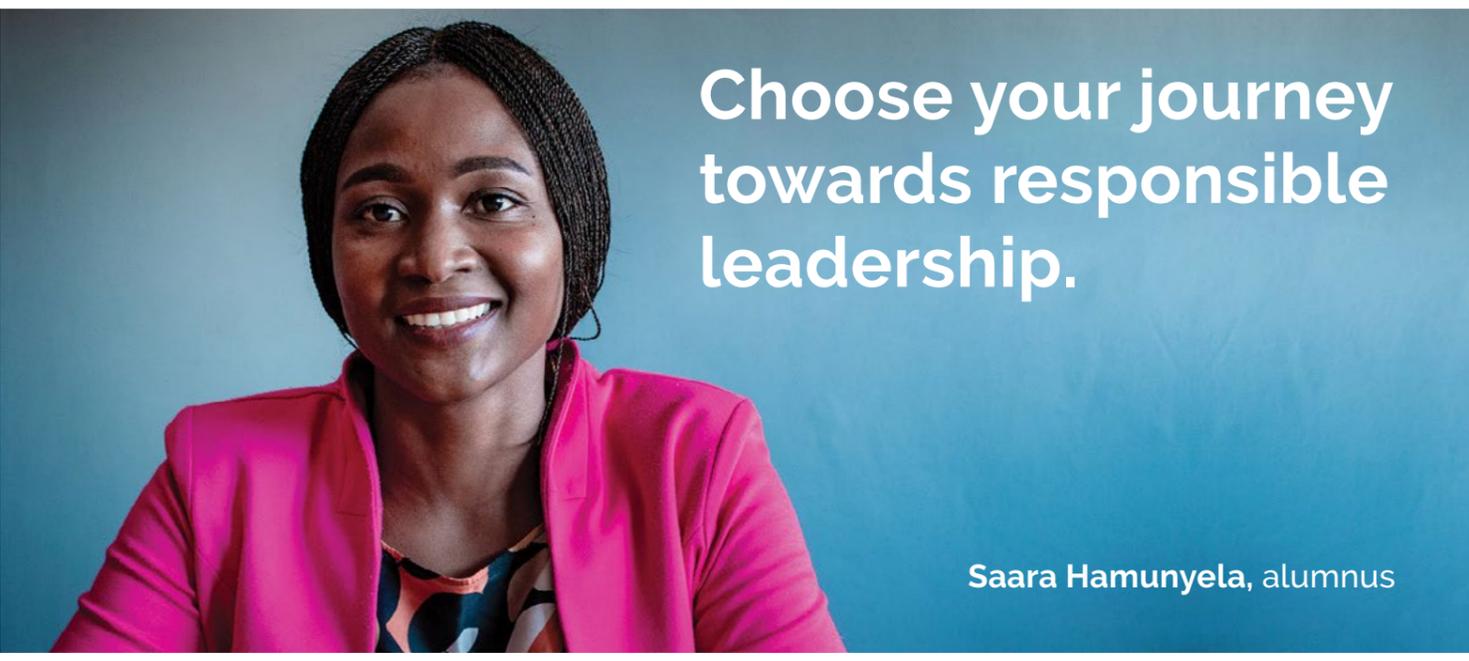
- ❑ Collaboration should be seen as cooperation rather than collusion.
- ❑ Collusion usually requires concealment. In terms of cooperation, the question should be asked: Is collaboration between competitors for the benefit or the detriment of consumers?
- ❑ In an ever-more complex world our competitors are often also our customers (for example, Apple and Samsung both collaborate and compete with each other.
- ❑ We are in a post-competition era: competition brought us more efficiency, lower prices and choice. Collaboration with competitors can further deliver on these.
- ❑ When it comes to solving environmental or social issues of mutual interest, my competitor is also often my ally. In South Africa, the fishing companies on the West coast of the country collaborate to protect resources by helping government with determining and enforcing of quotas.
- ❑ The tragedy of the commons can be avoided by the "citizens" of the industry when they collaborate.
- ❑ However, vested interests and poor reverse logistics still hamper the idea of cooperation.



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THE POTENTIAL NEGATIVE IMPACT OF AI AND SUBSEQUENT POTENTIAL SOLUTIONS



Shunxin Dang, MSC Financial Risk Management student and **Trinity Business School** Runner-up in the CoBS 2022 student CSR article competition, explores artificial intelligence and the potential areas of risk awaiting society.

After more than 60 years of development, AI has made significant progress in various fields such as big data, unmanned driving and brain science. As artificial intelligence appears more and more frequently in our life, the discussion on artificial intelligence becomes more lively. It is undeniable that the development of artificial intelligence has indeed brought convenience to our lives, but at the same time, it has also triggered people's thinking about the potential risks of artificial intelligence.

THE POTENTIAL NEGATIVE IMPACT OF AI ON CHILDREN

With the development of AI voice, many children's toys, home audio and other products have been further upgraded, adding natural language dialogue interaction. Let's think about if these smart toys also "learning" when young children are learning to speak. What will happen?

Do children's toys, as well as home audio, collect data, analyze children's learning style, speech habits and family information? Will collected data and information be directed to the children's clothing industry, snack industry or toy industry? Will these industries analyze and evaluate the information they collect and target ads to families with children? And at this time, are toys still just toys, or toys that become a sounding board for the development of enterprises?

“ Facial recognition technology misidentifies black and Asian faces 10 to 100 times more often than white faces. ”

More imaginatively, in addition to potentially monetizing the information they gather, the information gathered might also turn the toy into a basis for bias. If intelligent toys push information such as children's learning style and growth speed to the education department, will schools and teachers classify students' family background and learning ability before children enter school, and will they set new admission requirements? Will we one day start to deliberately curry favor with artificial intelligence?

THE POTENTIAL NEGATIVE IMPACT OF AI ON ADULTS

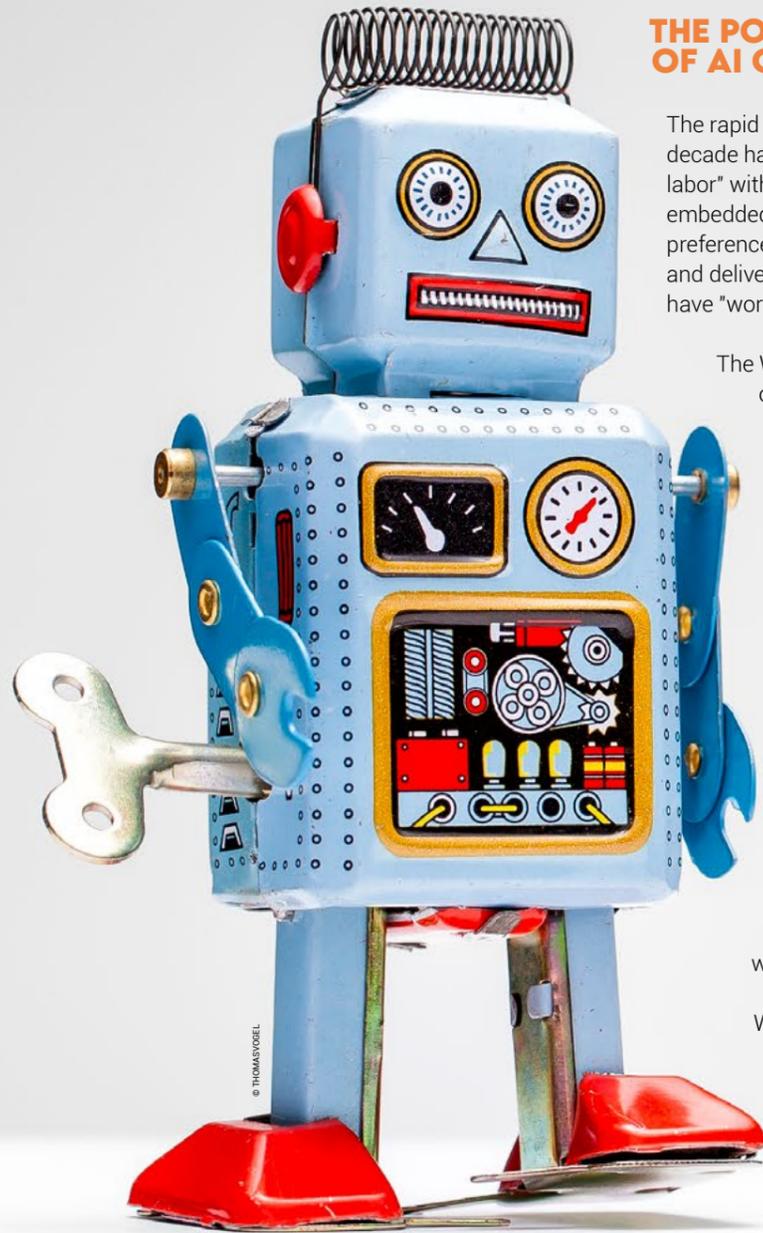
The rapid development of artificial intelligence in the past decade has benefited from the human desire to "replace labor" with artificial intelligence. Now that AI is deeply embedded in every part of the supply chain, from customer preference analysis and market analysis to cargo sorting and delivery, big data analytics and unmanned technologies have "worked" and humans' jobs have been taken by it.

The World Economic Forum mentioned in The Future of Jobs Report 2020 (2020) that AI will replace 85 million Jobs around The World in 2025. With the development of artificial intelligence, we finally realize the dream of freeing our hands, and at the same time, we also face the added "welfare" of unemployment.

THE POTENTIAL NEGATIVE IMPACT OF AI ON THE AGED

Even the elderly are not immune to the negative effects of artificial intelligence. Undeniably, digital endowment can monitor some of the physical indicators of the elderly, ensure their health (especially those living alone), and can replace their children to accompany them. However, the over-reliance of the elderly on artificial intelligence is also worth considering.

When the aged rely too much on robots and have too much trust in them, or even regard them as a substitute for interpersonal communication, their expectations rise – perhaps too high. Technical glitches, as well as understanding the technicalities of using AI-equipped machines, will undoubtedly pose a problem for older citizens.



POTENTIAL RISK ANALYSIS

Applying the above issues posed by the development of artificial intelligence to people of different ages, sorting them out we find that the so-called risks can be roughly divided into the following four categories: privacy, prejudice, employment and ethics.

The development of artificial intelligence has obviously infringed upon privacy. The monitoring of electronic devices and the directional push of big data have appeared in our lives. Indeed, the problem of bias brought about by artificial intelligence is not far away. The National Institute of Standards and Technology Report notes that most facial recognition algorithms exhibit bias. Facial recognition technology misidentifies black and Asian faces 10 to 100 times more often than white faces, with women more likely to be mistaken than men.

It is inevitable that some jobs will disappear as a result of the development of artificial intelligence. When machine learning, mechanical automation and other fields gradually develop and improve, related jobs will be replaced by tireless artificial intelligence. Moral and ethical issues have been the topic of discussion in recent decades. These are not only limited to the aged, but also reflect in a variety of human emotions, with movies related to it emerging in an endless stream. Beautiful robots in *Ex Machina* become tools for satisfying carnal desires; In *A.I. Artificial Intelligence*, robots are actually the resurrection of dead relatives and guide people to escape from death. The hero in *Her* uses his virtual girlfriend to escape normal interpersonal communication in reality. Although the film is fictional, the moral, ethical and emotional issues raised by AI reflected in these films do have a potential impact.

PRECAUTIONARY MEASURES

In response to the issue of privacy disclosure, the international community should formulate a reasonable and transparent AI application management report as soon as possible, taking into account the opinions of enterprises, governments, civil society organizations, international organizations and scholars. The report should clarify the limits on information collected by AI and the specific uses of the information collected. At the same time, countries should improve their legal measures according to their national conditions, formulate clear punishment measures for privacy trafficking and information abuse, strengthen governance, and promote the protection of human rights through the rule of law.

To address the problem of bias, development teams should try to fully understand the data source when writing the program to ensure that the data itself is fair and reasonable. The development team itself should also pay attention to bias and be proactive in improving data when it is skewed. If necessary, international cooperation can be considered to carry out mutual supervision or multiple supervision.

In view of the potential wave of unemployment engendered, the government should carry out market survey and forecast as soon as possible, monitor the total number of unemployed people, improve the social welfare security system of unemployed people, and in addition actively develop new industries and create more new jobs to ease the pressure on the job market.

To address moral and ethical issues, governments should provide a learning platform for their citizens to receive AI-related education and help them adapt mentally and emotionally to the development of artificial intelligence. It should also be clear that AI must not be given any autonomous ability to harm, destroy or deceive humans. ///

KEYS TAKEAWAYS

- ▣ AI may monitor conversations in families, including but not limited to children's growth process, personal preferences and other information, resulting in privacy leakage.
- ▣ AI may lose its impartiality due to data bias, personal bias, technical errors and so on.
- ▣ AI may cause original jobs to disappear, causing a wave of unemployment.
- ▣ AI may hurt the feelings of elderly people living alone, raising moral and ethical issues.
- ▣ To address the potential risk caused by AI, the government should convene representatives of all parties to work out a reasonable, fair, transparent and effective AI management plan as soon as possible, and improve relevant legal documents.
- ▣ In order to maintain social stability and reduce the number of unemployed people, market research should be carried out in time in the early stage to estimate the number of unemployed, and actively develop new occupations, improve the social welfare of unemployed people, and reduce unstable social factors.

2022: A SOCIAL ODYSSEY



Prateek Jha, ESSEC Business School MiM student, and finalist in the CoBS 2022 student CSR article competition, contends that business schools can provide a unique contribution to building back better post-Covid and winning the battle against social vulnerability.

"Wars of nations are fought to change maps. But wars of poverty are fought to map change."

“
It is the need of the hour that business schools encourage and incentivize creating more and more startups that work to bring social impact.

Muhammad Ali shuffled around simple words with this quote but left an upsetting but powerful remark on the state of the world, which is even more relevant today. Any large-scale disaster has the appalling potential to severely change the state of a country and introduce a ginormous scale of 'external stresses'. The Covid pandemic has had far-reaching consequences, not only drastically affecting the global economy, but also challenging the perseverance and mental strength of all on this planet. It has unexpectedly weakened our very foundation, making us susceptible to increased suffering and economic losses as a global nation. As we distantly point towards the light at the end of the tunnel, there are many who have not been as fortunate. The past couple of years have left people economically, mentally, and especially socially vulnerable. The battle against the pandemic has been that of humanity as a whole. Our responsibility is to not leave behind any segment of society, especially those which might have now become too fatigued to even ask for our help. This begs the question: what can business schools, with their ample resources and concentration of bright minds, do in order to address the situation?



SOME ARE MORE EQUAL THAN OTHERS

Social vulnerability is one of the few dimensions of vulnerability to which the community is a victim, especially due to the long-lasting effects of the ongoing pandemic. These can have repercussions such as abject poverty, social exclusion, and severe damage to mental health. However, assessing root causes for variations in levels of these impacts is complex as they are a complex interplay of social interactions, communities, government policies, and culture. The social vulnerability index (SVI) has been a key indicator and a pragmatic tool to assess the impact of the Covid pandemic on respective populations. Recent research in several countries has clearly shown a higher SVI independently associated with higher Covid incidence. "Certain populations (i.e. communities that are racialized, have older age structures and/or lower socioeconomic status) have been disproportionately impacted with greater mortality and morbidity, while also being under-resourced to manage the pandemic response" (Source: Jasmine C., Melissa K., 2022). Upon further inspection, it is found that key factors that further complicate and multiply the situation are socioeconomic status, housing condition, and minority status. As the pandemic brutally enhances this disparity within populations of rich and struggling economies alike, the need for immediate action increases. Business schools emerge as central players in this turmoil as they are very well equipped with academic, financial, professional, as well as social tools to bridge the gap and close this disparity. There is an apparent void in the social construct which needs to be metamorphosed not just for the near future but in the larger scheme of how humanity will operate in the next several decades. To bring these revolutionary changes, individuals with creative and innovative mindsets must be brought to the forefront, and business schools can provide them with the right tools and direction to 'map this change', as Ali mentioned.

TOO MANY COOKS SAVE THE BROT

Business schools must acknowledge their role and responsibility as social entities to address this issue. To take centre stage, these universities can help bridge the gap between businesses, communities, and the government. Business schools are evidently the intermediary between communities and governments that can provide innovative and contemporary solutions. With their resources and widespread networks, it is very feasible for business schools to mobilise resources in a prompt, efficient, and planned manner. With a unique business-minded perspective, it is plausible that business schools can better identify key stakeholders, as well as provide a clearer picture of the needs and expectations of these stakeholders in the community. Once they have broken down the problem and assessed the impact of the pandemic, effective strategies can be brought into place to help guide communities and governments alike. These strategies should involve identifying access barriers to the socially vulnerable section of the community and consequently targeting them efficiently. This will be even more effective when business schools around the globe work in unison by solving the problem based on knowledge sharing and collective research.

It is no surprise that business schools are hubs for inspired innovations. These higher education institutions efficiently provide the resources and entrepreneurial labs to build an organisation from scratch. However, there isn't much focus or mass motivation to envision social enterprises at such labs. Business schools can provide incentives and build motivations for such social enterprises from this grassroots level. Social enterprises have a huge role to play in bringing social impact, moulding public opinions and perspectives, and most importantly, influencing government laws and policies that directly affect the underprivileged. Therefore, it is the need of the hour that business schools encourage and incentivize creating more and more startups that work to bring social impact.

These entrepreneurial labs can even promote smaller enterprises or organisations which are not necessarily started with an aim of becoming a full-fledged company but with a motive of bringing a small change. These need to be more in terms of quantity and address micro-issues that can collectively bring a larger impact.

They can mobilise resources, as well as employ a large number of people who are now without jobs due to the pandemic. Overall, these social enterprises built by business school students, will have an innovative and modern approach to the issues of social vulnerability and poverty in the community by working together with big actors such as rich enterprises and government organisations.

GREAT POWERS, GREAT RESPONSIBILITIES

If we step further inside a business school, we get a glance at how these students are indeed the leaders of tomorrow in the making. A clear responsibility arises for these institutions to build leaders who are conscious of the need for reducing social vulnerability and bringing a larger change to the community. These students need to be moulded with the vision and innovative mindset to tackle more than just business problems. They need to inculcate the drive to address social issues with a purpose and vision for the longer future. These future leaders will spread out in diverse industries with different responsibilities. It is important that they are conscious of existent social vulnerability so that they become the secondary source of knowledge for the companies they work in and inspire social change from their onwards.

These students can even play a key role in lifting the local communities by being actively involved with local players, such as local investors, wholesalers, and government bodies. Consequently, they can come up with self-sustainable models that can create temporary jobs much more quickly. This will facilitate the communication of information from the communities to the governing bodies, who can bring change at the policy level.

ONWARD AND UPWARD

Social entrepreneurship is becoming a business fad, but much slower than we would like. To bring together all the actors involved, there needs to be rapid action that is free from bureaucracy and financial motives. An effective, inspired, and socially motivated objective inculcated in the core values of business schools has the potential to bring about a much larger impact than what each individual actor is currently doing. By taking charge and acknowledging their key role in this significant initiative, business schools can create proper frameworks and lay down the path for future leaders. Addressing social vulnerability and poverty is a long road and to ensure that the leaders for many more generations to come are well-equipped, social entrepreneurship and innovative social strategies must become the norm for their journey. ///

KEYS TAKEAWAYS

- The battle against the pandemic has been that of humanity as a whole, which calls for not leaving any section behind.
- With brutally increasing economic disparity, business schools emerge as central players as they are very well equipped with academic, financial, professional, as well as social tools to bridge the gap.
- With a unique business-minded perspective, business schools better identify key stakeholders and their expectations.
- Social enterprises bring social impact, mould public opinions, and influence government laws and policies.
- Entrepreneurial labs at B-schools can promote smaller organisations which need to be more in terms of quantity and address micro-issues that can collectively bring a larger impact.
- Business school students need to be moulded with the vision and innovative drive for the longer future. They can play a key role in lifting the local communities through self-sustaining models by being actively involved with local investors, stakeholders, and government bodies.



BUSINESS, CONCERN AND COMBAT RESPONSE TO COVID-19: CORPORATE STRUCTURES AND SOCIAL KNOWLEDGE



The consequences of the Covid pandemic have reached every country in the world, causing a huge rise in poverty and social vulnerability even in rich countries. What can Business Schools do in order to address this situation? **Ruan dos Santos Ferreira, FGV-EAESP** Runner-up in the CoBS 2022 Student CSR competition, explores.



Business schools all around the world are traditionally crucial for a country's development due to their transformative role in education.

The fact that the Covid-19 pandemic drastically affected the social structures of every country is the world is not news, mainly damaging those with less education and/or less financial funds.

According to the annual report of UNECLAC (United Nations Economic Commission for Latin America and the Caribbean) (2021), it is estimated that there has been an increase of 200 million people under the poverty line. In Brazil, a significant part of the population has lost their jobs and are now working informally, while the other part do not even have the means to work and acquire minor income.

A significant number of Brazilians are keeping their Welfare through "Auxílio Brasil" (Brazil Aid), according to the Brazilian Federal Government website. While the poorest and the middle class live in a shortage of resources, the richer classes got even richer. Growing inequality is reaching brutal levels all over the planet.



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One of the pieces of evidence of this is vaccine inequality between nations. “The pandemic exposed and intensified the inequalities inside and between countries. On June 17th, 2021, 68 out of 100 people got vaccinated in Europe and in North America, compared to less than 2 out of 100 in Sub-Saharan Africa” (UN REPORT, 2021) – which clearly shows the big inequality between countries and continents.

Beyond that, it is worth highlighting that social inequality is far-reaching, impacting different sectors of society such as education – indeed, students from public schools, if compared to those of private schools, have suffered more from the inequalities brought on by the Covid crisis. According to a recent study of FGV EESP Clear (“Getúlio Vargas Foundation’s School of Economics of São Paulo”), ordered by the Lemann Foundation, “Education can recede up to four years, due to the pandemic”. Newborns, children and teenagers in social vulnerability are the most affected – specially in under-developed and poor countries, while in richer countries, such as China and the United States, the quality of the education has not receded so abundantly.

THE IMPACT OF COVID-19 IN DEVELOPED AND UNDER-DEVELOPED COUNTRIES: DEEPENED INEQUALITIES AND CONSERVATION OF WEALTH?

According to a report published by The World Bank (2020), the Covid-19 crisis deeply affects the inequalities between rich and poor countries, and it is expected to keep active through the following years. Nations that are not completely developed will find it logically hard to finance and pay their debts, which, in turn, puts the welfare of their populations at risk. Furthermore, clearly, poorer countries tend to keep getting more vulnerable, while the richer ones, also due to their credibility, will keep getting stronger while each scenario

demands for quicker and more effective actions. World powers such as the United States, China and Germany, rapidly announced robust protective measures to slow the mass contamination down on the beginning of the crisis, making it possible for the situation to be normalized, even with the peak of the pandemic. Moreover, even encountering obstacles, these countries managed to build a robust combat structure, which, to a certain level, reduced the social impacts related to social inequality. However, poorer countries, such as South Africa, struggled a lot more just to get the basics such as vaccines and hospital beds. Furthermore, the lack of financial support was very likely a cause of the deepening of the vulnerabilities.

BUSINESS SCHOOLS AROUND THE WORLD AND THE FIGHT AGAINST THE PANDEMIC

Business schools all around the world are traditionally crucial for the country’s development due to their transformative role in education – hence challenges and opportunities imposed by present, past, and future scenarios. The Getúlio Vargas Foundation is an example of this. It is an institution that, since 1944, has promoted actions to guarantee good communication between corporations, society and government, forming professional leaders in all sectors and levels (nationally and globally). However, even though it has a full working structure, similar to Harvard’s and Oxford’s, this was not enough to limit the effects of the pandemic. But despite not having typical government functions, with time, they managed to adapt and even make their education tactics better. As such, according to the “Exame” magazine (2021), the crisis turned this concept upside down, making the institutions reassess their rules, in order to guarantee that lectures and classes could keep happening despite the difficult and unsure scenario.

THE VALUE OF BUSINESS SCHOOLS

According to the official website of the business school “Pontifícia Universidade Católica do Rio Grande do Sul” (Rio Grande do Sul’s Catholic University) (PUCRS) (2020), institutions have tried to look for solutions in order to aid companies amidst the Covid-19 pandemic. In an article published by “El País” (2020) – it was stated that some 716,000 companies ended their activities in Brazil since the beginning of the pandemic, as reported by the Brazilian Institute of Geography and Statistics (IBGE – “Instituto Brasileiro de Geografia e Estatística”). In addition, more than 50% out of the 716,000 institutions that suffered from the repercussions of the pandemic had already suspended activities since the beginning of the pandemic. As such, acknowledging the state of available financing, with no income or profit, companies won’t be able to keep active. Furthermore, the text argues that almost all of those companies were small businesses, even further confirming the financial logic for being able to maintain themselves active in the market, which, unfortunately, lays waste any company showing an inch of fragility, given the neoliberal logic we live in.

From the beginning, the actions promoted and organized by the business schools were fundamental, with many companies even asking them for orientation. They were already struggling to maintain their activities and did not have the means to pay for strategic consultancies. Therefore, business schools around the world have the profile, the knowledge, and the infrastructure to collaborate with these companies. As stated by Ian Davis (2005), the purpose of a company is not only to maximize its profit, but also to have a social awareness – this logic must also apply to schools, especially when it is related to a sector connected to education, even considering that it is different when compared to basic education.

HOW BUSINESS SCHOOLS CAN HELP

After the analysis and contextualization of the impacts caused by the Covid-19 pandemic, as addressed earlier, it is not news that the crisis drastically deepened inequalities, leading millions into the poverty line – and mainly those with less access to education and who live in lower income and lower life quality countries. That being said, it is important to state that business schools were, are, and will be important to guarantee the maintenance and existence of companies and, beyond that, the reduction of social inequalities. For even though it is not characteristic of their implementation and formulation of public policy, dealing with different stakeholders is one of their attributes. On that account, some actions that were carried out will be briefly assessed.

In order to clarify the great issue, initiatives for impact can be developed and implemented: the use of laboratory-produced technologies, for example; the practical application of knowledge learned in the class – given that business schools often have “junior companies”; mobilizing academics for strategic consulting; investing in research, in order to expand the knowledge of entrepreneurs, managers and employees;

mobilizing Congress to focus on motivations for business schools. Furthermore, according to an article of “Folha de São Paulo” (the São Paulo Paper) (2020), Jorge Paulo Lemann used his entrepreneurship program in Harvard to focus on the hardships brought on by the pandemic – Project having the purpose of financing three Harvard students with US\$ 10,000 each.

That being said, there are some lessons that can be learned and that reside on the fact that business schools have intellectual, human, and financial resources of their own to be able to move a whole social structure. Furthermore, these schools form leadership alliances and partnerships, capable of influencing heterogeneous groups. In this light, it is fundamental to impose socially responsible guidelines on people’s training and education. Beyond that, another lesson can be taken into consideration: how these institutions are even more powerful when they see that they have to help other groups on the society, beyond the big corporations. And, in conclusion, business schools can easily help to work on the foundations of public education, this in order to raise the aspirations of children and teenagers in social vulnerability. And making it possible, later on, for this group to socially ascend. ///

KEYS TAKEAWAYS

- ▣ The 2020-22 pandemic caused an increase of 200 million people under the poverty line (UNECLAC 2021 Report).
- ▣ In Brazil, a significant part of the population has lost their jobs and are now working informally. Others do not even have the means to work and acquire minor income.
- ▣ Social inequality is far-reaching, impacting different sectors of society such as education, with students from public schools, if compared to those of private schools, suffering more from inequalities brought on by the Covid crisis.
- ▣ Business schools can play an important part in reducing social inequalities as they are traditionally crucial for a country’s development due to their transformative role in education.
- ▣ In Brazil amidst the pandemic, business schools attempted to provide solutions to aid small companies (some 716,000 companies in Brazil went under during the crisis).
- ▣ Business schools can help reduce inequality by: the use of laboratory-produced technologies; the practical application of knowledge in startups and junior consulting; mobilizing academics for strategic consulting; investing in research for entrepreneurs, managers and employees; mobilizing Congress to focus on motivations for business schools.

MUSIC MASTERY – INNATELY HUMAN OR ALSO ARTIFICIAL?



Gabriel Menzies, IE Business School Winner of the 2022 CoBS student CSR article competition, tunes into a little-explored area in the great debate over AI and the future – that of music and how Humankind’s relationship with it might change – or not.

Man: “You are a clever imitation of life. Can a robot write a symphony? Can a robot take a blank canvas and turn it into a masterpiece?”

Robot: “Can you?”

BEYOND THE STEEL COLLAR WORKER

When discussing the rise of artificial intelligence, one of the biggest topic points is the impact on the labour market. Jobs are being automated at increasing rates, and AI will most likely replace human workers by the hundred millions in the coming decades.

When we think about the type of jobs that AI will replace us in, we tend to think about jobs that follow a strict process, often very repetitive. These jobs include warehouse workers, retail workers, and other unskilled labour jobs. Furthermore, with the way that technology is advancing, it is also probable that AI will outperform humans in highly skilled jobs such as doctors, teachers, and even lawyers.

However, there is one job that never seems to come up in this conversation: musician. This is understandable as music is an art form, and we tend to think of art as innately human. Art is born from human emotion and experience, and no matter how complex, AI cannot experience human emotion.

“Humans will still retain the capacity and the desire to be creative, even if they know they will never better algorithms.”



Nonetheless, it may be possible that AI will one day outperform humans in the composition of music in the same manner that a robot in a warehouse outperforms the human worker.

When this happens, it will have several adverse effects on society. It will take away our freedom to choose, it will impact the way we identify ourselves and identify with others, and above all, it will call into question what it means to be human.

ART AND ALGORITHMS

"Artistic creativity, it's magical but it's not magic, meaning that it's a product from the brain" said neuroscientist Charles Limb. The fact that art and creativity is a product of the brain suggests that we can "study it like we study other complex neurologic process."

The complex process of music creation when done by an artificially intelligent algorithm can be boiled down into 3 parts: the inputs, the processing, and the output.

INPUTS

The inputs for this algorithm would be all of the factors that contribute to an individual's musical preference.

Music preference differs based on culture, past experiences, past and present emotions, neurochemistry, and several other factors.

PROCESSING

The parameters necessary for the processing step of such an algorithm would be the elements of music and the concepts of music theory.

There are 7 core elements of music: tonality, timbre, texture, rhythm, melody, harmony, form, and dynamics. In a basic sense, the relationship between these elements, the way they are arranged in accordance with one another, is what gives rise to music.

While there do not seem to be any universal rules in music, there are certain "guidelines" which pertain mostly to culture. For example, modern Western pop music tends to follow certain chord sequences, rhythms, and generally has a simple, catchy melody.

OUTPUT

The inputs pertaining to the indicators of one's music preference will then decide what guidelines are to be applied when arranging the musical elements, which ultimately produce the output: the music itself.

For example, say in the future someone is overjoyed because they were just accepted into their dream university. They put on their futuristic headphones which are capable of scanning brains to detect emotions.

The data that their phone has collected about them, such as age, gender, location, previous listening habits, and the fact that they have just been accepted into their dream university is fed into the algorithm as an input along with the biometric

data provided by the brain scan showing their excitement.

The algorithm would then take these factors into consideration and compose a song that corresponds exactly to how this person is feeling in the exact musical style they wish to be hearing, while also putting lyrics on the song that are about being accepted into university.

This type of personalized output could create music for anyone, anywhere, in any situation, as long as the algorithm is provided with the necessary inputs.

THE LOSS OF CHOICE

If AI eventually reaches this point, it leaves humans with two choices each time they listen to music.

The first is to continue to listen to songs created by human artists. In this scenario, there is a chance of disliking the song, being unsatisfied with it, or any of the thoughts and emotions that one feels when listening to a new song in today's world

The other option is to listen to AI generated songs, where the music is guaranteed to elicit the strongest possible neurological response in your brain coherent with the exact emotion you wish to be feeling in the given moment.

When the choice is between something that you might like and something that you will surely love, it is not much of a choice. Humans instinctively choose the option that gives them the most pleasure, and in this case it is the AI generated music.

As a result, our musical preference will no longer be our own choice. Algorithms will determine everything we listen to

This indicates a loss of control in our lives as it hinders our ability to select our own circumstances and even our identity.

ARE WE BETTER OFF?

Not being in control of our own musical preference can be a scary thought considering where we are at today. With the internet and streaming services such as Spotify and YouTube, we currently have more choice about what we listen to than at any time in history.

However, as we become accustomed to AI making more of our decisions for us, we might eventually view this as a good thing. After all, we will be saving time and energy while also having songs personalized to our taste.

We listen to music we like in order to elicit a certain reaction or response that starts in the brain. If this technology can create music that elicits an even stronger response, we are achieving the same goal we do when picking our own music, only better.

So ultimately, the solution to the loss of control over our decisions when it comes to what we listen to might just be to embrace it.

SOCIAL COHESION

In the words of 1800s American poet Henry Wadsworth Longfellow, "Music is the universal language of mankind."

Humans have used music as an instrument for social cohesion across every single culture for tens and thousands of years. We gather in groups to listen to musicians, participate in festivals, to sing and dance along.

Music has the power to bring people together in night clubs, during family gatherings, weddings (think of the bond that the song playing during the first dance creates between a bride and groom), and countless more situations.

With such easy access to music now, someone's music taste is also a fundamental part of their identity, which is also a factor in how we connect with others.

The music one listens to can affect other factors of identity such as how they dress, how they style their hair, and who they spend time with. It is commonplace for people who enjoy the same music to be friends.

SOCIAL DISSOLUTION

When humans no longer listen to music created by other humans and instead opt for the tailored AI tunes, the role of music in society will fundamentally shift.

Music becomes an individual experience rather than a collective experience, something that cannot be shared. Consequently, the groups of people brought together by a similar taste in music and a shared love for certain singers or bands would no longer be brought together at all.

In addition, the part of people's identities formed due to a particular taste in music, alongside any potential experiences and relationships as a result of these identities, will no longer occur.

To listen to music is to tune into the product of human thought, emotion, and experience. Even the solo act of listening to music on one's headphones is still an expression of these things from one (or more) individual to another. This form of human connection is lost when music is created by algorithms.

SOCIAL SOLUTION

However, there may be a solution to this that utilizes the same technology: AI could apply the same logic as it does to a single person's music taste to a crowd.

If given the same inputs that determine an individual's music preference, except instead it is the data about an entire group of people, the algorithm could create the song that the most amount of people would enjoy.

In the case of nightclubs, it could create the song that gets the crowd dancing. At a wedding, it could create a song that is the musical embodiment of the bride and groom's love for one another. At a funeral, it could create a song to put everyone in tears.

While it would eliminate the role of artists and thus put an end to concerts as we know them, it could also make way for newer and more creative ways of musical entertainment, perhaps even using robots and other forms of AI.

THE BEGINNING OF THE END

From a 60,000-year-old Neanderthal flute to Beethoven's *Für Elise* to Drake's *Views*, music has defined humanity's past and present. It is a hallmark of human creativity that allows us to express ourselves, relate to one another, and even give life meaning.

The idea that one day AI will best us in the creation of music is daunting, and it may signify the beginning of the end of human creativity.

If this were to happen to music, it could happen to more art forms.

All forms of art follow a set of guidelines and concepts the way that music does, and therefore AI could become more adept than humans in any creative endeavour such as storytelling, filmmaking, and drawing and painting.

What would be the point of participating in any form of art if we knew that no matter what, AI could always produce something better than us?

THE MEANING BEHIND IT

If you visit your parents, or were to go through any memorabilia they kept from your childhood, you would probably find some drawings or paintings you did as a kid. These artefacts bear immense meaning to your parents and perhaps to you, but does this mean they expected you to become the next Picasso?

Perhaps you used to take some piano lessons, or are currently learning how to play a musical instrument. Were you or are you expecting to be the next Mozart?

The chances are that the answers to these questions are no. Humans continue to play and create music art when they know they will not become the best, and it may be that they always will.

Therefore, while people in the future may not be listening to music created by humans when they put on their headphones, the desire to create and express oneself through the use of music will still exist.

Humans will still retain the capacity and the desire to be creative, even if they know they will never better algorithms.

PROBLEMS AND SOLUTIONS

If AI becomes better than us at making music, we should just enjoy it. After all, the one thing that humans will have over machines is the ability to actually experience art.

While it might change traditional ways of how we connect with one another, it might also open up new doors that lead to increased social cohesion.

If it takes away our ability to choose our own likes and dislikes, it also means that we don't have to have as many dislikes or waste as much time trying to find what we do like.

And finally, just because AI might be better than us at it, it doesn't mean that we must stop singing, playing instruments, and expressing ourselves.

It is up to us to decide how we will respond to this great challenge. ///



KEYS TAKEAWAYS

- It may be possible that AI will one day outperform humans in the composition of music in the same manner that a robot in a warehouse outperforms the human worker.
- When this happens, it will have several adverse effects on society. It will take away our freedom to choose, it will impact the way we identify ourselves and identify with others, and above all, it will call into question what it means to be human.
- Our musical preference will no longer be our own choice. Algorithms will determine everything we listen to.
- Humans have used music as an instrument for social cohesion across every single culture for tens and thousands of years. It brings people together and creates identity
- But while people in the future may not be listening to music created by humans when they put on their headphones, the desire to create and express oneself through the use of music will still exist.

POST-DISASTER RECOVERY: THE ROLE OF CSR IN RE-EMPOWERING LOCAL COMMUNITIES



What's crucial in rebuilding local communities in the wake of a disaster? Dr **Maki Dan** and Dr-Professor **Masayuki Kohiyama, Keio University**, explore how companies can oil the wheels for a timely and effective recovery.

It has become all too grim in recent years. The brunt of Mother Nature's ire.

Fierce, complicated, and unpredictable, natural catastrophes — hurricanes, tsunamis, earthquakes, wildfires — are happening more frequently and causing more destruction. The unexpected news of such disasters disrupt the communities that businesses serve and where their employees work and live in. In 2019 alone, there were 820 events worldwide that occurred and wreaked havoc on communities, causing losses of over \$52 billion. So, how can companies rise above these challenges and contribute to the early recovery of local communities — one of their most important stakeholders? The answer lies in impactful corporate social responsibility (CSR) initiatives.

But CSR in the context of disaster management focuses particularly on business continuity planning (BCP). Of course, BCP is important for companies, but at the same time, there are many other CSR activities with the potential to positively contribute to the recovery of local communities. As such, Profs. Dan and Kohiyama seek to find out what they are. But before getting into the details, it is important to draw wisdom from the exciting evolution of CSR.



There are many CSR activities with the potential to positively contribute to the recovery of local communities.

THE INDISPENSABLE STAKEHOLDER

In the past, the major recognized responsibility of a company was earning profits. But this viewpoint changed after the introduction of Ed Freeman's stakeholder theory. In stakeholder theory, companies are held responsible for the utility of their stakeholders, such as employees and communities.

The 1970s saw CSR associated with corporate philanthropy and mainly implemented through volunteering and donations. Later, the role of CSR shifted to risk management, focusing on compliance. In recent years, CSR has been discussed in terms of value creation. The creating shared value approach first invoked by Harvard's Michael Porter – and known as Corporate Shared value, or CSV – sparked a global movement to redefine the role of business in society around a simple but powerful idea: a company's success and social progress are interdependent. As such, CSV is a business strategy that attempts to increase profits while creating shared value with stakeholders. In this concept, social contributions are viewed not as philanthropic activities, but as strategic business activities.

SPENDING MINIMUM RESOURCES VS. GOING THE EXTRA MILE

We now know that CSR involves a range of corporate activities that benefit both businesses and their stakeholders. Taking things one step further, the researchers introduce us to one of many classifications of CSR activities – Reactive CSRs and Proactive CSRs. So, how do the two categories size up against each other?

The first type, reactive CSR, comprises activities that support compliance, business ethics, and other actions that profit the company itself. Reactive CSR activities are usually motivated by social demands. They are generally episodic and are short-term or one-time operations. The second type, proactive CSR, consist of activities that profit stakeholders and society, such as CSV, work-life balance, local community activities, volunteering, and donations. Proactive CSR activities create value for stakeholders and society, delivering indirect (rather than direct) profit to the company. Although proactive CSR activities might not directly improve the life recovery of local communities, they positively affect the lives of employees and indirectly contribute to the life recovery of the local community.

To explore the ways in which the CSR activities of companies positively impact the life recovery of their employees, Profs. Dan and Kohiyama transport us to the Tohoku region of Japan, home to unspoiled rural landscapes, historical treasures, and incredible festivals.

THE TRIPLE DISASTER

March 11, 2011. 2:46 PM. An unforgiving 9-magnitude earthquake mercilessly struck the quaint Tohoku. Soon enough, giant waves set off by the quake cut a path of devastation as they rolled inland along the north-east coast. And the lives of people in the region changed forever.

Japan's most powerful earthquake took more than 15,000 lives and forced many to evacuate their homes after dangerous levels of radiation were emitted from the Fukushima Daiichi Nuclear Power Plant. The disaster also greatly affected Tohoku's economy and society. The nuclear power plant accident caused extensive destruction, harming agricultural, forestry, and fishery products. The direct financial damage resulting from the disaster was estimated at approximately 17 trillion yen, and many companies were forced to suspend work or permanently close their businesses. Local communities also suffered great losses.

From data acquired from 134 employed local residents in four areas of Iwaki City (Taira, Onahama, Nakoso, and Joban), the researchers determined the structure of the life recovery and the effects of CSR activities. And there were some interesting findings uncovered.

The structure of life recovery and the effects of CSR activities were determined from the data acquired from 134 employed respondents through a questionnaire survey disseminated to local residents in four areas of Iwaki City, located at the south-eastern end of the Tohoku region, namely Taira, Onahama, Nakoso, and Joban. And there were some interesting findings uncovered.

DOING THINGS RIGHT

Companies in the Taira area conducted more CSR activities (especially reactive activities) than companies in the other areas, because Taira is a major commercial area with many large corporations that focus on those activities. On the other hand, the Joban area consists of many small companies in the tourism industry, such as Japanese-style hot spring hotels. These companies invest fewer resources in reactive CSR, but are traditionally more engaged in proactive CSR. Overall, it was evident that companies in Iwaki City were well engaged in local community activities, volunteering, and donations, and they invested small resources in business ethics, work-life balance, and CSV.

RISING FROM THE ASHES

Women and youngsters tended to be more affected by the disaster than men and the elderly. In addition, people inhabiting mountainous regions and other regions distant from urban areas were found to be inclined to value their private lives over their jobs. People with higher incomes and those who owned their homes were more active participants in their local communities than low-income earners and renters. Finally, people in weak positions, such as contract and dispatched employees, tended to receive lower incomes, be less engaged in local community activities, and be less able to achieve life recovery.

In a nutshell, we can characterize the victims who have made a strong recovery after the earthquake as: (1) male, (2) higher age, (3) living in urban areas, (4) owning their homes, and (5) holding high social status.

FACING THE UNEXPECTED

The researchers observed that good health and strong relationships with family, friends, and community can improve life recovery.

Regarding CSR activities, reactive CSRs tend to increase business volume at the expense of employees' private lives as time with family is especially compromised. Conversely, proactive CSRs enhance private lifestyles and human relationships. As such, to improve the life recovery in local areas, companies can implement proactive CSR activities that:

- Improve the work-life balance of employees
- Are related to CSV, and
- Involve participation in local community activities, volunteering, and donations.

Giving back is not just a kind gesture. It is a business imperative. Businesses have always been a driving force at the epicentre of local communities everywhere. Now more than ever, employees expect businesses to play a role in creating better communities, including helping them to recover during times of natural disasters. And there is ample opportunity for companies to lead the way in increasing community resilience after calamities to strategically support the communities upon which their success lies. ///





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KEYS TAKEAWAYS

- ❑ Corporate social responsibility (CSR) is now considered to be one of the most important activities for companies as it greatly affects both companies and local communities.
- ❑ Companies have large resources for improving local community resilience and local communities can recover from a disaster in a timely and effective manner when companies provide appropriate assistance through their CSR activities.
- ❑ CSR activities can be categorized as reactive and proactive CSRs. Reactive CSRs are activities demanded by stakeholders and society, and comprise activities that support compliance and business ethics. Meanwhile, proactive CSRs, which create new value for stakeholders and society, primarily consist of activities focused on work-life balance, CSV, local community activities, volunteering, and donations.
- ❑ Life recovery largely depended on health and human relationships. Proactive CSR activities related to these two factors, such as work-life balance and local community activities, increases the life recovery of employees.



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HOW CAN LARGE CORPORATIONS BECOME MORE SUSTAINABLE?



What are the strategies to achieve sustainable goals in a corporation? Professors **Frederik Dahlmann, Warwick Business School, Dave Griggs, Universities of Warwick & Monash, Wendy Stubbs, Monash University, and Kevin Morrell, Cranfield School of Management**, explore how goal-setting approaches have been the backbone of corporate success and how they can be transposed to sustainable goals.

Related research: Corporate actors, the UN Sustainable Development Goals and Earth System Governance: A research agenda, *The Anthropocene Review* 2019, Vol. 6(1-2) 167–176, sagepub.com/journals-permissions DOI: 10.1177/2053019619848217 journals.sagepub.com/home/anr

IMPACT OF HUMANS ON THE PLANET EARTH

Humans have had such a significant and decisive impact on the Earth's ecosystems, that the current era has been dubbed the *Anthropocene*. This is technically defined as the current geological epoch, viewed as the period during which human activity has been the dominant influence on climate and the environment.

Corporations as central actors – and arguably drivers of the Anthropocene – explicitly feature only once in the 17 UN SDGs.

To attract more focus on the pressing issues associated with the Anthropocene, various governance organisations, as well as universal guidance, guidelines and metrics, have been established. Earth System Governance provides a framework for developing new insights into governing this coupled socio-ecological system while the UN Sustainable Development Goals (SDGs) provide a shared blueprint for peace and prosperity for people and the planet, now and into the future. go – go

At the heart of the SDG initiative are 17 goals which serve as an urgent call to action by all countries – developed and developing – in global partnership. They recognise that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all the while tackling climate change and working to preserve our oceans and forests.

While CSR is a happening topic in any corporation, what are the broader implications of the Anthropocene and the role of corporate actors in engaging with and supporting Earth System Governance by contributing to the UN SDGs?

THE PATH AHEAD

The Anthropocene faces unprecedented global challenges ahead and the assessment of these challenges can no longer be tackled by individual business practices and organisations. Unless the philosophy of 'We don't win alone and we don't lose alone' is adopted by all the stakeholders involved to create an immediate and significant positive impact in the Anthropocene, the path ahead seems very rough.

Effective Earth System Governance will require changes at a far broader level to promote and ensure collective and collaborative action by policy makers, civil society and the private sector. And moving away from the traditional concepts, this also requires new financial and business models that are compatible with the 'requirement of flourishing life on Earth'.

Dahlmann, Griggs, Stubbs and Morell identify three potential high-impact strategies which, if implemented, could lead to significant new insights into how corporate actors display responsibility and accountability regarding Earth System Governance:

- Integrating global goals into corporate target-setting
- Integrating global goals into codes of corporate governance
- And Integrating global goals into new business models.

GOAL-SETTING IN CORPORATIONS

The philosophy of achieving the desired position through goal-setting has traditionally been successful in many corporations. The benefits of steering organizations through goals include setting priorities for attention and resources, galvanizing efforts, benchmarking and progress tracking, as well as overcoming short-termism.

The UN SDGs have been positioned as an innovative form of global governance that complements more traditional governance approaches such as norms and rules (i.e. legislation and regulation). While policymakers around the world have understood how to tackle the spatial, temporal and contextual factors of such goals, what is lacking is corporate understanding of how to translate and integrate the UN SDGs into their strategies and business models.

Indeed, organisations are coming up with solutions to address the issue. Inspired by the decades-long successful and central process of setting organisational performance targets, companies have recently adopted a variant of that approach wherein executive remuneration schemes depend on achieving sustainability targets.

The UK government and other non-profit organizations have also played a significant role in encouraging and supporting the corporations to place more attention on sustainability. Initiatives such as reducing greenhouse gas emissions and deforestation, or increasing renewable energy, energy productivity, and electric vehicles, and other sustainability metrics have helped companies in the context of corporate sustainability performance.

INTEGRATING GLOBAL GOALS INTO CORPORATE TARGET-SETTING

As much as goal-setting in corporations is an important starting point, the key question is whether such individual target-setting approaches are effective in the face of a global biophysical and socioeconomic system. More worrying is the fact that corporations as central actors – and arguably drivers of the *Anthropocene* – explicitly feature only once in the 17 UN SDGs.

Moreover, there have been various efforts to highlight the commercial opportunities from integrating the UN SDGs – however, general awareness in the private sector remains ambiguous, limited in scale and largely anecdotal.

Whether and how companies can reconcile corporate impacts on people, planet and prosperity while at the same time satisfy their overriding *raison d'être* of (short term) profit and shareholder returns is a billion-dollar question that is worth billions of people's lives.

While businesses are increasingly recognising the various economic and strategic benefits from being more socially and environmentally responsible, such approaches are predominantly driven by corporate assessments rather than concerns for finding solutions to global challenges that may require a departure from 'business as usual'.

This calls for a better understanding and more in-depth research of the corporate perception of high-level issues such as the *Anthropocene*, Earth System Governance and the UN SDGs, and whether and how sustainability goal-setting could be more effectively integrated into the corporate sector.

INTEGRATING GLOBAL GOALS INTO CODES OF CORPORATE GOVERNANCE

Current corporate governance, as complementary as it has been to corporations, treats companies as individual actors and not as part of an interconnected network. Even the few forward and inclusive corporate governance models based on stakeholder perspectives remain silent on the need for systemic integration into wider external governance systems.

Such gaps in current governance models expose a need to examine corporate governance codes as well as rules and regulations, both at national and international levels, to support the implementation of the UN SDGs. Relevant legislation, codes and norms therefore need to be updated to reflect the wider sectoral and value chain implications of businesses' products, practices and actions, and encourage boards of directors to look beyond the narrow confines of their organizations when monitoring, controlling and steering them.



INTEGRATING GLOBAL GOALS INTO NEW BUSINESS MODELS

Research suggests that the majority of businesses are focused solely on short-term profit-maximization and would not hesitate to exploit resources such as the natural environment and people. As such, it is now more important than ever to transform companies' fundamental understanding of business models.

As a result of major crises such as the global financial crisis and political blindness to social and environmental challenges – and as a response to the critics of capitalism and business-greed – innovative initiatives based on constructive concepts such as *Shared Value*, *Net Positive*, *Future Fit*, *Conscious Capitalism* and *Blueprint for a Better Business* have risen to prominence.

Such initiatives are covered under the blanket term 'Purpose Ecosystems' because of their shared efforts to redefine the purpose and nature of business and focus upon broader non-financial performance outcomes. These purpose ecosystems offer concrete action frameworks, business templates and other practical guidance such as audit and certification to improve businesses' legitimacy in society.

The ultimate objective for companies should be to try and adopt business models with a *sustain-centric* orientation in order to address the interconnected set of seemingly incompatible social, ecological and economic challenges with the help of all the stakeholders involved to form a unified network. This also requires businesses to develop new ways of creating and accounting for value for society that goes beyond the financial bottom line.

BILLIONS OF DOLLARS VS BILLIONS OF PEOPLE

Unlike other dominant animals that were at the top of the food chain, humans reached the podium in a very short span of time, largely thanks to their cognitive abilities. The consequences of this, however, are profound. The fundamental nature of Mankind's relationship with the planet, and society that has been fashioned over time, has been altered to an almost irreversible condition in several ways. In the end, it is our moral duty to care for our society and planet so that future generations avoid the consequences or worse, miss out on an opportunity to indeed face the consequences. Typically, this is achieved by inspiring changes among people, corporations, governments and every other stakeholder part of the natural ecosystem. Big corporations who have been both the beneficiaries and causes of much of these changes should be more accountable and responsible for their actions. While they have guidance and guidelines in many sources and forms, true change can happen only if they decide to embed sustainable values in their business models, corporate codes and goals. Will they be on time or will it be too late? ///

KEYS TAKEAWAYS

- Anthropocene is the current geological age, viewed as the period during which human activity has been the dominant influence on climate and the environment.
- Earth System Governance (ESG) provides a framework for developing new insights into governing this coupled socio-ecological system.
- The UN Sustainable Development Goals (SDGs) provide a shared blueprint for peace and prosperity for people and the planet, now and into the future.
- Effective Earth System Governance will require changes at a far broader level to promote and ensure collective and collaborative action by the corporations.
- The researchers identify three high-impact strategies: Integrating global goals into corporate target-setting, integrating global goals into codes of corporate governance and Integrating global goals into new business models.
- While policymakers around the world have understood how to tackle the spatial, temporal and contextual factors of UN SDGs, what is lacking is the understanding of the companies in how to translate and integrate the UN SDGs into their strategies and business models.
- The government has also played a significant role in encouraging and supporting the corporations to place more attention on sustainability.
- While businesses are increasingly recognising the various economic and strategic benefits from being more socially responsible, such approaches are predominantly driven by corporate assessments rather than concerns for finding solutions to global challenges that may require a departure from 'business as usual'.
- There is a need to examine the corporate governance codes as well as rules and regulations, both at national and international levels, to support the implementation of UN SDGs.
- The ultimate objective for companies should be to try and adopt business models with 'sustaincentric orientation' in order to create a highly-interconnected set of seemingly incompatible social, ecological and economic systems with the help of all the stakeholders involved and create a unified network.
- Big corporations who have been both the beneficiaries and causes of much of these changes should be more accountable and responsible for their actions.

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GREENFLATION: THE ACHILLES HEEL OF THE GREEN ECONOMY?



Paul Pernot, MiM student and **ESSEC Business School**

Winner of the 2022 CoBS student CSR competition, analyses the increasing phenomenon of greenflation and offers several ways forward to stabilize the green transition.

In Avignon, a city in the south of France, George R. was planning to renovate his bathroom in early 2022. When he asked his plumber for a quote, the plumber handed him a piece of paper and said: "It's valid for fifteen days". Fifteen days is a very short time! The plumber, faced with George R.'s apparent hesitation, justified himself: "I know, but I have to do this so that I don't put my business at risk by buying materials that are becoming ever more expensive every day. That's the way everyone does it now".

The plumber is right. The price of some commodities has soared in recent months. The price of PVC (composed of 43% oil), which is widely used for plumbing, rose by 90% between May 2020 and August 2021. The reason to this is a multiple one: after Covid-19, the price of oil has risen considerably, then remained high due to the geopolitical situation, but may continue to rise in order to meet the goals of the 2015 Paris climate agreements (Schnabel, 2022). Other commodity prices are rising: copper, aluminum, lithium, cobalt, to name but a few, and again, the increase is linked to the green transition.

In short, if commodity prices rise because of the transition to a green economy, so do the costs of all goods and services: that's inflation. Well, actually, it's greenflation.

“As there is no such thing as a free lunch, everyone must do their bit.”

GREENFLATION: A VERY RECENT CONCEPT

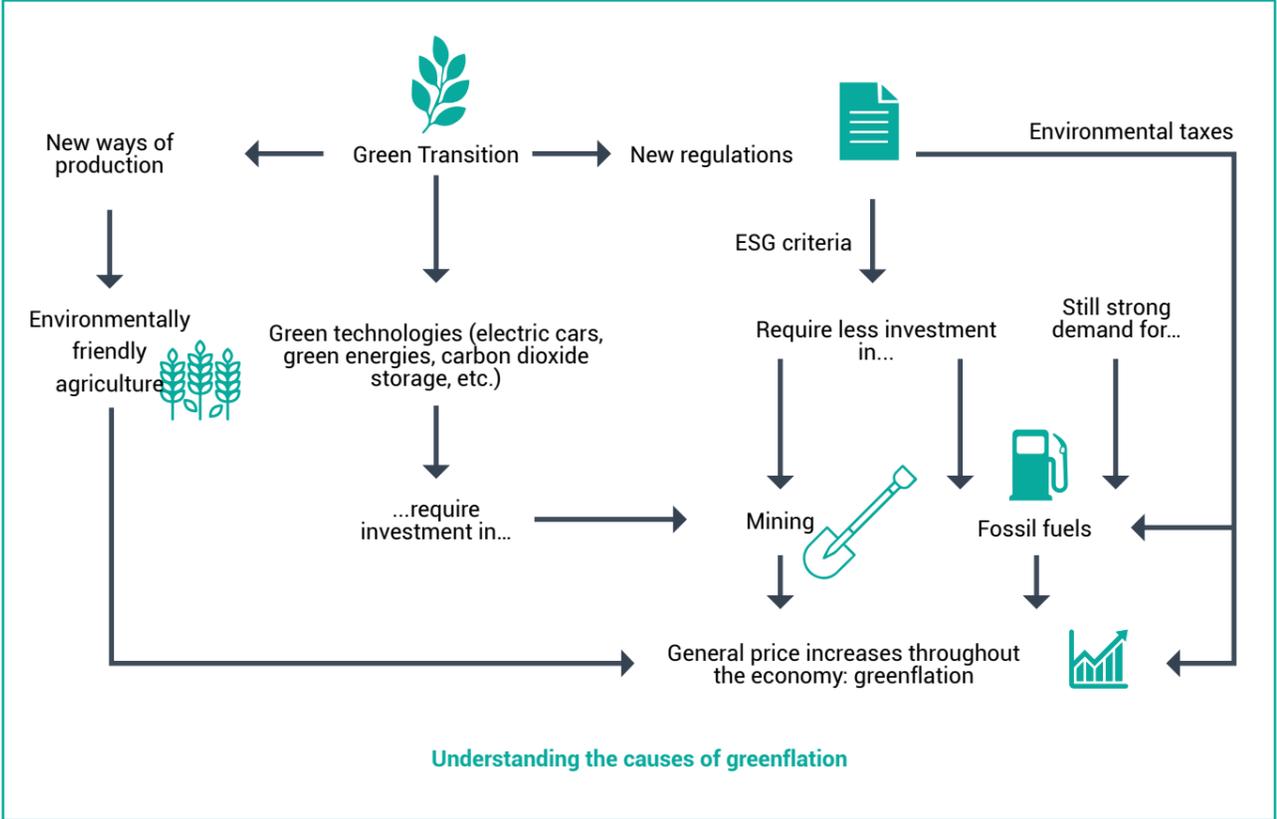
The concept of greenflation can be summarised as the increase in prices of goods and services (inflation) as a consequence of the transition of the current economy to a greener one (i.e. net-zero economy). As the concept is not yet set in stone and is the subject of much debate among economists, I will voluntarily use a broad definition.

Nevertheless, it is essential to point out that not all price increases are the result of greenflation. For instance, it would be absurd to think that greenflation is sufficient to explain the annual inflation rate of 5.3% in the EU in December 2021 (Eurostat 2021), as there are many other reasons for the rise in prices. Yet greenflation remains necessary to explain the inflation we are experiencing.

Nor is greenflation a sign of a failure of the economic system because it is characterised by continuing inflation: the green transition is a mammoth task which requires massive investments (Blas, 2022). Indeed, the American economist Pr. Harold T. Shapiro (1981) thought that continuing inflation could not be understood in a purely economic way. According to him, "inflation relates more directly to our political system's response to a changing social agenda than to any unresolved deficiency in our economic system". In fact, the Covid-19 crisis was the landmark for a global awareness of the social and environmental issues within our society. It has shaken up political agendas and accelerated the green transition.

CAUSES AND MANIFESTATIONS OF GREENFLATION TO HAVE IN MIND FOR EFFECTIVE RESPONSES

First of all, greenflation is reflected in an increase in the price of some commodities. The latter should be understood as the meeting of a strong demand for metals necessary for the green transition and a supply that is unable to meet such demand. Supply is low due to massive underinvestment in the mining sector, which had been already heavily impacted by Covid-19. China, for example, supplies nearly 60% of the world's aluminum, but has decided to cap new smelting in order to be in step with its carbon neutrality campaign (Sharma, 2021). Lastly, the decrease in productivity induced by environmentally friendly and ethical agriculture results in higher prices for agricultural materials



Moreover, greenflation is closely linked to rising energy prices. Contrary to what one might think, the cost of green energy has become cheaper than the cost of fossil energy. An IRENA report (2019) shows that onshore wind and solar photovoltaic power are now frequently less expensive than any fossil-fuel option and thus without any subsidies. However, renewable energies are not sufficiently scalable and require high investment (Schnabel, 2022). In the United States alone, it would take nearly \$4.5 trillion in investment to move to 100% renewable electricity generation (Shreve, 2019). Another problem is that many economies still rely on burning fossil fuels to generate electricity. Yet the price of oil is rising. Undoubtedly, the war in Ukraine has contributed to the rise in energy prices, but this is not the only reason. OPEC has significantly reduced its upstream investments since 2015 and pressure from investors is forcing oil majors to reduce their investments in exploration-production and to gradually turn to renewable energy. These trends lead to higher fossil fuel prices.

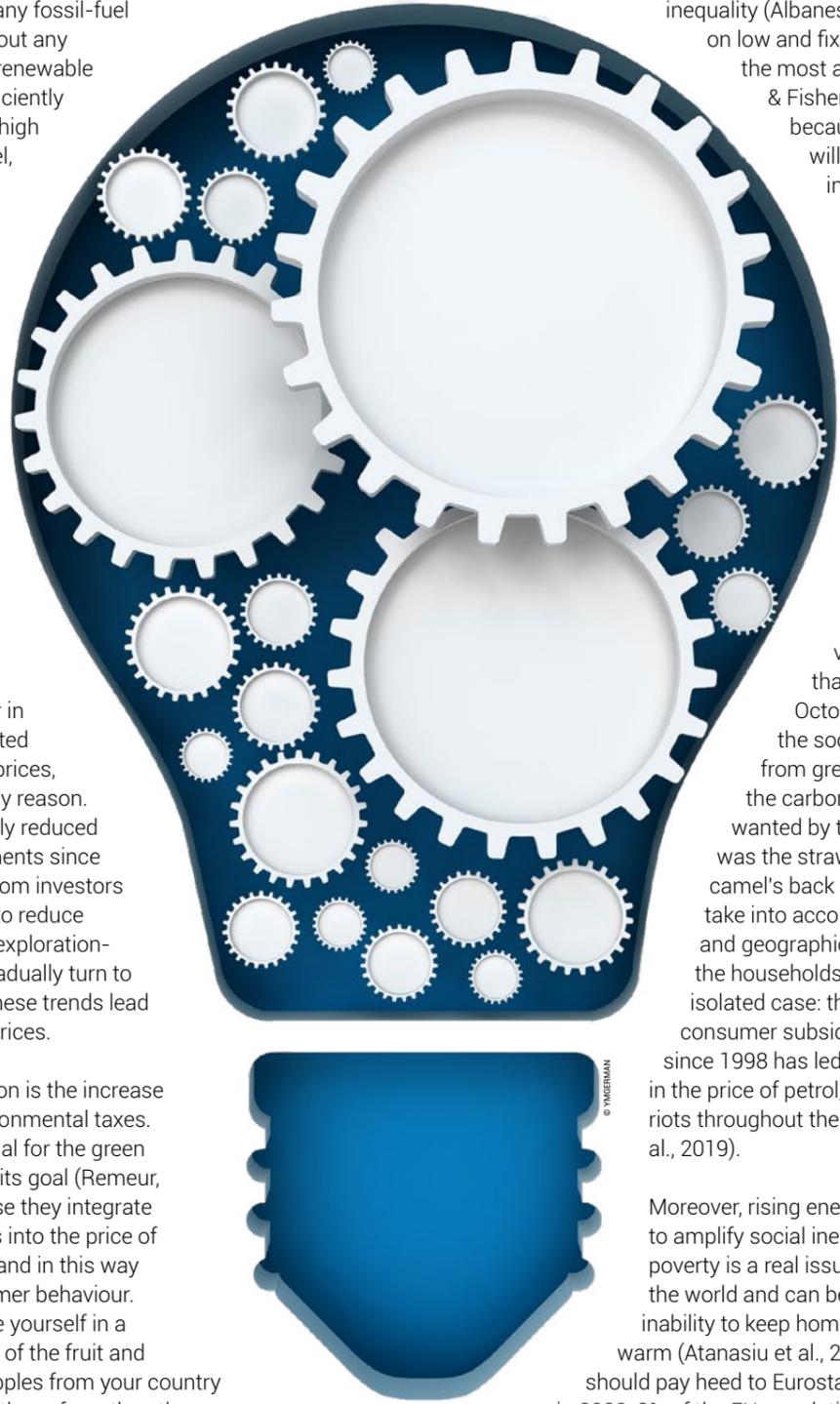
Eventually, greenflation is the increase in prices due to environmental taxes. The latter are essential for the green transition to achieve its goal (Remeur, 2020). This is because they integrate negative externalities into the price of goods and services, and in this way can influence consumer behaviour. For example, imagine yourself in a supermarket, in front of the fruit and vegetable section. Apples from your country cost \$2.9 per kg and those from the other side of the world cost \$3.5 (because of a possible environmental tax). Of course, if you are on a budget, you would buy the locally grown ones. Environmental taxes can therefore encourage consumers to consume in a more sustainable way and are a real game changer for the ecological transition.

TOWARDS NEW SOCIAL TENSIONS?

Greenflation will have the same negative effects as inflation and may lead to numerous social conflicts within states. Inflationary phenomena increase inequality (Albanesi, 2000). People on low and fixed incomes will be the most affected (Modigliani & Fisher, 1978). Not only because their wages will not keep up with inflation, but also because the less well-off families hold their savings in cash, whereas the more well-off families hold real assets (ibid.). As a result, their purchasing power decreases.

In France, the "yellow vests" protests that emerged in October 2018 exemplify the social tensions arising from greenflation. Indeed, the carbon tax increase wanted by the government was the straw that broke the camel's back as this tax did not take into account the economic and geographical situation of the households. France is not an isolated case: the gradual end of consumer subsidies in Indonesia since 1998 has led to a 149% increase in the price of petrol, and to numerous riots throughout the country (Postic et al., 2019).

Moreover, rising energy prices are likely to amplify social inequalities. Energy poverty is a real issue throughout the world and can be defined as the inability to keep homes adequately warm (Atanasiu et al., 2014). Politicians should pay heed to Eurostat data on the issue: in 2020, 8% of the EU population (i.e. 36 million people) were affected by such poverty. However, not all countries are equally affected: Bulgaria and Lithuania are the most affected ones, followed by the southern European countries. More than intra-state social conflicts, the rise in energy prices is likely to worsen the phenomenon of a multi-speed Europe.





UNDERSTANDING THE PROBLEM...

The situation is somewhat paradoxical: while the climate emergency is on everyone's mind, how can one protest against measures in favour of the green transition? Is it not possible for humans to reduce their consumption to achieve the common good?

In order to better understand the "yellow vests" and their behaviour towards the carbon tax, I decided to conduct a survey within a Facebook group called "Gilets Jaunes [Yellow Vests]". A small number of individuals answered (n = 21). Provided that they took the survey seriously, 95.2% of them were against the carbon tax, while 38.1% attach great importance to the climate issue. In fact, the problem is rooted in the misinformation that abounds in such groups, with almost 23.8% of respondents believing that climate change is merely a political chimera. Lastly, the vast majority think that the carbon tax lacks transparency (95.2%) and want to see something concrete in return (85.7%). These results are in line with other articles that accused the tax of opacity in its functioning (Cessac, 2019).

... TO PROVIDE EFFICIENT SOLUTIONS.

Firstly, governments must be able to help the most vulnerable ones, who will be the most affected by greenflation. For example, they can distribute energy vouchers, as in France or in South Korea (Podesta et al., 2021), or offer a reduction in green energy tariffs. Since 2009, Spain has been offering a 25% reduction in the regulated price of electricity to low-income households.

Some states (or regions) have already implemented more advanced economic systems: revenues from the carbon market are allocated to a green fund separate from the general state budget (Postic et al., 2019). Quebec, for example, has a green fund that finances projects such as greener transport, help to farmers so they can meet the challenges of environmental protection, housing renovation, etc. (MDDELCC, 2017). In California, the fund set up has similar missions with the constraint that 35% of the funds must benefit disadvantaged or low-income households (Breslow, 2020).

Finally, more audacious but still feasible solutions to reconcile greenflation and social tensions are proposed by some NGOs. For example, the carbon tax imposed on individuals and companies could partly be used to distribute money to less well-off households in order to protect their purchasing power. This distribution to the least well-off households would take the form of a "climate income" calculated on the basis of income, location and household composition (Climate Action Network, 2019). Australia and Sweden have hitherto reduced the taxation of the lowest incomes thanks to the carbon tax (Postic et al., 2019), and thus limit the social impact of greenflation.

COMMUNICATE, COMMUNICATE AND COMMUNICATE!

Following the "yellow vests" protests, it was regrettable for many activists that the French government gave up on increasing the carbon tax. Even worse were the prosaic explanations of the French government on the reasons for the withdrawal of the tax increase. Indeed, they dealt mainly with the tax pressure, whereas they should have highlighted the efficient, fair and transparent distributional policy that the possible upcoming modification of the tax could have enabled. The nub of the problem was the lack of transparency which led to the belief that the government had surreptitiously implemented a new tax. It is indeed essential for governments to communicate clearly on how the tax works and to insist on its benefits. In this way, the population is more likely to accept environmental taxation (OECD, 2010).

In any case, it is of the utmost importance that governments do not give up on measures for the ecological transition. As there is no such thing as a free lunch, everyone must do their bit. But governments have a responsibility to help the most vulnerable so that the green transition is not only beneficial to the environment, but also to society as a whole. ///



KEYS TAKEAWAYS

- Greenflation is the increase in prices as a result of the transition to a carbon neutral economy. Most countries have the ambition to be carbon neutral by 2050.
- Greenflation is both a venom and a remedy for our society, as it achieves the goal of carbon neutrality, while increasing inequality within society.
- To make greenflation fairer, policies must focus on redistribution towards the most vulnerable by helping them with their energy consumption, housing, transport and more broadly, their purchasing power. Governments must be able to give concrete expression to climate action.
- Lastly, transparency on the functioning of environmental taxes and their benefits is essential for their acceptance by the public.

THIS BUZZWORD MAY LEAD TO YOUR NEXT BUSINESS OPPORTUNITY



“
Firms are learning that by helping the earth, they are helping their business.”



Bo Anne-May De Boer, BBA student at **IE Business School**, and runner-up in the 2022 CoBS student CSR article competition, looks at benefits companies will gain for going green and explores several ways in which they can capitalise on existing resources, nature itself, and innovations in their supply chains.

Great, we have recognized the need for sustainability – now *how can we make it a reality?* Firms are facing increased pressure from law-makers and customers to engage in sustainable practices such as by decreasing their carbon emissions, reducing waste or recycling. Now corporations are left with little choice: they must act. The best way forward is to embrace sustainability and create value for the customers and the companies themselves. But how?

WHAT THE FUSS IS ALL ABOUT: THE PRESSURES THAT ORGANIZATIONS ARE FACING FROM A SERIES OF RELEVANT STAKEHOLDERS.

Particularly since the introduction of the 2015 UN Paris Agreement many countries have placed more importance on decreasing their environmental impact (United Nations). Similarly, the European Union's "Green Plan" highlights their aim to be the first climate-neutral continent. A big part of the UN and EU ambitions is formed by achieving zero net emission of greenhouse gases by 2050 (European Commission). Resultingly, corporations are experiencing increased urgency to engage in sustainable business practices.



As new laws that aim to regulate companies' environmental impact are put in place, firms are forced to change their operations. Simultaneously, customers are more aware of their environmental footprints leading to changing customer demands. On an environmental front, these demands revolve around active involvement in the care for the environment by reducing greenhouse gas emissions – such as carbon dioxide and the offering of more environmental-friendly products. While sustainable practices were not initially a great interest for many for-profit organizations, they are now forced to get involved in order to stay competitive and relevant. To make the most out of this pressure is to react innovatively and create new value streams for themselves and their stakeholders.

IT'S GETTING HOT IN HERE: WHAT IS LOW CARBON PRACTICE AND WHY IS IT RELEVANT?

Carbon on its own is a chemical element that is found in many compounds that are made up by the combination of elements (Britannica). It also forms a very common and harmful greenhouse gas: carbon dioxide (CO2). Carbon dioxide is the primary greenhouse gas (GHG) emitted through human activities, accounting for 80% of GHG emissions in the United States in 2019 (EPA). As mentioned, CO2 is greatly harmful to the environment as it is a major concern for global warming. For example, in the legally binding international treaty, the Paris Agreement, 193 parties agreed to reduce the GHG emissions to prevent the global temperature to increase by 1.5 degrees Celsius compared to pre-industrial levels. As

the current global temperature is only 0.4 degrees Celsius away from this benchmark, there is an increased fear of global warming consequences (United Nations). Therefore, carbon dioxide emissions must be reduced – urgently.

Firms are able to support the mission of keeping the global temperature below the 1.5-degree Celsius benchmark by incorporating low carbon practices. Low carbon practices are characterized by the low levels of carbon released throughout the entire value chain of a company. Companies may do this in various ways: by adapting their supply chains, replacing materials or resources, reducing their output to decrease operations, or even through more innovative solutions.

The role of low carbon practices is relevant to reach net-zero goals, and is perhaps the most effective way of attaining the 2050 deadline. This is because firms came up with innovative ways to reach net zero goals without actually having much impact. *How is that possible?* Firstly, many firms, such as confectionary producer Zentis GmbH, offset their carbon emissions by planting trees around the world by financing third party tree-planting organizations (Zentis). This means, they are not adapting their actual practices, but rather offsetting the carbon they produced with temporary solutions. Secondly, solutions such as carbon offsetting are hard to track, meaning companies can greenwash easily. Contrarily, changes in business practices offer a more reliable, measurable and impactful way to determine a firm' involvement in decreasing their carbon effects.

FROM BORING TO BRILLIANT: SUSTAINABILITY IS NOT AS UNINTERESTING AS IT MAY SEEM

You may think that talks about carbon dioxide seem repetitive or boring. However, it is the key for driving positive change. Sustainability is not just a buzzword – it is a business opportunity. Some firms have discovered this for themselves by creating new value, not just for the customers, but also for their own benefit, while implementing more low carbon practices. As previously learned, through the limitations posed by laws, regulations and pressures, companies are forced to adapt. To do so, some companies have been creative and innovative in order to establish competitive advantages, generate new revenue streams, increase their client base, or decrease their costs. *So, how can decreased carbon dioxide emissions lead to increased company success?*

THE BEAUTY OF NATURE: TAKING NATURALLY REPLACEABLE RESOURCES TO CREATE VALUE

One common way to reduce carbon emissions is by making use of ample, naturally occurring resources, such as sunlight, wind or water. These substitutes for energy generation in form of solar, wind and hydraulic power, make the need for high CO2 emitting alternatives, such as fossil fuels or coal, redundant. For firms, the implementation of natural substitutes creates value in the shape of decreased costs of production in the long-term as sun, wind, and water are free of cost and they omit new carbon taxes. It also supports firms' long-term relevance, as transitioned companies can remain competitive in a carbon-neutral world, and will attract sustainability-driven customers from competitors to expand market-share.

An example of a firm that has embraced the switch to low carbon practices and are creating value is *Apple*. Already in 2016, *Apple* was running 93% of its overall global operations on renewable energy (The Climate Reality Project). This set an example for *Apple's* competitors, giving them a first mover advantage.



Aside from energy efficiency, substituting the materials of a product with renewable and natural processes also helps reduce carbon dioxide emissions. For example, *Pangea Organics* has implemented the natural process of composting and plant growth in their packaging of body products. The firm created packaging for their products that contains seeds and is entirely biodegradable (Sweeney). This means that the boxes can be planted in soil causing new plants will grow as a carbon offset, and the composability follows a natural process. This reduces the need for recycling, burning or waste, all leading to increased CO2 levels or environmental harm. *Pangea Organics'* innovative take on low carbon practices gained them great media awareness. Their unique selling proposition through sustainable approaches to product design helped them with an increased customer base and established a competitive advantage.

TWO BIRDS WITH ONE STONE: TWICE THE VALUE IN ONE PROCESS

Sustainable practices have helped firms search for creative solutions in how to continue their business offering, or how to improve it. One way in which firms tend to improve their business is by increasing their efficiency. This often means reducing lead times, increasing productivity and generating more output. While the increase of output may initially sound counter intuitive to what sustainability stands for, it can actually be a way to reduce carbon emissions and improve sustainable practices. Firms can be more efficient by implementing the business model of co-product generation. The idea here is to get twice the number of sellable products in one process, reducing the carbon levels for each product.

For example, in the process of creating sugar, *British Sugar*, also produces animal feed from the by-products of the sugar. This reduces waste, and provides them with two marketable products to sell and generate revenue. Both products will also have a lower carbon impact, as the carbon emissions produced are divided over them all.

ONE'S WASTE IS ANOTHER MAN'S TREASURE: HOW WASTE TURNS INTO A RAW MATERIAL

In a supply chain, carbon dioxide emissions are produced at all stages: including the supplier. In the initial raw material phase agricultural practices can be GHG emission intensive: from farming, to machinery for processing, to transportation and more. To reduce the carbon emissions at this stage, some companies use the waste of others. This also reduces the carbon emissions at the waste management stage at the end of a product lifecycle, where burning plays a great role in carbon emissions. The name for the use of byproducts or waste of one firm as an essential product for another is called industrial symbiosis. This low carbon practice is embraced by *Toast Ale*, a beer producer. They take excess bread and the surplus of baked goods from bakeries, grocery stores and more as the main ingredient for their beer (Toast Ale). Their innovative idea of using bread as a substitute for barley has helped avoid 48 tons of GHG emissions and saved over 2.5 million slices of bread (Toast Ale).

A SECOND LIFE: CREATING VALUE WHILE OMITTING CARBON-INTENSIVE PRODUCTION PROCESSES

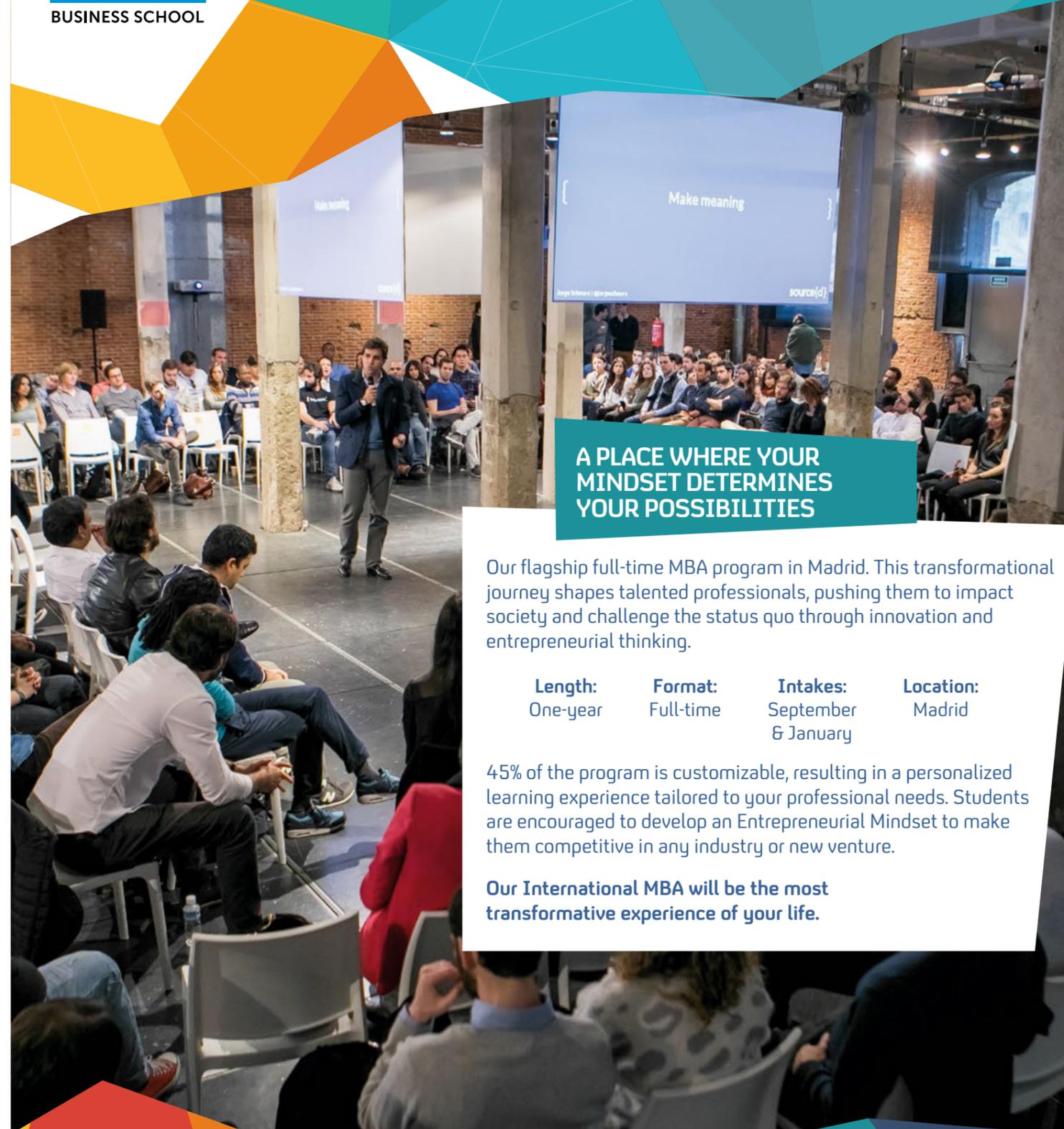
Another way to reduce the carbon emissions and create value for customers and the company is a concept known as "next life sales". Next life sales are a creative solution to resell used products as certified second-hand goods. This means, that a company can enjoy the revenue of a product twice – once as a new good, and once as a certified resold good. This creates monetary value for the firm, while also creating value for a customer who can benefit from increased product accessibility. For example, *Lely*, a Dutch agricultural machine manufacturer produces a robotic milking system for cows, called *Astronaut (Lely)*. Sometimes, a machine is returned or machines are bought back by the company when a client wants a newer model or it is damaged. *Lely* has put in place a certification process where their second-hand *Astronaut* machines undergo tests and refurbishing (*Lely*). When ready for resale, they are labelled as being "Taurus certified" and are ready to be sold in a "next life sale." By omitting the need for more production to earn revenue, *Lely* has managed to find a low carbon practice to create more revenue with minimal cost and effort.

FROM LIMITATION TO VALUE CREATION

Companies are forced to become more engaged in sustainable operations by law-makers, customers, pressure groups and other stakeholders. In order to stay relevant in the market, to compete with competitors or to benefit from financial or marketing-related perks, firms are forced to act – and they are. Increasingly more firms are becoming involved in low carbon practices in creative and innovative ways. Some ways include embracing the resources provided, and processes crafted by nature, while others involve adaptations to the supply chain in order to create double the value in one process. Firms are learning that by helping the earth, they are helping their business. They are learning to use sustainability as a vehicle to drive value for customers and themselves. However, what will happen when these innovative ideas become outdated? How might new value be created? **///**

KEYS TAKEAWAYS

- While carbon-zero goals are good for orientation to keep the global temperature under a 1.5-degree Celsius increase from pre-industrial levels, it has caused firms to off-set their carbon which has allowed for greenwashing and difficult measurements of company impact.
- Low carbon practices are characterized by the low levels of carbon released throughout the entire value chain of a company. Companies achieve this by adapting their supply chains, replacing materials or resources, reducing their output to decrease operations, or even through more innovative solutions.
- Some companies are finding creative and innovative ways to establish competitive advantages, generate new revenue streams, increase their client base, or decrease their costs in order to create value for themselves.
- Companies are embracing natural resources and processes as a way to incorporate low carbon practices into their operations. This allows them to reduce their costs, and gain a larger customer base, or even benefit from first-mover advantages.
- Corporations are also finding ways to produce two products simultaneously, or substituting the raw materials of one product with the waste, or co-product, or another. This helps reduce waste and carbon emissions for the entire new development of a good or for the processing of waste.



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IS AI BECOMING THE NEXT OIL AND GAS?



Nicolas Cador, MiM student and **ESSEC Business School** article competition finalist, navigates through the challenges Information technology faces to reduce its carbon footprint.

The use of Artificial Intelligence (or AI) is growing. The FAANGs have succeeded in training models based on consumer data to innovate and create value – they are now the most valuable companies on Earth. Volume, velocity, variety, veracity and value are the five keys they have used to make energy-consuming data a huge business.

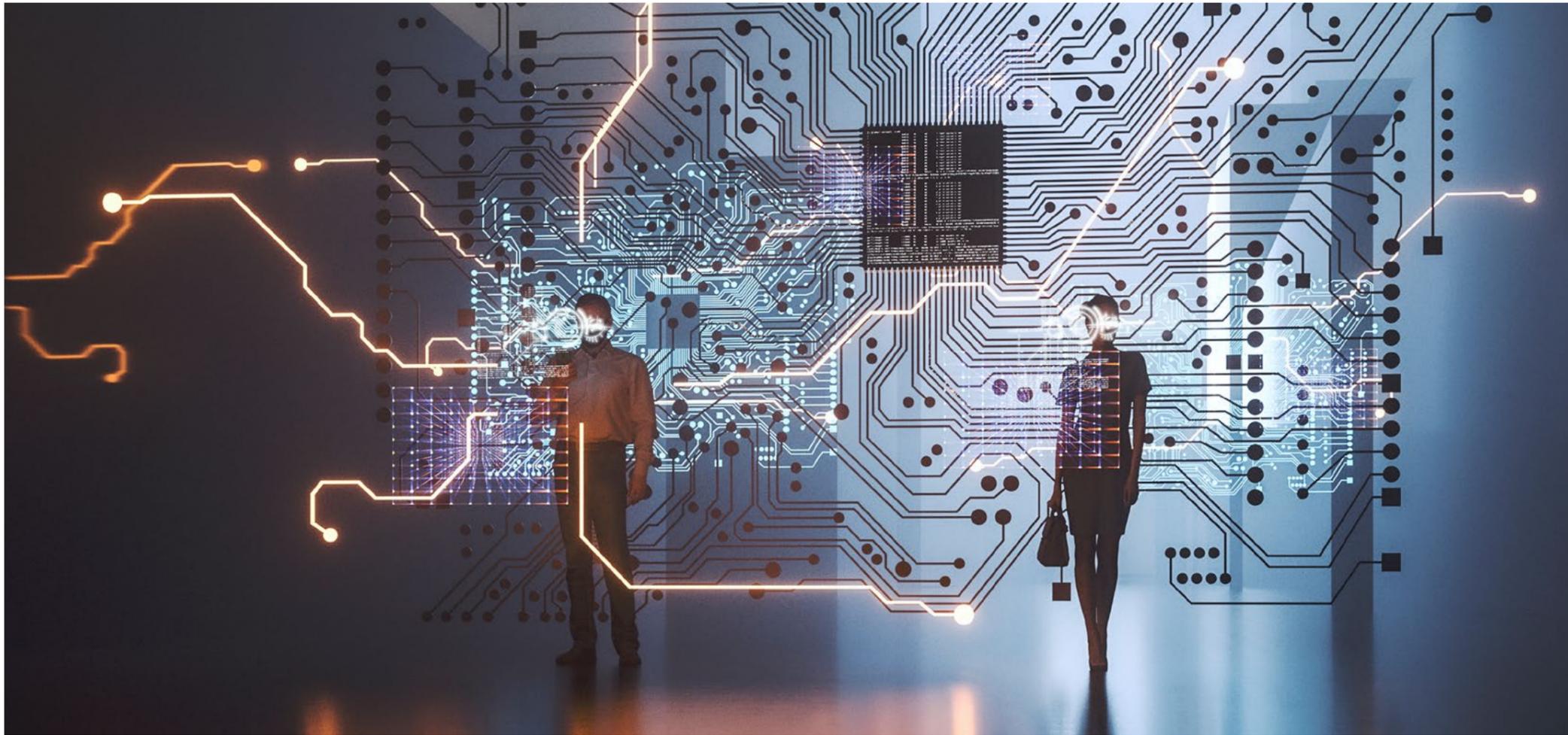
However, as the climate emergency has just been restated by the 6th Assessment IPCC report, how can we ensure that digital and AI – forecasted to account for 10% of global emissions in 2030 – do not become the most polluting industry by the end of the century?

MONITORING THE CARBON FOOTPRINT OF AI

AI, thanks to its computing power, enables process optimisation: better logistics, waste reduction, and resource extraction impact computation are indeed made possible with AI. The study "How AI can enable a sustainable future" by PWC indicates that AI could reduce global greenhouse gas emissions by 4% by 2030.

But, on the other hand, the consumption of AI-driven technologies will create a high demand for energy. AI application, to be trained, relies on digital infrastructures – cloud, servers, data centres – and on a large data bandwidth. According to the International Energy Agency, data centres currently consume approximately 200 terawatt-hours (TWh), or nearly 1% of global electricity demand. By 2025, average estimates suggest that energy consumption will increase by a further 25%.

Cloud computing, the metaverse and new IoT services reinforce the probability of an energy-intensive evolution scenario.



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Moreover, the rise of cloud computing, the metaverse and new IoT services reinforce the probability of an energy-intensive evolution scenario. But direct and indirect global digital carbon impact is systematically subject to very wide estimates, given that taxonomy varies between jurisdictions.

While the digital sector is constantly evolving in terms of usage and equipment, it is still difficult to assess the ongoing carbon impact accurately. Models are not refined enough and do not allow us to clearly communicate the energy efficiency of a particular process using AI. This would enable public authorities to adopt measures towards energy optimisation.

DEEP LEARNING VS. GREEN CODING: A WIDE GAP

Deep Learning, a sub-technique of artificial intelligence-based neural network models, is an even more energy-intensive practice. Its use improves learning speed: DeepMind, owned by Google, recently published an article announcing a breakthrough accelerating fusion nuclear science.

But pure performance gains are achieved through larger data volumes, larger models, and ultimately more computations.

Researchers at MIT have calculated that training a deep learning model for 4 to 7 days emits as much CO₂ as a human being for 57 years, or as much as 5 cars during their lifetime, only to generate and recognise words very close to human language (NLP) – enabling for instance a voice command to be interpreted by Google Assistant.

Of course, it should be borne in mind that training such complex models is only deployed for a small share of AI solutions. But energy optimisation is often missing from AI development projects. Software engineers are the first to admit that they lack concrete baselines and indicators to gauge themselves. Using surveys conducted at the 38th International Conference on Software Engineering (464 software engineers), researchers found that where green coding most matters, its practice is rare. Green coding consists in ensuring that the code uses as few processor instructions and as little memory space as possible to reduce energy consumption. But mobile apps are too often developed in a rush to reach the market quickly. Poorly optimised, some can drain a battery in a day, requiring frequent recharging.

A nascent regulatory framework does not yet encourage developers to update their source codes. Companies are slowly starting to audit their software infrastructure, but competent audit services are still lacking.

EDUCATE ALGORITHM PROGRAMMERS AND CONSUMERS

To create a challenging climate for AI programmers, it is necessary to promote energy-efficient algorithms and finance R&D.

Raising awareness and training developers on these issues during their academic years is essential. As said within the latest World Economic Forum report, AI developers "must incorporate the health of the natural environment as a fundamental dimension." And in its "Recommendation on the Ethics of Artificial Intelligence", UNESCO states: "Member States should ensure that AI actors give preference to data-, energy- and resource-efficient AI methods."

Within the community, some good practices are starting to be shared and dedicated blog sites are emerging. To reduce the energy produced by deep learning models, researchers from the University of Montreal recommend that developers use computationally efficient techniques such as Bayesian optimisation and random optimisation.

It would also be interesting to develop metrics or indexes that consumers could understand – such as Energy Rating Labels used for household appliances or buildings. The energy performance of a given application (website, applied task, API) would be quantified in kWh consumed.

The benefits of such a practice would be twofold: 1) educate consumers on their digital carbon impact – pushing for a respectful use of technology (digital sobriety), 2) serve as a recognised benchmark prompting software engineers to develop better designed and less energy consuming software.

Tools do exist today: CodeCarbon seamlessly integrates into Python codebase to estimate the CO₂ produced by cloud resources. But the quest for energy-efficient algorithms is still subject to the goodwill of companies. Making regular code audits compulsory under penalties would be a good way to ensure optimisation across the digital world.

While it is difficult to assess AI carbon impact on an ongoing and accurate basis, more refined calculation models and dedicated tools are needed to drive legislation. Enforcing digital solution optimisation is key, as Web 3.0 will become increasingly dominant in the global economy.

Raising awareness today about tomorrow's AI energy challenges will drive programmers to natively design efficient solutions, while consumers will have to adopt environmentally friendly digital uses. Of course, the energy mix also needs to be further decarbonised: the carbon footprint of the digital sector could be reduced by more than 80% if all electricity consumed came from renewable energy sources. ///

KEYS TAKEAWAYS

- Growing carbon impact of digital and AI is forecasted to account for 10% of global emission in 2030
- Issues in quantifying AI positive environmental impact results in a lack of regulatory involvement
- Regulation and auditing are needed to improve AI energy efficiency
- Raising awareness is key to prompt programmers to design eco-friendly AI solutions

CROSS-LISTING AND CSR: FRIENDS WITH BENEFITS



While good CSR performance improves the overall performance of a firm, can it also be used as a gateway to different markets? Professors **Haina Shi, Xin Zhang** and **Jing Zhou** of **School of Management Fudan University** explore how firms in developing countries use CSR performance as an entry strategy to developed markets.

Related research: *Cross-listing and CSR performance: evidence from AH shares*, Shi et al. *Frontiers of Business Research in China*, 12:11.

CAN THERE BE 'A' DEFINITION OF CSR?

Even though CSR has been in the limelight of various stakeholders both in the business world and outside, it has been surprisingly difficult to arrive at a universal definition of CSR. The implication of this difficulty is indeed a characteristic of the concept itself.

One way of defining CSR is the firms' considerations of, and response to, issues beyond the narrow economic, technical, and legal requirements for the firm to accomplish social and environmental benefits along with the traditional economic gains that the firms seek.

Yet another definition describes CSR as to how businesses engage their stakeholders, including shareholders, employees, customers, suppliers, governments, international

Firms from emerging markets are using cross-listing as a means and motivation to improve their CSR practices.



organizations, and the natural environment through policies, processes, and procedures.

Regardless of the various definitions, the bottom line is straightforward. CSR encompasses activities that take into consideration social and environmental concerns. The definitions depict an intrinsic value to CSR but there has been a rapid increase in its recognition, especially in the developing markets.

CONCERN FOR SOCIETY OR SHAREHOLDERS?

It is a no-brainer that CSR is important to the environment and society as a whole. But why are businesses interested in CSR practices when, in most cases, it is going to cost them financially? Is it because the firms are concerned about their footprint or is it because such practices offer them a business advantage?

If someone is even vaguely aware of the history of businesses and firms, it is pretty easy to find out that they rarely partake in something that does not benefit them directly – and CSR is no exception, at least in most cases.

The primary reason for firms to focus on CSR practices is that these activities enhance the firms' relationships with various stakeholders, and without their participation, firms cannot survive. It is becoming increasingly important for businesses to showcase their beliefs and values along with their products and services.

Internally, good CSR performance is found to improve employee relations and customer satisfaction/loyalty, increase firm competitiveness and product quality, lower the cost of capital and firm risk, and build reputation, all of which may, in turn, increase firms' profitability.

Until now, the impact of CSR has been predominantly observed in developed countries with concentrated markets. However, being increasingly aware of the importance, firms in emerging markets are now actively participating in corporate social responsibility (CSR) practices.

CROSS-LISTING – EXPANSION OF EXCHANGES (STOCK EXCHANGE)

Cross-listing is the listing of a company's common shares on a different exchange than its primary and original stock exchange. It allows firms to access more developed capital markets and achieve better valuation.

Apart from better valuation and access, there is also a perception premium associated with cross-listing. Foreign firms and Chinese firms cross-listed in the US and Hong Kong markets, respectively, are better valued than their non-cross-listed counterparts from the same country.

For the shareholders and investors, cross-listing is an advantageous proposition. In addition to increasing the firm valuation, it also decreases the risk by sharing the risk with foreign and domestic investors. It also offers the shareholders better information transparency, disclosure, and protection.

CROSS-LISTING AS A MEANS FOR CSR PRACTICES

Having established the advantages of cross-listing for firms, it is understandable that firms would be interested in cross-listing. However, since developed markets demand better CSR performance, cross-listing requires firms to monitor financial intermediaries, such as analysts, underwriters, and auditors in a more stringent manner.

In a way, firms from emerging markets are thus using cross-listing as a means and motivation to improve their CSR practices. And the measures taken in the CSR domain in an effort for cross-listing have in fact proven that cross-listed firms perform better in CSR than otherwise similar non-cross-listed firms.

Apart from internal measures, cross-listing also subjects firms to the securities laws and accounting standards of the host country. As the laws and standards are more stringent in developed countries than in developing countries, it forces firms to comply with higher levels of CSR regulations.

When venturing into a new market, investors are looking for every possible information on a firm. One of the most important sources of non-financial information for investors is sustainability and CSR reports. Since foreign investors value such information, firms tend to perform better in this regard.

Looking at the phenomenon from the flip side, governments and organizations can propagate better CSR practices in developing markets using cross-listing as a tool. Indeed, CSR can't be a strong enough incentive on its own – but coupled with increased valuation and reduced risk, it might do the trick.

STEPPING STONE OR STARTING POINT

Cross-listing is not without its problems. Given that investors of a foreign market have some requirements from the firm when it comes to cross-listing, those requirements may not always align with the requirements of the investors in the home country. This puts the firm in a tricky position to trade off one for the other.

Cross-listing, also, does not naturally extend to corporate social responsibility. It only acts as a small part of the vast ocean of CSR. And even though cross-listing enables the firms to employ better CSR practices, at the end of the day firms still operate in their host country and so are only constrained by its national environmental and labour laws.



Furthermore, CSR calls for firms to go beyond the minimum requirements of law. In fact, this is one reason for the difficulty in universally defining such a concept. Therefore, cross-listed firms should not look at CSR as a stepping stone that is forgotten once the objective is reached, but rather as a starting point for an impactful CSR mission.

TIME TO WAKE UP

CSR can't be treated as a trend or as a Key Performance Indicator (KPI) anymore. It is extremely important to focus on it now so that future generations don't suffer from the irreversible consequences of our actions. It is worth noting that we have officially entered the phase of climate change where it can no longer be reversed with businesses having had a major role to play in this regard.

If cross-listing is going to encourage firms to better their CSR practices, it is indeed a tactic that many firms can use. However, if firms see CSR performance as a mere formality to enter a developed market, it defeats the whole purpose of the CSR concept. Are we headed towards impending doom or will CSR become an intrinsic part of businesses and save our future? It is just a matter of time. ///

KEYS TAKEAWAYS

- Regardless of its various definitions, the bottom line is straightforward. CSR encompasses activities that take into consideration social and environmental impacts
- Good CSR performance is found to improve employee relations and customer satisfaction/loyalty, increase firm competitiveness and product quality, lower the cost of capital and firm risk, and build reputation, all of which may, in turn, increase firms' profitability.
- Being increasingly aware of the importance, firms in emerging markets are now actively participating in corporate social responsibility (CSR) practices.
- Cross-listing is the listing of a company's common shares on a different exchange than its primary and original stock exchange.
- Firms from emerging markets are using cross-listing as a means to improve their CSR practices as well as venture into developed markets.
- Such measures have proven that cross-listed firms perform better in CSR than otherwise similar non-cross-listed firms.
- Cross-listing, also, does not naturally extend to corporate social responsibility. It only acts as a small part of the vast ocean of CSR.
- Cross-listed firms should not look at CSR as an entry requirement to developed markets but rather as a starting point for an impactful CSR mission.

REALIZING LOW-CARBON NEW VALUE AROUND CUSTOMERS, PRODUCTS AND ENTERPRISE OPERATIONS



“
Carbon neutralization and low-carbon practices are no longer multiple-choice questions.”



Dong Wang, School of Management Fudan University

Winner of the 2022 CoBS student CSR article competition, looks into a dovetailed solution of benefits for stakeholders involved in the quest to reduce carbon emissions.

Nowadays, it is generally accepted that human excess will lead to climate change. Global warming has been an indisputable fact as a result of greenhouse gases directly or indirectly produced by human life and economic activities. With the emission of greenhouse gases, the impact on the earth's climate system has brought disasters, including glacier melting, rising sea-levels and frequent extreme climate events. Consequently, the world has been actively making suggestions for cooling the earth and trying to find "meaningful and effective" measures to save it. Emission reduction has become a responsibility and obligation that each of us and every enterprise should take the initiative to undertake.

In spite of the fact that many enterprises have also begun to join global climate governance, participate in low-carbon practice and start the journey of carbon neutralization, it is still a very important topic regarding if or how low-carbon practice can make more profits or bring new value-added effects for enterprises, as enterprises are created to seek profit. According to experts' judgment and relevant data, the value of low-carbon practice is mainly embodied in three aspects: customer-oriented, enterprise-based, and product-centric, which can be elaborated as follows.



CUSTOMER-ORIENTED TO IMPROVE LOW-CARBON EXPERIENCE AND CREATE A NEW LOW-CARBON LIFE

a) Low carbon experiences enhance low-carbon demand and drive the sales of low-carbon products

Responsibility and sustainability are increasingly accepted by the public. Everyone has tried to integrate low-carbon life and participate in the new low-carbon life more and more actively, hence making low carbon products increasingly welcoming. For example, more and more residents begin to travel by public transport and use new energy vehicles, recyclable or degradable fast-food boxes.

These new low-carbon activities and new experiences mentioned above can trigger new market demands, such as the promotion to the development of the new-energy vehicle industry, and to the research and development of degradable materials, and so on. In this scenario, enterprises can actively try to add low-carbon elements to the customer experience, improve the sense of low-carbon experience, and create a new low-carbon life with consumers, which will bring more low-carbon business opportunities to enterprises.

b) Promote carbon inclusion and achieve common prosperity.

While consumers improve low-carbon awareness and actively promote low-carbon behavior, the international community is also generally implementing the carbon inclusive system to encourage and orderly allocate resources through the scientific planning of "whoever reduces carbon will benefit". In this process, the volume of low-carbon behavior of a single consumer is too small. Therefore, the interaction between enterprises and consumers can form a converging influence. In addition to spiritual recognition, low-carbon behavior

can also bring tangible benefits so as to achieve common prosperity.

Taking automobile manufacturing enterprises as an example, based on the American ZEV (Zero Emission Vehicle) act, automobile manufacturers are required to produce a certain number of zero emission vehicles every year to obtain ZEV credit points. Therefore, for Tesla, the financial report data in recent seven years show that Tesla's revenue from carbon credits business has reached US \$3.834 billion, and its revenue from selling carbon credits in 2020 is US \$1.58 billion, while the annual net profit of that year is US \$721 million, and the carbon credits revenue is more than twice the annual net profit.

Take "enterprise as the foundation", reduce consumption and emission, and increase enterprise profits.

In the course of low-carbon practice, an enterprise will not only bear social and environmental responsibility, but also consider the rate of return on investment. Therefore, from the perspective of the enterprise itself, low-carbon practice will create value in two aspects:

a) Starting from the corporate brand, perform responsibilities through ESG, undertake social responsibilities and improve the brand image.

ESG (Environment, Social & Governance), a value concept that pays attention to the performance of environment, society and corporate governance, is a key factor in measuring the sustainability and moral impact in the investment strategy of enterprises or companies. It can build social capital and trust for enterprises and enhance their ability to resist market shocks and environmental disasters.

Especially at present, the pandemic has brought challenges to global economic development. Enterprises can achieve sustainable growth of performance through ESG, improve brand strength and maintain the continuous leadership of the global market. In short, it is an effective way to improve sustainable income.

b) Starting from the enterprise operation, the production cost is reduced through energy conservation and consumption reduction.

In the process of low-carbon practice, enterprises mainly consider the integration of industrial productivity and ecological productivity, rather than offset each other. Therefore, two aspects can be taken into consideration: one is the impact of consumption on cost, and the other is the impact of consumption on the environment. Around these two impacts, the new value created by an enterprise's low-carbon practice is mainly reflected in the following two aspects:

IMPROVING ENERGY EFFICIENCY AND REDUCING DECARBONIZATION COSTS

In terms of enterprise production, if energy efficiency can be improved, energy consumption will be reduced from the consumption side. Promoting the recycling and comprehensive utilization of energy is an effective way to improve energy efficiency. Using waste resources to create new value or realizing "one energy for multiple uses" has become the focus of energy conservation and consumption reduction of many energy and manufacturing companies.

Cogeneration is an important starting point for improving energy efficiency and saving energy. Shell generates electricity through cogeneration, and the waste heat from

the Pernis Refinery in Rotterdam, the Netherlands, and heats 16,000 households. Its Apomatox platform in the Gulf of Mexico has reduced fuel consumption by about 40% and carbon emissions by about 20% ~ 25% through combined thermal power generation.

Since ExxonMobil launched the "global energy management system" in 2000, the energy efficiency of the company's refineries and chemical plants has increased by 15% ~ 20%.

Taking the above data of Shell as an example, according to the relevant data and based on the energy price in February 2022, it has been calculated that the electricity charge of Netherlands residents is € 0.35/kWh, and the annual heating consumption of Netherlands households 8,000 kWh. And based on the data of Germany in 2019, the average emission of carbon dioxide is 401g/kWh. So heating 16,000 homes a year can bring the following benefits:

- Economic benefit: $16,000 * 8,000 * 0.35 = € 44.8$ million
- Emission reduction: $(16,000 * 8,000 * 401) / (1,000 * 1,000) = 51,328$ t.

Therefore, when improving energy efficiency, the demand for energy consumption will be smaller than the original demand, the cost of energy consumption will be reduced, and emissions will be reduced accordingly.

USE OF RENEWABLE ENERGY TO REDUCE ENERGY COSTS AND REDUCE EMISSIONS

According to data on global power plants thermal power generation, especially coal-fired power, is one of the main sources of carbon emissions. The international power industry is also vigorously advocating the adjustment of energy structure, promoting the use of renewable energy, and increasing the rate of industrial electricity.

From the current global application, wind and photovoltaic energies are more effective in renewable energy power generation, especially photovoltaic power generation, which has a good application effect in the world. Moreover, distributed photovoltaic technology is becoming more and more mature.

Taking Chinese industrial enterprises as an example, it is assumed that 10,000 square meters of rooftop photovoltaic power stations are being built (the actual inclination, obstacles, shadows, etc.) and that if all power generation is used for self-use, the power generation cost shall be ¥0.4. The peak electricity price of municipal power is more than ¥1, and the normal electricity price is ¥0.5, which is calculated according to the average ¥0.8/kWh. And according to CLCD (China life cycle basic database), 1 kWh of mains power is generated, accompanied by 960 g of CO₂.

According to empirical calculation, 1.5-MW photovoltaic power generation can be created. The following benefits will be generated within one year:

- The power generated will be: $1,500 \times 3.9$ (effective sunshine hours) $\times 0.8$ (system efficiency) $\times 320$ days (it is expected that there will be sunnier days) ≈ 1.5 million kWh.
- Economic benefits obtained will be: $150 \times (0.8-0.4) = \text{¥}600,000$.
- Reduced carbon emissions: $(150 \times 10,000 \times 960) / (1,000 \times 1,000) = 1,440\text{t}$.

The data of reduced carbon emissions is consistent when the calculation is applied to European countries, but the economic benefits will be more objective. Therefore, the use of renewable energy can effectively reduce the cost of energy consumption and reduce carbon emissions.

PROMOTE GREEN SUPPLY CHAIN WITH "PRODUCTS AS THE CORE"

With the popularity of low-carbon products, green products are increasingly accepted by the people. Taking products as the core and the whole life cycle, building a green supply chain from supply, logistics, consumption, data as well as recycling effectively improves environmental performance, makes resource utilization efficient and minimizes environmental impact. This enhances the green image of the enterprise, wins the favor of customers and enhances the premium ability of products. At the same time, we can reduce carbon from the supply side through green products and contribute to the continuous cooling of the earth.

To sum up, carbon neutralization and low-carbon practices are no longer multiple-choice questions, but blank filling questions faced by enterprises. In the face of the continuous global warming problem, it is incumbent upon everyone to bear social and environmental responsibility. Moreover, through effective low-carbon activities endorsed by enterprises, we can create new value for society, companies and consumers. ///

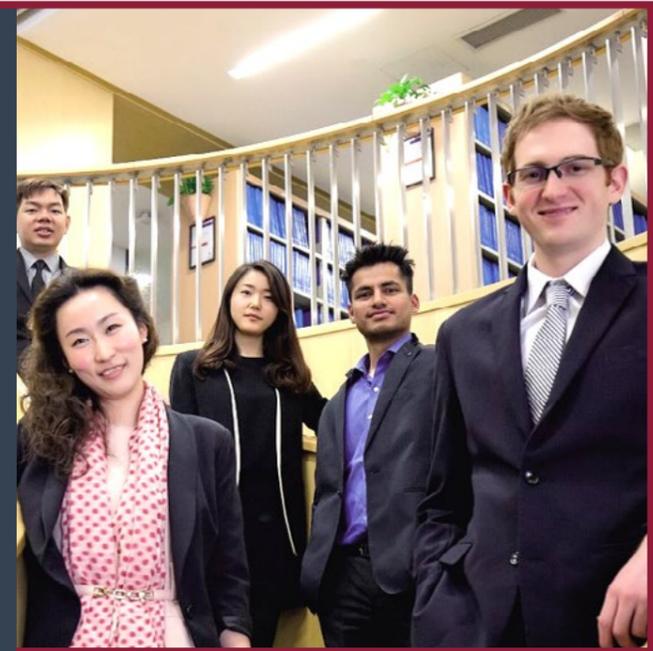


KEYS TAKEAWAYS

- The value of low-carbon practice is mainly embodied in three aspects: customer-oriented, enterprise-based, and product-centric.
- Low carbon experiences enhance low-carbon demand and drive the sales of low-carbon products.
- Enterprises can promote carbon inclusion to achieve common prosperity
- Starting from the corporate brand, perform responsibilities through ESG, undertake social responsibilities and improve the brand image.
- Starting from the enterprise operation, the production cost is reduced through energy conservation and consumption reduction.
- Taking products as the core and the whole life cycle, building a green supply chain from supply, logistics, consumption, data as well as recycling effectively improves environmental performance, makes resource utilization efficient and minimizes environmental impact.

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GREENFLATION: THE DIRTY COST OF BUILDING A CLEAN AND GREEN ECONOMY



There is a debate around the potential cost of a green transition. "Greenflation" would be caused by higher demand for greener solutions, and the consequences of new public policies (e.g. green taxes). How can we deal with the social tensions that could possibly arise with greenflation? **Salil Shahane, ESSEC Business School** MiM student and competition finalist, explores.

GREENFLATION – THE CAUSE AND THE EFFECT

The need for green energy is more than ever today and this has ironically put a lot of strain on conventional energy sources. The more the push towards this greener transition, the more expensive the whole campaign. Government policies have positively influenced the demand for green energy resources but tightening regulations for the conventional resources required to produce green energy have affected supply – making these resources expensive. The unintended result is "Greenflation", caused by rising prices for raw materials like copper, aluminum, and lithium that are essential for harnessing energy from non-conventional energy sources like Solar and Wind. Copper and Aluminum – two of the most important minerals used in the electrification processes required to create greener resources – end up doing more damage than good to the environment due to their procurement processes. As such, public policies

“ Shutting the old economy too fast could lead to exorbitantly high prices in the newer and the cleaner ones of the future. ”



INCREASING AWARENESS AROUND ENVIRONMENT, SUSTAINABILITY AND GOVERNANCE (ESG)

ESG concerns have now taken the entire world by storm and are no longer the prerogative of rich nations. Due to the new-found ESG awareness, supplies are restrained even from Latin American countries – once considered as the wild west of global mining. One big copper project in Peru, one of the largest global exporters of copper, scheduled to open in 2011, remains unfinished due to resistance from the local community. A similar trend can be seen in China, one of the world's largest commodity exporters, that has cut production of raw materials like iron ore and steel as it aims to achieve carbon neutrality.

THE “GREEN” CONUNDRUM

Green technologies need more wiring than the prevalent fossil fuel-based technologies. Electric vehicles, for example, use up to 6 times more minerals than a normal car. Over the past couple of years, governments around the world have announced new green spending plans and pledges thereby leading analysts to revise their demand estimates for copper and aluminum. So, we have on one side public policies and government pledges that create a demand for green technologies; but on the other hand, we also have tight regulations constraining the supply of the essential raw materials required to build green energy thereby leading to Greenflation.

The effects of this greenflation can be felt across different sectors of the economy and eventually in the entire society. No one including businesses, governments and central banks is spared by this greenflation. The spurring demand for green energy and the consequent rise in commodity prices required to create green energy would definitely increase the complexity of monetary policies for the central banks of the world. Governments around the world with their labour and



tighten the regulations surrounding their procurement thereby discouraging investments in mines, smelters or any other source that belches carbon. This kind of growing demand and decreasing supply, both due to public policies and regulations, is leading the world into Greenflation.

IS NECESSITY BIRTHING INVENTIONS?

Historically, transitions to a new energy source have pushed for innovation in the old one. With the introduction of the steam engine, the makers of sailing ships innovated more in the 50 years than they had in the previous 300 years. Electricity proved to be the mother of innovations in gas lighting. Extending this analogy and given the current scenario, the transition to green energy would require increased consumption of oil in the transition period. But we do not see investments picking up in the oil sector as the stringent regulations and dis-incentivising policies against this polluting ingredient make this sector less and less attractive for investors. Even when we see oil prices rising (Brent crude has already breached the \$100/barrel mark), the big hydrocarbon companies and countries are reluctant to join the party. As mentioned earlier, the two vital minerals in green electrification, Copper and Aluminum, also are subject to scathing ESG scrutiny thereby making them less lucrative for investment. It is a paradox that the world needs more copper than ever to go green eventually and this has inevitably hurt the environmentalists who recently helped block a new Alaska mine over concerns for the negative impact on the local community around the mines and the threat to aquatic life like the salmon.

technological constraints would need to look out for plausible implications on other priorities like equity and public finances. For businesses, the balance among different stakeholders like employers, customers and society will become more complex and difficult.

GREENFLATION – TRANSITIONARY OR HERE TO STAY?

Perhaps greenflation is transitional and economies of scale can be applied to eventually rationalise commodity prices and decrease overhead costs like permit fees, customer acquisition costs and installation costs. Better access to funds can probably reduce the threats to the economic viability of clean energy. Having said that, there is still a possibility that inflation will appear further up the green technology supply chain. We can already see some evidence in the case of electric vehicles. But inflation sources do not tend to distinguish between conventional and electric vehicles. For instance, on average, the price of Tesla vehicles increased by 6.3% as compared to 5% seen in regular cars during the same period. Isabel Schnabel, a German economist, while speaking at an ECB virtual panel, stated that *“While in the past energy prices often fell as quickly as they rose, the need to step up the fight against climate change may imply that fossil fuel prices will now not only have to stay elevated, but even have to keep rising if we are to meet the goals of the Paris climate agreement.”*. With the rising demand and decreasing supply, the prices for non-renewable energy sources can only go up. As Schnabel likes to put it - *“At present, renewable energy has not yet proven sufficiently scalable to meet rapidly rising demand... The combination of insufficient production capacity of renewable energies in the short run, subdued investments in fossil fuels and rising carbon prices means that we risk facing a possibly protracted transition period during which the energy bill will be rising. Gas prices are a case in point.”* Now, the onus is on the governments to acknowledge that this noble transition to a greener future is going to cost dearly in the shorter run. It is not a matter of “if” anymore but rather a matter of “when” this price needs to be paid. Perhaps, the sooner the better.

THE BALANCING ACT

Governments around the world need to rethink their expenditure and income redistribution policies. The challenges posed by this transition to a green economy will need to be faced head-on, to a large extent, by Governments. They need to mobilise their public capital by employing it in the essential infrastructure required to facilitate the green energy transition. Public accounts need to show huge investments towards green electricity and storage. Carbon taxes or the green premium are highly unlikely to cover all these expenditures and hence the public debt has to bear the brunt in the shorter run for the sake of future generations not having to live in adverse climatic conditions.

This transition could also have regressive income impacts and carbon taxation could affect the various strata of the society differently. In the shorter run, this regressive carbon

pricing impact needs to be compensated for by the different urban groups affected by it and this compensation again needs to be borne by the government's exchequer. Income transfer mechanisms need to be in place within the country and between countries to mitigate these regressive impacts.

Reskilling of labour is another priority for the government as we move towards this greener future. Workers need to be skilled for procuring, manufacturing and maintaining greener substitutes, and job creation in these sectors becomes a priority. Obsolescence of physical assets like machinery and equipment as we move towards green technology is something that needs to be compensated for with investments in their greener counterparts.

STILL, A LONG WAY TO GO

We are confronted with a conundrum. The cost of doing nothing is surely more in the longer run. We need to supply enough dirty material to build new, clean and green technology. But to achieve this we need to strike a balance. Having stringent regulations in place that reduce the supply of essential raw materials will not help realize the goal. Governments need to understand that this transition needs to be given time – and shutting the old economy too fast could lead to exorbitantly high prices in the newer and the cleaner ones of the future. ///

KEYS TAKEAWAYS

- Government policies have positively influenced the demand for green energy resources.
- But tightening regulations for the conventional resources required to produce green energy have affected supply – making these resources expensive. The unintended result is “Greenflation”.
- Given the current scenario, the transition to green energy would require increased consumption of oil in the transition period.
- Public policies and government pledges create a demand for green technologies, but tight regulations constrain the supply of the essential raw materials required to build green energy thereby leading to Greenflation.
- Governments around the world need to rethink their expenditure and income redistribution policies.
- Income transfer mechanisms need to be in place within and between countries to mitigate the negative impact of the transition on job loss and skills needs.
- Shutting the old economy too fast could lead to exorbitantly high prices in the newer and the cleaner ones of the future.

THE ISE SUSTAINABILITY INDEX IN BRAZIL: A STORY OF PURPOSE, CHALLENGE, AND SUCCESS



Professor **Mario Monzoni, FGV-EAESP**, one of the creators of the ISE (Sustainability Index) in Brazil, takes us through its journey from conception to successful implementation. From an interview by Professor **Adrian Zicari, ESSEC-CoBS**.

Sustainability indexes are promising tools. They give invaluable information to investors, as they present a selection of companies in a particular stock exchange with good sustainability results. Among the many sustainability indexes in the world, the one of the Sao Paulo Stock Exchange (ISE B3) has a particular place. Created in 2005, it was one of the first sustainability indexes in an emerging economy. We had the opportunity to interview Mario Monzoni, Professor at FGV, and one of the creators of this index.

FIRST STEPS, FIRST CHALLENGES

Adrian Zicari: How did the ISE begin?

Mario Monzoni: Legend has it that the ISE began on the insistence of Fabio Barbosa (at the time, head of Banco Real-ABN), who had just launched the Ethical fund, a family of ethical and SRI funds which were the first ones in Brazil, in 2001. They needed a benchmark to measure the fund's performance and a more appropriate reference than comparing it to the traditional stock market index.

Raymundo Magliano, who was Bovespa's president at that time (today it is B3), accepted the challenge and created a working group to think about the launch of an index. We were invited to this working group as FGV-EAESP as its Sustainability Studies Centre. In this working group, we realized it was necessary to look for funding to build

Any corporate and institutional PowerPoint having the ISE on it means a plus for the company.



the methodology of the index. We talked to the IFC – the International Finance Corporation (World Bank). We sent them a proposal to finance the first year of our research, which was to develop a questionnaire. They financed the studies throughout 2004 and 2005 to build the index. Then we launched the questionnaire, which also included a public consultation on the questions it included. It is important to talk about these because we were concerned that the questionnaire itself could have been a barrier to entry – it was very long and it covered several dimensions that concerned the responsible investing community itself and also the business world.

In 2005, the ISE was launched. That year, it had a large adhesion, while it decreased slightly over time. The Brazilian capital market is small compared to other capital markets, so it wasn't possible to use a *Best in Class* model, for example, like the Dow Jones does. Companies competed among themselves to take part in the portfolio. A council was created within Bovespa, to which we, FGV, submitted our evaluations. So we designed the questionnaire, sent it back to the companies, they responded, we evaluated them and told the board: "In our evaluation, this group of companies is ahead of another group in terms of sustainability practices".

The first stock portfolio was in 2005. The ISE initially reached momentum in participation, followed by a drop, but we were then at another moment in the sustainability agenda. Personally, I think the ISE was very pioneering. To get investors, especially institutional investors, out of the traditional model and into sustainability investing.

Adrian Zicari: How did people react to the initiative?

Mario Monzoni: In the beginning, in 2005 and 2006, some banks even launched several products linked to the index, but institutional investors here in Brazil, especially pension funds, have a benchmark to follow, the Bovespa index. As such, it's very difficult for them to leave an investment they know to migrate to others, even though the Investors' Association and other associations linked to institutional investors had been discussing this issue since 2005. It was a different time than

today with the explosion of ESG as an issue and interest in it reaching an all-time high.

From the second and third year on, the ISE became self-sustaining, with companies paying to participate in the index. However, it had a very marginal impact on the investment community, because at that time that agenda was still very in its beginnings. The capital market is small, so we had 50 companies participating to draw up a portfolio of 30, 35, 40 corporates to compose the index.

But we're straying from the subject. The questionnaire and the approach we came up with involved several dimensions and three hundred questions and this posed a challenge to companies when deciding to join the ISE. Not least because they often had a single person dealing with the initiative, multiple internal stakeholders to discuss approval such as the operations and marketing departments to name only two. In short, the decision to move the whole company in such a way was a complex decision involving many issues and questions.

A PURPOSEFUL AND USEFUL TOOL

Adrian Zicari: What impact did the ISE have in companies?

Mario Monzoni: I think it had a great impact on the corporate sector. The ISE questionnaire, although its function was to build a portfolio, ended up serving as a management tool for sustainability. Very importantly, at that time we had the Ethos indicators and Ibase model, giving us a mix of guidelines for reporting and questionnaires for indexes. These included the Dow Jones itself and the FTSE which ended up being imported into the sustainability management systems of companies. Because the questionnaire, in a way, reflected what was expected of a company in terms of sustainability practices, there were questions for companies to address which went from action plans and strategy to very basics.

It was a diagnostic tool to see gaps in terms of management and, on top of that, action plans to address these gaps, from a strategic point of view. I think that it wasn't the ISE but the

ISE questionnaire itself that had a role as an instrument, and a very important tool for corporate management towards sustainability. There, yes, in the business world – I believe it had an impact. We were also responsible for the Exame Award – a prestigious award for companies in Brazil – and this award also used the ISE questionnaire. Only that in the Exame Award, as closed-capital companies were also offered the opportunity, we took all multinationals. This is because, in general, multinationals in Brazil are through subsidiaries – closed-capital companies – and they do not necessarily participate in the capital markets.

In the Exame Award there were up to 250 companies participating. For 10 years, we took charge of, in parallel, the methodology, the questionnaire and the evaluation among other things. I believe that this has given impetus to or contributed to driving the corporate responsibility agenda in Brazil, together with other players that were also active such as the Ethos Institute and the branch of the World Business Council here in Brazil. The CDP then played an important role in the climate dimension. Today, the CDP questionnaire constitutes the climate change questionnaire of the ISE itself.

Moreover, I think that, yes, there was a lot of criticism because the questionnaire was so long, because academia was developing it and we were faced with the old stereotype from professionals that "academics don't know life as it is". We suffered a lot in this process, but while the "dogs were barking", as we say in Brazil, "the carriage was passing". I believe it had a great impact on the business community, it is still a reference. Being part of the ISE is important. Any corporate and institutional PowerPoint having the ISE on it means a plus for the company. And losing its place in the ISE is very bad for a company. And actually, at that time we didn't even use the word "leave". We used to talk about "not entering again" because the portfolio was renewed every year, so it was possible that a company would not enter the next portfolio. To be in one year and not be in the next was very badly seen. For companies, if they want to participate and enter, then they can't leave, because leaving is worse, the loss being greater than the benefit of entering, perhaps. I believe that in this sense, the impact of the ISE was higher among companies than among investors themselves.

PRESSURE FOR PROFIT: OVERCOMING THE SHORT-TERM VIEW

Adrian Zicari: What impact does the index have on investment decisions?

Mario Monzoni: Investment, I think, follows business as usual. Maybe now the picture is a little different, as the financial community in Brazil is quite innovative in terms of practices and even the Central Bank is regulating on sustainability issues. If we were to do qualitative research on what led these things to happen, maybe the ISE has a little place in the equation. I don't know how relevant the coefficient is in the equation, but in the business world it certainly has a greater impact than on the investment side.

Adrian Zicari: What have you learnt from all this?

Mario Monzoni: Oh, everything. It was a very important experience for us. Today, the ISE has undoubtedly contributed to what we are as a sustainability centre. However, sustainability is still marginal on the corporate agenda. Certainly, it's the short term that drives actions and business practices, especially for publicly listed companies, which have to demonstrate their results to shareholders quarterly. In Brazil, with high interest rates, with part of the benefits of sustainability connected more to the medium and long term, when you add interest rates and time to the denominator, it's cruel.

So when it comes to decision making, without a doubt, short-term issues prevail. We had to go on building, creating awareness. I believe that today this ESG world tells me that companies have realized that looking into this is important. Not that they are already doing things, but they have realized that not looking into sustainability issues, especially climate change, for example, can bring risks to the company and affect returns. They have a greater and better understanding of what that means.

I'm not saying that this ESG tsunami has made us enter the enchanted world of sustainability or corporate practices, because you only have to look out the window and see social and environmental indicators, and there is a lot of work to be done. That's it. Realising the obvious – that sustainability fights with the interest rate and the discount rate – it fights with time. Here, we joke that there are three Cs: which is conviction, convenience and catastrophe.

We realize that some companies are convinced that they have no other way to go, and that to question the environment will mean questioning their operations, their way of life, their entire production and consumption model – because their inputs and outputs are related to the planet. So, they are convinced that there is no other way. Even if, in the short term, there is a trade-off, they know that up ahead this will be very important and will guarantee or increase the probability of the business' sustainability. Others, the vast majority, I think, are in the world of convenience.

Maybe they are tired of fighting against it and they understand that: "Gee, if I don't do this, my European customer will buy from the competitor" So, I have to at least say that I'm doing something. It's the class of convenience. "Not that I believe in it very much. In fact, I don't even like this issue, but for my business it is convenient to say that I believe, because otherwise I can lose market access, or I can have some reputational problems. Everybody is doing it and why not me?" It is the convenient group, which I think is the vast majority. Then there is the C of the catastrophe, usually for those in denial, who tend to say "what's the point of that? Another tax to be paid." Sometimes a catastrophe happens, linked precisely to governance issues. Here, in Brazil that could be linked to corruption, which is very strong. Or water crisis. If we talk about ecosystem services, water supply, water regulation, nobody understands. But when people see a water crisis, they say "Ah, now I understand."

When there's a water crisis, a company has to pay for water trucks to keep operations going and the usual reaction is "Oh, but I had them for free, now I have to pay?" Perhaps here too, in a catastrophe scenario, companies will understand the ESG issue at stake. Maybe one thing I've learned is that you can divide the world into three: conviction, convenience and catastrophe.

LESSONS LEARNT AND FUTURE EVOLUTION

Adrian Zicari: If you had the opportunity to do it again, what would you do differently?

Mario Monzoni: Ever since I received your question, I've been thinking about this. I don't know. Actually, I was the technical advisor for Bovespa, so it was them who decided, not us, but I think that if everything were to start from the beginning again, I'd create two leagues, two clubs. Maybe a questionnaire, the way it is, for the champions. And then a league to give visibility to those companies that are making an effort, that are starting out – as if it were an access league – where obviously you wouldn't be able to compare with the class that is up there doing a lot of things, but it would give visibility to the market that they have already started. It would have a standard, minimum standards in there, including reporting among other things.

Or perhaps an expanded index, which would give even greater investment possibilities, because one of the criticisms is that it was too small a portfolio: "I need more, with more sectors, to diversify my risk." In addition, I would maybe add a little more inclusiveness there, even if there is a trade-off. Because by the time you include more firms, I think you would have to really differentiate as well. Those who are there are going to say: "Gee, I want to stay in the club, in the A league, I don't want to be in the B league." I pushed that idea for a while, but I don't think the board understood that nobody would want to stay in a B league. That's fine, they call the shots.

A further idea is maybe a more simplified questionnaire, maybe a more customized questionnaire by sector, which would be a lot more work – because as I said, we don't have *Best in Class*. Sometimes, the best in a sector is the worst in the sector, because it is the only one. There are not 2,500 companies like the Dow Jones to be able to choose from and divide into sectors. For the ISE, 40 companies answered the questionnaires. It was a limitation given *a priori*, and it was a fact of the problem. I don't know, maybe if FGV had gone out earlier, looked for more partners, it would have been possible to leave earlier. We were there for 15 years. Maybe it was time to realize that we had done our part, now the other one can do better than us, maybe. ///



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THE MAIN BARRIERS PREVENTING THE WORLD FROM REACHING NET-ZERO CARBON EMISSIONS



An in-depth exploration of the complexities and paradoxes of reaching net-zero by **Félix Dubois-Aubecq, ESSEC MiM** student and finalist in the CoBS 2022 CSR article competition.

The concept of "net-zero carbon emissions", or "net carbon dioxide emissions", has been defined as the situation in which "anthropogenic CO2 emissions are balanced globally by anthropogenic CO2 removals over a specified period". Understood this way, it leads to the cessation of CO2-induced warming when net anthropogenic CO2 emissions themselves halt: unless emissions subsequently decrease, CO2-induced surface warming would remain at its last achieved level, in the long term. Another consequence is that this concept does not cover other, less well understood drivers of global warming.

There are different interpretations of this concept. Originally a scientific concept, carbon neutrality emerged at the end of the 2000s when the question of how to curb the rise in global surface temperature due to CO2 emissions was raised. It then entered the field of climate policy, the Paris Agreement being a striking example, as it set the goal of carbon neutrality by 2050. As such, carbon neutrality is part of the objective of containing global warming to +1.5°C. Buoyed by the narrative of this concept, over 120 countries have already adopted neutrality targets.

This is perhaps also its first obstacle: while it is widely adopted as a solution in climate policies, the concept is not yet well understood, whether in the scientific, political, or economic fields. As such, it is subsumed under the more general concept of "neutrality", which can have at least six interpretations: carbon neutrality per se; net greenhouse gas emissions; climate neutrality, which refers more broadly to the "state in which human activities result in no net effect

The uncertainties surrounding the concept of net-zero emissions are not restrained to the development of scientific and technological solutions.





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on the climate system"; carbon neutrality, which refers to the sole emissions of a country, organisation or activity; net greenhouse gas emissions at the country level; negative net greenhouse gas emissions, which refers to a situation where "metric-weighted anthropogenic greenhouse gas (GHG) removals exceed metric-weighted anthropogenic GHG emissions".

This variability in the interpretation of net zero reflects the three main uncertainties surrounding it: uncertainties about the technical means; uncertainties about the way in which policies set targets and plans, both nationally and internationally; and uncertainties about the response of the private sector.

SCIENTIFIC UNCERTAINTIES: A CONCEPT AND IMPLICATIONS STILL DIFFICULT TO UNDERSTAND

Originally a scientific concept, achieving net zero carbon requires action in the political, social, and economic spheres, and involves ethical, technological, legal, and behavioural concerns. However, even before generalising solutions to achieve net zero carbon, it is necessary to consider that the concept is not fully understood and that solutions vary considerably between sectors.

Firstly, achieving net zero carbon emissions means tackling all emissions. So far, solutions have been found mainly in the energy sector (which generates 73.2% of carbon emissions) through the development of clean energy. According to the IEA, the goal of zero CO2 emissions is even achievable in technological terms, thanks to a more efficient use of energy and the development of renewable energies. In many countries, the cost of renewable energy has fallen so sharply that the transition to carbon-free electricity looks promising. A similar trend seems to exist in the automotive industry, with

the development of electric vehicles, which the IEA estimates could reach 60% of global car sales by 2030.

However, most sectors show more uncertainties in their transition to net zero carbon emissions, including mining, heavy industry, agriculture, food processing, aviation, and construction, where the issue is more difficult to address.

For example, the food and agriculture sectors have received little consideration on this point outside of deforestation issues, due to the complexity of the supply chain, the large number of actors, the fragile economic situation of agriculture and the need for low prices. Solutions exist to combat emissions from this sector, which is responsible for about 10% of CO2 emissions, such as reducing the use of fossil energy sources in farm buildings and equipment; reducing the CO2 intensity of agricultural production; making better use of organic fertilisation and increasing the share of legumes in crop rotations; storing more organic carbon in soils by introducing intermediate and intercropping crops, crop associations or agroforestry systems; developing no-till techniques and optimising grassland management; capturing CO2 emissions within plantations.

The latter solution is central to the goal of zero net carbon emissions, through the development of carbon capture, utilisation, and storage (CCUS) technologies. The Carbfix project in Iceland is an example of such developments, which aims to capture CO2 in rock underground. However, concerns have been raised about the limits of our ability to remove carbon from the atmosphere, especially using biological carbon storage. For example, plantations of exotic tree species are sometimes used to capture CO2 emissions, which could cause hazards such as weather fluctuation or fire. Similarly, the use of natural carbon reservoirs such as the ocean, mineralisation, or soil carbon sequestration (as in the Carbfix project) still need more research to better understand their real efficiency. Lastly, their use could disturb more

ecosystems already impacted by CO2 emissions, such as oceans which are jeopardised by their acidification.

The uncertainties surrounding the concept of net-zero emissions are not restrained to the development of scientific and technological solutions: they expand to the adoption of these solutions on a political level, by private companies and by individuals.

UNCERTAINTIES AT THE POLITICAL LEVEL: A NEED FOR COOPERATION AT NATIONAL AND LOCAL LEVELS

"Emissions targets are a zero-sum game. If one country or company does less, other have to do more to achieve the same global temperature outcome". From a public policy perspective, this reality for net-zero carbon emissions objectives means that at the international level, some countries lagging in meeting their carbon neutrality targets will have to be compensated by additional efforts from other countries. At the national level, the situation is the same: some localities will have to make up for the delay of others in reaching their targets. Otherwise, carbon neutrality is not possible.

This reality raises two key questions for public policy: the timing of carbon neutrality targets; and the extent and the content of those targets.

However, the first question has rarely been discussed and studied. In particular, each of the countries that decided to adopt carbon neutrality targets set their objectives according to a different timescale than the others, following the signing of the Paris Agreements. While most countries have set the target in the same terms as the agreements, i.e. by 2050, it is notable that Brazil, China, India and Ukraine have decided to push it back to 2060. Some countries, such as Singapore, have not even defined a specific date. Other countries have adopted dates that are even closer: 2045 for Germany and Sweden; 2040 for Iceland and Austria; 2035 for Finland; 2030 for the Maldives.

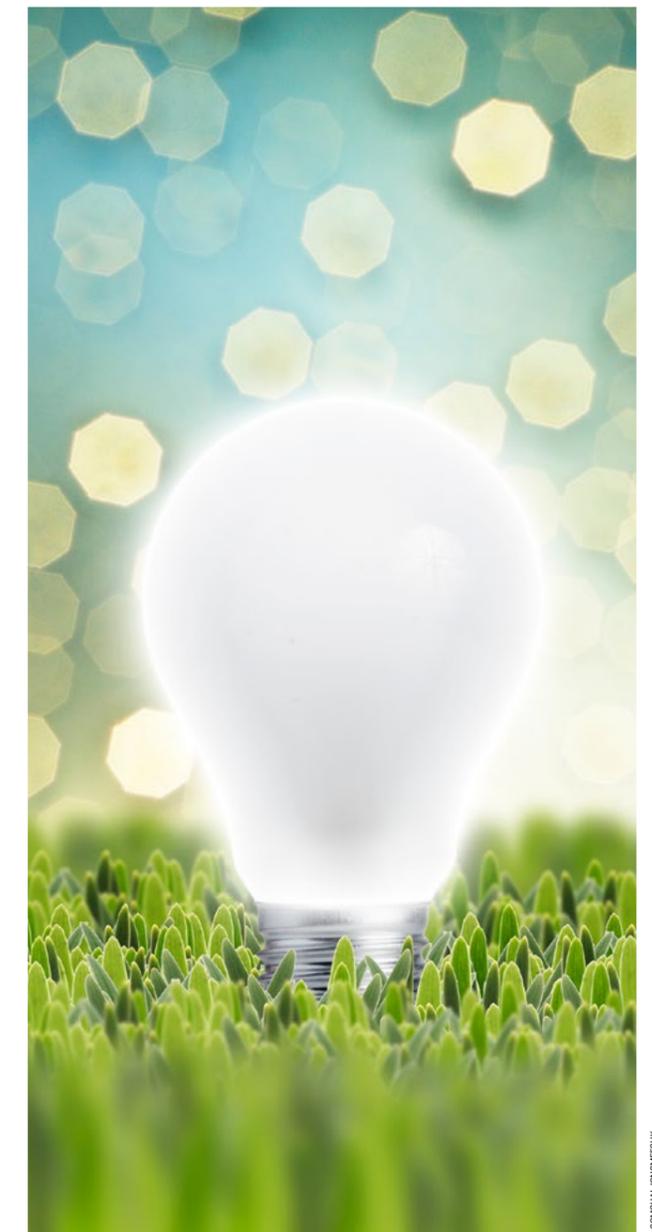
The difference in timing is not the main problem. The IEA's strategy for achieving carbon neutrality by 2050 is based on the idea that the most advanced countries, which are also the ones generating the most CO2, should achieve this goal before the developing countries. The compensation between the two should then guarantee carbon neutrality. It is therefore the lack of coordination that is disturbing, especially as the question of the timescale has never really been studied or discussed.

As for the second question, the objectives in terms of carbon neutrality are not equivalent between countries. On this point, two types of targets can be distinguished: objectives aimed at all the country's economic sectors; objectives restricted to certain sectors. For example, Sweden does not include emissions from the land use, land-use change and forestry sector in its carbon neutrality policy. Most countries have also excluded international aviation and shipping from their policies, except for the United Kingdom.

Furthermore, the vagueness surrounding the very concept of carbon neutrality already defined above impacts public policies: not all countries understand it in the same way. For example, some countries have restricted the neutrality objective to CO2 emissions alone, while others, such as New Zealand, include a variety of selected greenhouse gases (the New Zealand Government includes all greenhouse gases, except biogenic methane).

Finally, some countries appear to be more advanced than others in terms of governance methods, including cooperation between national and local levels, as in the case of France with Paris, Denmark, and Sweden.

In the end, the lack of cooperation between the various political actors and the lack of studies on the impacts of such cooperation thus appear to be the main political obstacle to achieving the carbon neutrality objectives, along with the absence of climate policy in many states.



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UNCERTAINTIES FOR PRIVATE COMPANIES AND INDIVIDUALS: A NEED FOR LIFESTYLE CHANGE

The problem for companies is similar to that encountered in public policies: the efforts of companies to achieve carbon neutrality will only be effective to the extent that initiatives are not isolated; the efforts of some will have to compensate for the delays of others. However, as described above, not all sectors are equal in this respect: while the energy sector and the automotive industry appear promising, heavy industry, raw material extraction, aviation, agriculture, and the agri-food sector are more difficult to address.

Above all, their actions in this area are intrinsically linked to consumer behaviour. For companies to be more inclined to initiate carbon neutral policies, it is necessary that consumers are inclined to change their lifestyles and, if they are already inclined, do so. Indeed, even though companies are responsible for a significant proportion of greenhouse gas emissions (for example, in France, 30% of CO2 emissions come from companies in the energy and industrial sectors) and the services and products are offered by these companies, it is still necessary for consumers to decide to adopt a lifestyle that is more compatible with achieving carbon neutrality.

For example, carbon neutrality in the transport sector will require the adoption of new vehicles, new mobility services and a new urbanisation more adapted to the development of shared services. However, consumers must be willing to adopt these new services, otherwise the company's efforts will remain a dead letter and could threaten its profitability. Another example: since food is a matter of personal decision by consumers, a return to a less meaty and more local diet can only be achieved through changes in consumer consumption patterns.

Here, companies are essentially faced with the challenge of dialogue with consumers. On the one hand, consumption patterns are changing slowly. On the other hand, companies are sometimes reluctant to get involved in environmental issues – because of the complexity of these issues both technically and in terms of communication. Therefore, the slowness of these changes appears to be the main obstacle to the goal of carbon neutrality in the private sector.

Carbon neutrality thus appears to be a concept still difficult to understand. Whatever the will of Governments, companies, and individuals, it remains subject to a scientific knowledge still uncertain as to its implications. As it is part of a complex societal environment, it is also subject to public policies that are still uncoordinated, to slow lifestyle changes and to business uncertainties. The challenges are therefore immense, and success is far from assured. ///

KEYS TAKEAWAYS

- Understood as the "anthropogenic CO2 emissions are balanced globally by anthropogenic CO2 removals over a specified period", the net-zero carbon emission objective is not yet well understood in scientific, economic, and political terms.
- First, it faces scientific uncertainties, both as to its implications and the means to be implemented.
- Public policies, although they seem inclined to achieve this objective in many countries, are in disarray, lacking the necessary coordination.
- This objective must also take into account the slowness of companies to make the necessary changes and of consumers to change their lifestyles.



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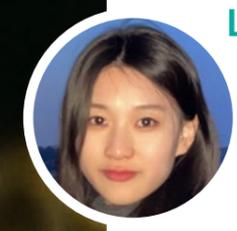
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CLIMATE SOLUTIONS FOR CORPORATIONS: BE SUSTAINABLE-COMPETITIVE BY CREATING SUSTAINABLE VALUE CHAINS

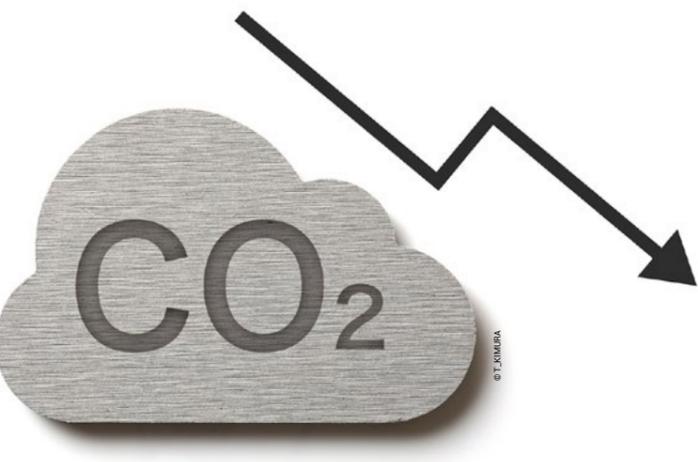


**Liang Kong, MSc Business
with Operations Management**
student, and **Warwick Business
School** Winner of the 2022 CoBS

Student CSR article competition, explores the options available to companies to play an active part in reducing carbon emissions and lead the combat against climate change.

Climate change is a critical global threat, and it requires an emergent worldwide response. From the 1997 Kyoto Protocol to the 2021 COP26 summit, an increasing number of actions have brought different stakeholders together to accelerate processes towards the goals of the UN Framework Convention on climate change and the long-term transitions of temperatures and weather patterns (United Nations, 2022). These transitions could be due to natural factors such as variations in the solar cycle. However, since the industrial revolution the main driver of climate change and associated severe weather has been human activities, owing primarily to the overuse of fossil fuels such as coal, oil, and gas. It is imperative to take action to transfer to low-carbon practices since the overuse of fossil fuels can cause devastating impacts on food security, livelihoods, and global health (Hobert and Negra, 2020). One of these actions is to encourage sustainable value chains which should involve improving efficiency, reducing energy consumption and pollution (Nardella et al., 2020). Moreover, transitions to a sustainable value chain require a shift from using fossil fuels in production to renewable energy sources. We cannot achieve the goal of low-carbon development without the full backing of corporations – the primary participants of the global economy (Bartlett et al., 2016). Therefore, due to the urgent need for action on climate change, it is necessary to review the drivers of companies' low-carbon practices, identify business opportunities regarding sustainability, and highlight potential limitations of the low-carbon goal.

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**With mutually
enhancing positive
actions, we create
hope for our
planetary future.**”



DRIVERS OF LOW-CARBON PRACTICES

Before investigating how businesses generate value through sustainable value chains, we need to understand what motivates corporations to conduct low-carbon activities.

• REGULATIONS: The regulations and policies enforced by government policies drive a significant portion of corporations' low-carbon actions. A systematic review of 37 studies found that the overall effect on emission reductions for policies could be an average of 2% per annum (Green, 2021). The low-carbon regulations have compelled automakers in the European Union, the United States, and other regions such as Japan and China to manufacture more energy-efficient vehicles (IEA, 2021). Although Haites (2018) reported that low-carbon policies might have little impact on emission reduction since emissions could fall faster than the cap in every jurisdiction, the resulting oversupply of allowances could lower carbon prices and undermine the policy's effectiveness.

• RISKS: Since penalties for non-compliance can have significant financial impact on a company's earnings, corporations anticipating stricter policy requirements tend to mitigate the business risks of potential new policy impacts in advance. Moreover, non-compliance can severely damage a company's reputation and, thus, financial performance. For instance, Bosch was fined \$100 million for its role in the diesel emissions scandal (Foodmanufacturing, 2019), and Volkswagen agreed to pay US\$14.7 billion to cope with the scandal's costs (Krisher and Durbin, 2016). Although a study found that non-compliance might not damage financial performance since corporations' reputations related to existing perceptions of how socially 'responsible' the firm was initially (Nardella et al., 2020).

• SOCIETAL EXPECTATIONS: Corporations are responding to the growing body of regulations concerning climate change and are anticipating future policy developments in this area. Their actions on climate change also respond to rising societal expectations, including the sustainability needs of investors, consumers, international organisations, employees, and international declarations such as the OECD guidelines for multinational enterprises. Studies show that stakeholder pressure on corporations can motivate asset owners to undertake low-carbon practices (Bartlett et al., 2016). Meanwhile, consumers' expectations lead corporations to pursue the low-carbon goal. Indeed, the influence of customers' expectations may be more significant in high-intensive competition industries. For instance, a study shows that customers are more willing to purchase chocolate with simple packaging than those with ecologically unfriendly packaging (García-Herrero et al., 2019).

HOW CAN CORPORATIONS CREATE NEW VALUES THROUGH SUSTAINABLE PRACTICES?

To become sustainable-competitive through low-carbon practices, companies may benefit from increased economic productivity associated with low-carbon business models and sustainable value chains.

• REDUCE ENERGY CONSUMPTION TO CREATE NEW VALUE: SAVING COSTS, BOOSTING MOTIVATIONS, GAINING NEW DEALS, AND REINVESTING GREEN SOLUTIONS.

Energy consumption and transportation are often a company's two most significant greenhouse gas emission sources. By applying high-efficiency energy solutions, the company can save costs and achieve cost-leadership strategy in the industry. For example, with measures such as installing more energy-efficient technology, decreasing transportation miles, and reducing packaging, Ferrero achieved a 3.4% increase in global turnover in the 20/21 fiscal year, despite more uncertainties caused by Covid-19 in 2021 (Ferrero Group 2021). By investing in operations that reduce carbon emissions, such as less-energy lighting, producing green power, and making assembly lines more efficient, Mahindra & Mahindra Ltd saved operating costs and made it a competitive advantage (Kerr, 2017). The company's \$10 per ton internal carbon price also motivated its business units to apply more low-carbon technologies. Moreover, Mahindra & Mahindra Ltd reallocated funds from such carbon fees to low-carbon projects such as energy-efficient motors and zero effluent discharge, which helped the company further reduce emissions from its manufacturing.

• REDESIGN TO CREATE NEW VALUE: CONSIDERING LOW-CARBON PRODUCTS, SERVICES, AND BUSINESS MODELS.

Unilever is an outstanding example of creating value by designing low-carbon products. The company identified a way to reduce packaging by innovating concentrated detergents with smaller caps and less plastic use, making it easier for people to use the correct amount. The result is fewer lorries demanded to transport the bottles, thus reducing carbon emissions and increasing market share (Unilever, 2021).

Corporations can also create new value by redesigning their services. Plastic recycling services may be a good start since the global plastic recycling market is estimated to produce at 6.5% annually from 2017 to 2023. The recycling market will be worth almost \$54 billion by 2023 (Schwartz, 2020). Moreover, new entries can enter the market by redesigning business models concerning sustainability. An excellent example of business model innovation is car sharing, and the study has shown that greener mobility applied in the sharing system could help reduce greenhouse gas emissions (Arbeláez Vélez and Plepys, 2021).

• BUILDING A RESPONSIBLE BRAND IMAGE BY REDUCING AND REDESIGNING: CREATING GOODWILL AND ATTRACTING INVESTORS.

Sustainability has become a strategy for businesses to differentiate from their competitors by building a reliable brand image. The sustainability reporting performance of the FTSE 100 shows most corporations taking low-carbon practices seriously, which is especially significant in the highly competitive retail sector (Ceesay et al., 2021). The innovation of low-carbon products can also attract government subsidies such as the Low Carbon Innovation Fund. Moreover, there is an excellent trend in the financing needs of climate solutions in the finance sector and a desire to understand their impact. The market of investments concerning environmental, social, and governance factors (ESG) now accounts for roughly one-third of all assets under management. Evidence suggested that considering ESG factors could reduce risks and enhance investment and business performance. (Boffo and Patalano, 2020).

WHAT WILL BE THE IMPACTS OF LOW-CARBON PRACTICES ON ENERGY INDUSTRIES?

If corporations are ambitious for zero-carbon goals, what will happen? Since the purpose of sustainability is correlated to the green energy industry, we shall estimate the impacts of corporations' low-carbon practices on the industry. As the supply of renewable energy has to increase to meet the massive demand for fossil fuels, it will lead to a tremendous increase in demand for metals such as copper, nickel, cobalt, and lithium, primarily used for green electricity production and storage. The International Energy Agency (IEA) (2021) forecasts that lithium and cobalt production volume needs to increase more than sixfold than the current quantity to match the demand for clean energy production. However, rising demand will face a slow supply response. According to IEA (2021), copper, nickel, and cobalt mines are capital-intensive, taking more than a decade from discovery to production. In addition, increasing production which does not go against CSR and sustainability goals will also be a challenge. The combination of increased demand and delayed supply could cause the cost of these metals to skyrocket. The market prices of lithium, for example, could rise from \$6,000 per metric ton in 2020 to about \$15,000 between 2020 and 2030 (Boer et al., 2021).

Moreover, since the transition from fossil fuels to clean energy will reduce the demand for fossil fuels, investors expect fossil fuel prices to fall and thus decrease investment. However, a reduction in funding can lead to a deterioration in supply conditions. If the supply of fossil fuels does not match demand, fossil fuels prices will not be stable. Moreover, public policies supporting energy transitions such as carbon taxes and bans on internal combustion engines can burden fossil fuel production. Therefore, higher input prices for fossil fuel production and use and accelerated demand for green energy will obstruct the road to decarbonisation. In order to mitigate such unexpected results, large-scale deployments of green solutions and energy efficiency optimisation should be timely invested, which means that revenue from carbon taxes and capital from investors should cover spending on decarbonisation. Realising such a situation requires knowledge from future research and practices.

MUTUALLY REINFORCING POSITIVE ACTIONS.

Simultaneous sustainable actions from corporations and all related stakeholders may address the systematic challenges of climate change. Policymakers, investors, and customers motivate corporations to undertake low-carbon practices, and corporations can share values between business and society by identifying business opportunities from sustainable value chains. Likewise, corporations' responsible activities can also train consumers' behaviour to be sustainable and give policymakers confidence to set more ambitious decarbonisation goals. With these mutually enhancing positive actions, we are creating hope for our planetary future. ///



- Climate change can cause devastating impacts on food security, livelihoods, and global health. As the main participants of the worldwide economy, corporations should take action to decarbonise.
- Drivers of corporations' low-carbon practices could be regulations, risk management, and societal expectations.
- By reducing energy consumption, redesigning products, services, and business models, corporations can earn reputations and investments, making corporations sustainable-competitive.
- However, future practices and research may pay attention to the inflations brought by decarbonisation.
- With the mutually reinforcing positive activities between policymakers, corporations, and consumers, we will create hope for our future.

DESIGNING SOLUTIONS FOR RESILIENT RAW MATERIALS SUPPLY



Ksapa's Farid Baddache focuses on an increasingly strategic issue for companies to address – that of ensuring their raw materials supply is both responsible and resilient – with input from experts **Shivani Kannabhiran**, OECD Center for Corporate Sustainability, and **Hélène Vermont**, Responsible Sourcing Manager for Michelin.

Designing Solutions for Resilient Raw Materials Supply, by Farid Baddache. With kind acknowledgements to Ksapa. Originally posted on the Ksapa blog.

SUPPLY OF RESILIENT RAW MATERIALS: AN IMPERATIVE

Regulatory pressure, stakeholder expectations and changing consumer behaviour are encouraging the transformation of commodity supply chains towards greater transparency and resilience.

The duty of vigilance incrementally establishes critical business processes for businesses and investors. New legal tools are emerging around the world that include the UK Modern Slavery Act, the French duty of vigilance, and the recent German law governing the due diligence of companies in supply chains ("*Lieferkettensorgfaltspflichtengesetz*"). Regulatory pressures are multiplying and pushing companies, leaders of industry, and investors to take action. Moreover, consumers, and especially young people – millennials – are now demanding ethical products that include traceability.

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The environment and social are intrinsically linked. It seems difficult to approach one while omitting the other.”



These criteria form an integral part of the purchasing decision, and cannot be ignored and, as such, the positive impact generated by companies is increasingly strategic. This nurtures consumer confidence and now ensures the survival of businesses themselves. Finally, addressing these challenges forces companies to act beyond their own scope and minimise emissions on scope 3 – the organisation's indirect impact – of their value chain. This is a complex but not impossible task.

In this light, it is important to bring focus on the raw materials – the non-transformed materials, also known as primary products – a company uses in its product processes. These raw materials, although often only associated with agricultural products such as coffee, beef, tea, sugarcane or palm oil, can also include oil, plastics, natural gas, graphite, lithium or rare earths to name a few.

HARNESSING RESPONSIBLE RAW MATERIALS SUPPLY CHAINS

Every agricultural or non-agricultural supply chain has environmental and social challenges. A compelling example is the direct impacts of the soybean supply chain on the deforestation of the Amazon rainforest in Brazil. Likewise, the cultivation of cocoa also increasingly encroaches on the Ivorian forest every year. Between natural habitat loss, soil erosion, biodiversity loss among others, deforestation plays a drastic role in global warming.

In 2018, the equivalent of 3.6 million hectares of forest were cut down, the equivalent in size of Belgium or Lebanon. Data shows that 80% of these losses were related to agricultural commodities. IPCC – the Intergovernmental Panel on Climate Change – reports have on multiple occasions demonstrated the devastating part raw material production plays in deforestation, and a recent study by the Carbon Disclosure Project shows that 9 out of 10 listed companies identify at least one risk of deforestation related to agricultural commodities such as wood, soybeans or palm oil. 32% of the companies surveyed have already identified direct risks.

In addition to environmental risks, there are real social risks that should not be overlooked. The textile industry, for example, is proof of this with working conditions that are often deplorable. The most basic human rights are neglected and regular controversies occur, with very few social norms actually in place to ensure the conditions for production and the transformation of supply chains.

TOOLS FOR BUILDING RESILIENT RAW MATERIALS SUPPLY

The importance of the duty of vigilance is becoming a fundamental regulatory trend, with the increase in the number of vigilance approaches demonstrating this. However, the notion of duty to be vigilant remains specific and requires study to understand how it works. In this light, the OECD – and specifically the team under Shivani Kannabhiran that leads the agricultural sector at the OECD's Center of Corporate Sustainability – has published a series of guides to accompany companies.



One of these is the OECD-FAO Guide for Responsible Agricultural Sectors, providing strategic and practical recommendations for companies. The objective here is to help stakeholders adopt responsible conduct in their agricultural sectors and these recommendations are expected to be complemented by a regulatory system to be improved by governments.

Nevertheless, they represent a tool for greater understanding of the risks and alignment across the supply chain's ecosystem. The recommendations included in these practical guides can especially play a supporting role for small and medium-sized enterprises and the OECD has subsequently made training a point of honour, opening up a digital training centre for SMEs.

THE RESPONSIBLE SOURCING APPROACH OF A MULTINATIONAL COMPANY: THE MICHELIN EXAMPLE

Michelin, a world leader in tyre manufacturing, provide a good example of a responsible resourcing approach that others can benchmark. When developing the initiative, a number of key and very practical questions were placed on the table – how, for example, to define responsible sourcing principles in dialogue with stakeholders? What appropriate responsible tracing would be appropriate when sourcing raw materials from highly fragmented supply chains? Indeed, what do we buy, who do we buy it from, and how do we buy? H el ene Vermont, Responsible Sourcing Manager for Michelin, cites several strategic and practical considerations to be deployed across a multinational company such as Michelin. These include:

- Creating a code of conduct for suppliers to ensure the highest transparency of the company's expectations of suppliers
- Designing a systemic approach for reporting of scope 3 emissions of supplier activities to encourage greater transparency (in line, for example, with the CDP Programme)
- Setting high emission reduction targets for supplier activities
- Implementing evaluation monitoring to examine which sectors are considered most at risk
- Promoting the purchase of recycled and renewable materials
- Establishing a conflict minerals policy for suppliers.

For Michelin, natural rubber still represents a quarter of its purchased raw materials. This category requires a specific approach in addition to all the elements mentioned previously, not least because the sector faces major environmental and human issues. Nearly 2 million farmers are involved in natural rubber supply chains which are by nature highly fragmented.

Tyre production alone accounts for three-quarters of the world's natural rubber production. As such, together with stakeholders, Michelin has developed a dedicated natural rubber purchasing policy. Actions are carried out across the supply chain, engaging tier 1 suppliers, as well as exploring effective solutions to engage at the level of smallholder farmers directly.

EMERGING ECONOMIES AND THE IMPORTANCE OF A SMALLHOLDER APPROACH

Ksapa CEO Farid Baddache points to the SUTTI impact investing solution the ESG consulting company offers its clients. This tool addresses commodity supply chains and is adaptable and replicable to all local circumstances and specificities with a single objective: to improve the social-environmental performance of supply chains and to help communities raise revenues above the poverty line.

Primarily, the SUTTI approach is designed to focus on smallholder farmers with a view to creating a positive impact within local communities. This involves vocational training in a hybrid format: digital (permanent access and high dissemination), as well as face-to-face formats (building trust and anchoring community engagement), the promotion of best agricultural practices, crop diversification, income growth, social inclusion, improved workplace security and labour market facilitation.

According to Baddache, it is essential to combine the needs of both smallholder farmers and industrials, with Ksapa also developing a strong financial dimension to the SUTTI programme, notably through the engagement of committed investors, carbon credits, and a “blended finance” model.

The CASCADE project, carried out in the central Sumatra Island region of Indonesia, is a solid example of directly contributing to smallholders in the natural rubber supply chain, grouping the entire natural rubber supply chain from the original players such as the small natural rubber operators to industrial buyers such as Michelin and its automotive customers like the Volkswagen Group. In this project, Ksapa trains up 1,000 farmers, supported by a local NGO responsible for ongoing villager engagement to adopt sustainable and efficient extraction methods.

SCALE IS CRUCIAL IN CREATING POSITIVE IMPACT ON THE GROUND

For Shivani Kannabhiran of the OECD, scaling up involves a multiple approach – hence the use of a range of instruments to enforce it such as regulation, certification, training, but also the multi-faceted integration of all stakeholders at all levels. This occurs notably through partnerships between companies themselves, but also with local governments.

On the other hand, the Michelin Group bases its strategy on a risk-based approach rather than a systematic approach to traceability and certification. This, however, can prove to be slow and does not apply to highly fragmented smallholder supply chains. Once the risk identified through the deployment of a dedicated tool dubbed *RubberWay*, appropriate remediation projects can be rolled out such as the CASCADE project outlined above. The vision of the Michelin scale-up therefore involves projects to minimise risks that can be replicated from one particular supply chain to another.

Recent years have seen ample transformation, with younger generations singling out the pain point and questioning companies where it hurts. Where does the food I eat come from? Do I eat responsibly? Indeed, the climate awareness of these young people has never been stronger than it is today, one of the effects being to exert pressure on companies to move the lines, adopt more virtuous behaviours, engage in real traceability processes and minimize risks across their value chain and the suppliers they work with.

As such, the pressure and expectations of stakeholders on scope 3 of supply chains not only mitigate carbon emissions in general, but also play an important role on the social dimension of corporate impact. As Farid Baddache points out, the environment and social are intrinsically linked. It seems difficult to approach one while omitting the other. ///

KEYS TAKEAWAYS

- Consumers, and especially young people – millennials – are now demanding ethical products that include traceability.
- Every agricultural or non-agricultural supply chain has environmental and social challenges.
- In addition to environmental risks, there are real social risks that should not be overlooked. The textile industry, for example, is proof of this with working conditions that are often deplorable.
- The OECD publishes practical guides which play a supporting role for small and medium-sized enterprises and the OECD has opened up a digital training centre for SMEs.
- Tyre production alone accounts for three-quarters of the world's natural rubber production. Together with stakeholders, Michelin has developed a dedicated natural rubber purchasing policy.
- Another guideline is the Ksapa SUTTI approach designed to focus on smallholder farmers with a view to creating a positive impact within local communities.
- Scaling up is vital in creating positive impact on the ground and this occurs notably through partnerships between companies themselves, but also with local governments.



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