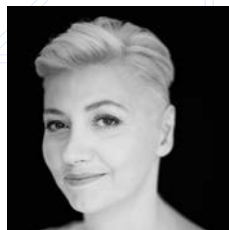


MASTERS
& ROBOTS

BEYOND 2030

BEYOND 2030

DEAR READERS,



Jowita Michalska

Digital University CEO,
Ambassador
of Singularity University
in Poland

Innovation, disruption, transformation. New technologies and the digital revolution. Artificial intelligence, IoT, blockchain... Technology develops exponentially. And it does not wait for us in the distant future, nor "around the corner", but shapes our reality just here and now. Technology affects how we live and work, how we learn, and how we can heal.

For many years I have been watching how technologies change businesses and societies around the world. I can see how dynamically we operate also in Poland, although I can clearly see that we still lack access to high-quality education and the latest knowledge. Thanks to cooperation with such organizations as Singularity University and recognized international experts – pioneers and innovators share in their fields – it is possible to transfer know-how, experience, as well as thoughts and opinions on the most important topics related to the future. Events such as Masters&Robots organized by Digital University give you the chance to learn about the latest discoveries, tame technologies and implement effective tools that will improve your life and work.

"Beyond 2030" is a unique report – a record of the most interesting conversations that provide answers to bothering questions from four areas of our lives: society, business, work and medicine. We've invited amazing experts – the most powerful minds, that have been constantly working to ensure that technologies develop and support humanity – to share their knowledge and experience.

In the publication you will find not only futuristic visions, but above all useful and practical knowledge that opens up to changes, inspires, but also provokes to ask further questions.

Digital transformation is happening right in front of us and being open-eyed we can win a lot thanks to it. I highly recommend reading the Beyond 2030 Report to everyone who wants to start a change process in their organization, so that it becomes resistant to the digital revolution, and to those who want to start introducing changes from themselves. The knowledge deriving from the Report is a panacea for anxiety, and an opportunity for development.

Enjoy your reading.



MASTERS&ROBOTS

Masters&Robots is a new category of events at the intersection of, science and education centered around technologies and their practical applications. It is an annual meeting with the latest solutions and extraordinary people who create them. It is also a space for sharing knowledge, know-how and ideas that change everyday life, as well as a substantial help in preparation for the digital transformation.



The world is evolving at an exponential rate. Modern technologies are driving unprecedented changes, in terms of pace and scope, of all areas of human activity. Can we as humans understand the consequences of this "hurricane-like progress"? Do we already know what our newly defined role will look like in the world of artificial intelligence, machines, and the fourth industrial revolution? Master & Robots is the knowledge and inspiration driven from the best practitioners, experts and entrepreneurs. People who have been already contributing to our future for years.

Sebastian Kulczyk

Owner and President of Kulczyk Investments

Thanks to cooperation with leading academic centers, think tanks and organizations – Singularity University, MIT, Harvard Business School, Warsaw School of Economics, SWPS – education of the Masters&Robots participants rests in the hands of the best recognized experts. Among conference speakers are innovators, entrepreneurs, engineers, visionaries and scientists who work every day in the most dynamic technological and business centers in the world (including Silicon Valley, Israel, MIT). During the workshops, participants have the opportunity to start an in-depth dialogue them and gain valuable, practical knowledge and opinions with regard to the challenges they face.

Masters&Robots – 70 speakers, 3 intensive educational days and 3 stages – Main Stage, Masters&Robots Youth Stage and workshop rooms – prepared for 1000 participants. The conference also means accompanying events like MIT COINS – the first meeting of experts and data researchers gathered around MIT International, Global Impact Challenge in Poland – a competition for start-ups under the patronage of SingularityU Poland – the Polish division of Singularity University, as well as Hackathon for nearly 60 programmers jointly fighting against anti-Semitism – an event organized in cooperation with the Israeli Embassy.

During Masters&Robots, we guarantee inspiring and insightful speeches, practical and useful workshops, as well as exchange of thoughts and opinions with world knowledge leaders. If you're working on a digital transformation strategy or you want to make changes to your own business or life – Masters&Robots is the place you need to be.

BEYOND 2030





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BUSINESS



BUSINESS



Dominika Bettman

CEO
Chairman of the
Board Siemens
Poland

Digitalisation is not for everyone, just as computerization and electrification were not for everyone before. I am convinced that after 2030, and even after 2050, there will still be industries where, for example, manual manufacturing companies or simple manufactories will continue to succeed on a micro scale. However, people who choose this path must find their own niche and have a unique product.

However, if we think about mass production, cost reduction and expansion, we need digitalisation. On such a market, manufacturers will have to compete with much stronger and often international competitors who can afford control cabinets, dedicated industry-specific software, sensors that collect data in real time (IoT) or the best engineers.

Just a few weeks ago, Thomas Cook, the oldest package-holiday firm, collapsed. One of the main causes was the inability of its management board to adjust its business to the internet revolution. It clearly shows the scale of impact that digitalisation has on all companies – small and medium enterprises, but also on large traditional corporations. I would even say that the latter group should be even more vigilant.

Digital transformation provides more equal opportunities and reduces marginal business costs. It is not those who are the biggest, but those who are the fastest and the most innovative that will benefit from it the most.

The scale of impact that digitalisation has on all companies – small and medium enterprises, but also on large traditional corporations.



**Cristina
Dolan**

Financial institutions – challenges and opportunities

What in your opinion banks and insurance companies are overlooking while projecting the next 10 years future? What challenges are just around the corner?

Changes in consumer interests and behaviours are being driven by the evolving trends that impact the needs and careers of professionals raised in the continuously evolving digital economy. They are choosing different lifestyles, taking advantage of the gig economy, and managing their finances through their smart phones. Technology plays a significant role in this evolution.

The latest Edelmans Trust Barometer report, shows that there has been a higher level of trust in technology than in financial and insurance organizations over the past decade. Financial service organizations are built on trust, yet building a sense of trust through technology is an art form that not all financial institutions understand.

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The number of start-ups building successful digital financial service businesses are growing because they offer more accessible digital banking and more diverse investment services through mobile devices at a lower cost than traditional financial institutions.

The increasing regulatory pressure on traditional financial institutions requires an increasing number of valuable resources and investment, which takes the focus away from innovation. Financial services firms need to evolve to meet the changing needs of customers, for example

micro insurance and peer-to-peer payments, these products are powered by new business models and infrastructure. The growing number of freelancers and contractors engaged in the gig economy need different financial products, enabled by technology.

What challenges do financial institutions face in relation to data verification and risk assessment?

Data is the fuel for a competitive advantage in the financial industry, in particular investment. At present, there is a massive movement towards ESG (Environmental, Social and Government) and Impact Investing, which requires an understanding of investor's criteria and their adaptation to the unique interpretation of the relevant ESG data. Such extensive data sets also require substantial resources including machine learning and artificial intelligence resources to generate insights.

When it comes to managing the clients' personal data, regulators have dictated how the data can be used and stored. Regulatory compliance on the acquisition and use of data will be critical. If the data hasn't been acquired directly from a customer that is willing and aware of the use, there could be large regulatory fines.

There are also financial risks associated with unauthorized access to data or any breach of security procedures. In the networked economy, traditional financial services firms have hundreds or partners or vendors on their networks.

Exchanging data on a regular basis to process transactions or verify information is a basic part of doing business. Third Party Risk has been a factor in many of the largest data breaches, yet cyber risk can be difficult to measure and control. As the cyber regulations increase for financial firms, vendors and third parties will need to demonstrate their cyber-hygiene before being allowed to connect.

How can financial institutions increase digital security while remaining customer-friendly?

Identity verification solutions will need to improve, especially with more customers moving towards digital financial services and electronic payments. The identification process should not prevent clients from running their business, and will have to effectively prevent fraud.

Currently, there are effective frameworks to measure and manage the cyber risk, but not all executives, managers and board directors have the required understanding to be effective. As regulation increases around managing data and cyber risk, stakeholders will need to become more accountable. Financial institutions require customer trust, and if customer data isn't protected, the trust will be lost.

In your opinion how banks will, or should co-operate with the fintech and startups environment? Will they compete or perhaps rather cooperate and together furtherly "disrupt" financial market?

Fintech startups can offer financial institutions innovative strategies and solutions that meet the digital needs of customers. To reduce the burden of having to adapt to changing and stricter regulations, traditional financial institutions can also "outsource" or "partner" for specific services using the support of creative startups. This will enable financial institutions the flexibility to quickly adapt to the customer's needs as they build out new products and services.

As the cyber regulations increase for financial firms, vendors and third parties will need to demonstrate their cyber-hygiene before being allowed to connect.

There are many incubators today where startups and traditional financial institutions collaborate and learn. However, these startups do compete with specific facets of financial institutions as they grow. As customers' needs for financial services continue to evolve, funded startups will have greater flexibility to build out the required infrastructure to support the creation of new services and products.



CRISTINA DOLAN is the founder and CEO of InsideChains, which works with organizations to digitally transform business models through blockchain, AI and IoT ecosystems to drive new business models in FinTech, InsurTech and Smart Infrastructure. More recently, she cofounded SDX, which enables new IoT and blockchain enabled insurance models for transportation. She is a cofounder of token and blockchain enabled InsurTech companies, iXT and iXledger. Her extensive board advisory work includes MIT delta V startup, Floating Point Group, which offers a smart order router for crypto and Additum, a tokenized value based healthcare ecosystem in Europe.



**Michael
Ventura**

Leaders and businesses need empathy

Empathy is one of the most critical leadership skills, both for attracting new talent and for building a healthy business. It also is one of the most important tools for designing services and products. Empathy is an exercise in perspective taking; both of people and the world around you. This mindset allows future-oriented leaders to make more informed, thoughtful, and ultimately aligned decisions that will positively influence their business acumen and interpersonal relationships.

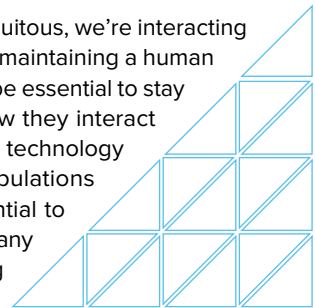
Empathic leadership also helps businesses better understand, recruit, and retain an effective workforce. In addition, it keeps businesses connected to the marketplace, the shifting landscape of their competitors, and ultimately, the consumers they serve. Businesses with empathy integrated into their internal fabric and culture are able to better notice the subtle shifts occurring within those aforementioned realms and move nimbly toward success.

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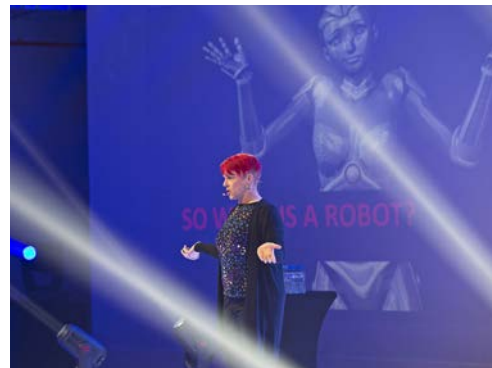
Voice command is one of the most interesting technology spaces to watch for empathy led innovation. Whether you're looking at Amazon's Alexa, Google Home, Apple's Siri, or another voice driven technology; what we are entering is an on-demand, consumer-controlled, hands-free experience that is seamlessly connected to one of our most natural human behaviours – talking. It's a simple shift, but one that is gaining rapid adoption in most hardware/software products.

Ultimately the widespread incorporation of this feature is making our interactions with technology more empathic, and in a sense, more human.

As technology becomes increasingly ubiquitous, we're interacting in less human ways. Empathy is critical in maintaining a human element within technology. As such it will be essential to stay focused on user needs, especially in how they interact with products and services. Furthermore technology will have sweeping effects on large populations and workforces. As such, it will be essential to consider technological impact from as many perspectives as possible before deploying these products.



MICHAEL VENTURA is an accomplished entrepreneur and creative director. In 2009 he founded Sub Rosa, an award-winning strategy and design practice that helps leaders and their organizations explore, learn, and grow. Michael has served as a board member and advisor to a variety of organizations including Behance (An Adobe Company), The Burning Man Project, The Smithsonian's Cooper-Hewitt National Design Museum, Friends of +POOL, and the U.N.'s Tribal Link Foundation. Michael Ventura is also an author of *Applied Empathy: the New Language of Leadership*.





**David
Gram**

Innovation: a two-front action

Many companies that mature and develop get used to set modes of action and follow the beaten track. Those organizations become better at what they do and focus on business areas they know. And no wonder – it is more profitable to them. However, what these companies need to face with time is the inevitable and ever more rapid change in their business area.

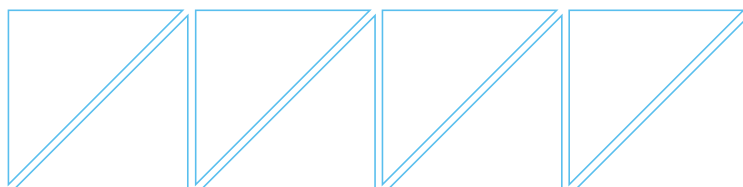
The introduction of many new technologies leads to different products, services, ways of providing them and new user experiences. It affects the existing and – up to now – successful business model. As these changes become fundamental and disrupt the *status quo*, organizations are forced to change and adapt to new market demands. Regardless of their trusted methods and core business, companies should explore new areas and experiment with implementing them to avoid hitting a brick wall.

In order to do it in a profitable way and minimize the risk, companies should take action on two fronts. This means that they should not reject previous methods and courses of action, but continue to apply them to present, familiar activities while looking for new, more agile attitudes to work which will help them to enter new areas. It is an approach based on both agile methodology and design thinking, which allow you to test new solutions and search for niches, while making mistakes and learning from them.

Companies must become "ambidextrous" in their actions to continue what they have done well so far and what their current business is based on, but at the same time actively and agilely search for new areas, new niches and create new needs.

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Agile methodologies help companies recognize key opportunities and prospects, which can contribute to future success. The approach involves using available talents and resources in a new way, which allows the company to explore new areas and examine them closely, noting any changes and analysing collected experiences to then test and perfect them in an iterative manner.

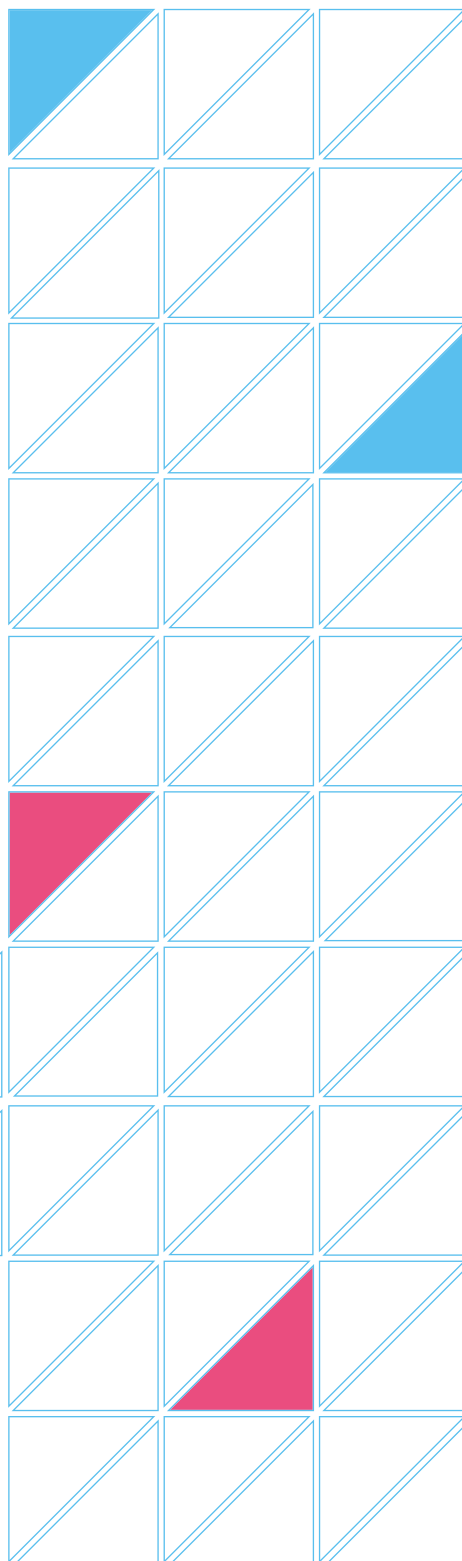


This way of thinking is based on the notion of a lean start-up and on developing a second, experimental branch on the side of the main business, outside of the existing operating model and using available resources (therefore minimizing investment costs) – effectively creating new startups. This approach creates a balance.

The future belongs to those organizations and leaders who explore new business areas using the existing corporate ecosystem in a bold and innovative way. I call them the "Diplomatic Rebels", because on the one hand they are rebels who question the *status quo* and are the pioneers of change, and on the other hand, they have to tread lightly and communicate changes in the organization in a diplomatic way. Let's face it – accepting change is not easy, so it is vital to communicate it in an empathetic way and look for support among leaders and team members who share the enthusiasm and will not be afraid to create new value in the organization.

Unfortunately, things can go either way in a VUCA economy and companies going through a rough patch tend to lose the dead weight, namely all activities outside of the core business. It kills innovation and makes the company vulnerable to other unexpected changes in the future. That is why it is worth being ambidextrous – securing enough means and resources to explore and test new areas. Regardless of how turbulent the market situation is. The new, unexplored path could be the future of the company, as the currently profitable business fails.

DAVID GRAM Innovation thought-leader & Co-founder of Diplomatic Rebels. David has worked with radical innovation and lean start-up methods in small businesses and large global corporations for the last 20 years. He worked as Head of Innovation at Scandinavian Airlines, as Senior Innovation Director in LEGO's Future Lab, and recently as Venture Partner in LEGO Ventures. David is passionate about transforming large organizations into lean innovators.





**Markus
Peschl**

Creating an innovation-friendly environment

What are the top 5 features of the management style of the future-oriented leaders and companies?

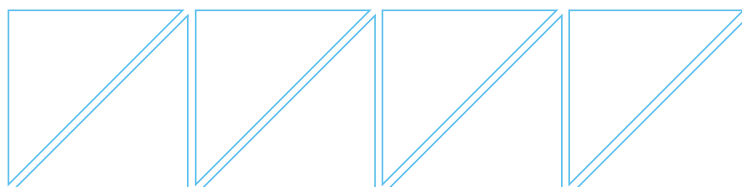
First of all the capability to balance: radical openness with being clear about the company's core purpose as a constraining factor. I would also name important a sense for future potentials and being brave in adopting them, which also means being able to "learn from the future as it emerges" instead of extrapolating from the past into the future. In my opinion a very important feature of true leaders is also to have empathy and being capable of listening and observing closely, as well as following a mindset and strategy of enabling (for employees and the organization) rather than of controlling and determining every detail.

Innovation is a key word. Companies are at quest searching for innovations, however still they are not open to failures neither develop early solutions. How to implement innovation so it increases effectiveness and wins market advantages?

***Living in a VUCA world
that is highly unpredictable
and undergoes permanent
disruptive change,
a "strategy of rigidity" will
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company to trouble.***

Most of today's innovations are adaptations or slightly modified versions of products, services, or business models of already existing solutions and market offers. This strategy does not work any longer in a market that is characterized by digital disruption and a high level of uncertainty. The goal cannot be any longer to optimize existing products or services. We have to start to "learn from the future as it emerges", i.e. by questioning existing premises and frameworks, developing new perspectives, and identifying future potentials (going beyond "trends"), new opportunities or user needs that do "not yet" exist and still have to be discovered.

The challenge is to overcome the classical approach to innovation of just being creative or "thinking-out-of-the-box". We will have to replace it by a future-oriented mindset, and develop organizational capabilities to open up to these emerging potentials by closely "listening" to slight, almost undetectable changes in the market, social value systems, culture, technologies, etc.



How to transform an organization and encourage leaders to create an innovation-friendly environment?

In most cases, organizations are still understood in a mechanistic manner following a simplistic linear and rule/process based input-output strategy. On the one hand, this drives stability, productivity and efficiency. On the other hand, it makes an organization a rigid and inflexible system that is almost unable to learn, change, or innovate. Living in a VUCA world that is highly unpredictable and undergoes permanent disruptive change, such a "strategy of rigidity" will — sooner or later — put the company to trouble, as it has no capabilities in place to either react to environmental changes or even proactively shape it by creating new niches.

What is needed are humans, organizational structures, capabilities, mindsets, etc. enabling change and innovation as an intrinsic capacity of the organization. We refer to such organizations as "Enabling Spaces": they act as containers, holding innovation and knowledge processes and (social) activities. An "Enabling Space" is designed as a multi-dimensional space, in which architectural/physical, social, cognitive, technological, epistemological, cultural, intellectual, emotional and other dimensions are considered and integrated.

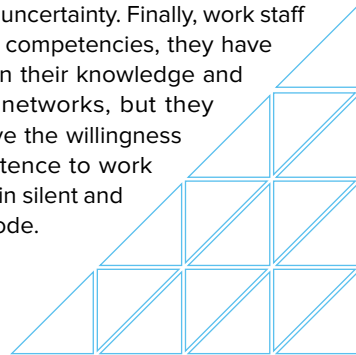
These dimensions must not be seen as separated from each other, but are heavily dependent on each other and only make sense, if they are related to and interacting with each other. This cannot be achieved in a mechanistic manner, because one always needs to take into account the particular organizational and cultural context, its environment, as well as the particular task. Hence, developing an "Enabling Space" is a design task, one that does not have a "single best solution".

And what about the employees? How they can enhance their innovation readiness?

First of all, the organization and its leaders have to be truly engaged in innovation, change, and openness for the company's future. Innovation is not just following given and abstract procedures or processes, but it is a mindset and a personal

Work staff need social competencies, they have to engage in their knowledge and innovation networks, but they need to have the willingness and competence to work individually in silent and research mode.

attitude, a "way of life and work". Employees have to be capable of reflection, and are also required to have a good understanding of the company's strategy and purpose. Furthermore, employees have to be "brave" and capable to deal with uncertainty. Finally, work staff need social competencies, they have to engage in their knowledge and innovation networks, but they need to have the willingness and competence to work individually in silent and research mode.



MARKUS PESCHL Professor of Cognitive Science and Innovation at the University of Vienna. His research is driven by the question how novelty and innovation come into the world. He focuses on the interdisciplinary fields of innovation, knowledge, organizational change, cognition and the design of so-called Emergent Innovations and "Enabling Spaces", i.e. spaces for the generation of new knowledge and innovations. Furthermore, he is the founder and CSO of theLivingCore Innovation and Knowledge Architects.

SOCIETY

Microgravity and
Space Technology

International Space Station

- 400 km, 6 astronauts, 8 km/s
- 3-D print spare parts
- Combustion efficiency in stable burn state
- Robot arm for brain surgery in MR chamber
- Protein crystallization in space for pharma
- Bone density medication

MASTERS
& ROBOTS

SOCIETY



Aleksandra Auleytner

Attorney at law,
Partner, Head of
IP / TMT Practice at DZP

The use of autonomous systems and artificial intelligence in various areas of social life will become more and more frequent. Artificial intelligence in the media, agriculture, medicine or robotics is already changing each of these fields in a more revolutionary than evolutionary way. Self-learning computer systems are increasingly surprising with the results of their work. With their use, for example, songs are created under the Google Deep Mind or Iamus program, parts of due diligence reports, or short press articles. The Washington Post has boasted that only in 2016 did the robot working for it wrote 850 press articles.

Autonomous systems and artificial intelligence with their interactions in the society, create a number of new and fascinating challenges – technological, organizational, but also legal and ethical. The development of a legal framework and codes of ethics in this area is a significant task legislators of all countries need to face.

One of the most important challenges are issues related to civil liability. The more autonomous robots become, the more difficult it would be to trace entities that would traditionally be responsible for their functioning. In the EU, the proposals to give the most advanced robots legal personality – which would allow the issue of liability in doubtful cases to be resolved are becoming more and more frequent. Saudi Arabia's granting of citizenship to Sofia the robot in 2017 is also part of the "assign legal personality" trend, although no details as to the scope of the rights of the robot resulting from it were given.

At present, it is difficult to answer many questions that arise when discussing the use of artificial intelligence in the society of the future. These questions, however, often prove that we are on the verge of a real revolution.

Autonomous systems and artificial intelligence with their interactions in the society, create a number of new and fascinating challenges – technological, organizational, but also legal and ethical.



**Justin
Hendrix**

Fourth decade of new media

Can you imagine the world of media beyond 2030?

One of the two major forces driving the evolution of media is advances in the data sciences – machine learning, artificial intelligence and related technologies such as natural language processing, computer vision and more. Not only are we teaching computers how to read, how to see and how to talk, we are teaching them to combine and recombine information in novel ways, to recognize and employ emotion, and to generate content of all types. This is the thing that will change media and change our interaction with information the most over the next decade.

Will we become even more addicted to screens?

No, not really. The second big force is the evolution of interface technologies. We are all very reliant now – even addicted – to the panes of glass we use to engage with most media. But a new generation of interfaces is bringing information into our environment in new ways. Voice interfaces, brain and neural interfaces, virtual and augmented reality devices are changing the way we interact with computers, with content and with one another. I think these new interfaces may somewhat diminish the role of screens in the next decade.

New generation of interfaces is bringing information into our environment in new ways. Voice interfaces, brain and neural interfaces, virtual and augmented reality devices are changing the way we interact with computers, with content and with one another.

Virtual reality, augmented reality, deepfake those are technologies that are conquering our minds and businesses right now, what awaits for media in the next decade?

A major event in the next decade will be the emergence of spatial computing and the AR cloud. This refers to systems that will make information contextually available and relevant in physical space and time. We will see augmented reality applications in particular employ this information to allow us to explore digital layers permeating the world around us – enabling new products and services and means of communication.

Our memories and ideas will be situated in physical space, and every location will contain volumes of information. This will prompt some pretty strange behavior as we learn to navigate the new layers to the world around us.

We will need new languages and methods to call that information forth and to interact with it, in a social context. These capabilities, in a context of near limitless bandwidth and throughput on 5G wireless networks, will open up opportunities to create different media products and services than the ones that command our attention today. We're seeing the early signs of what that world might look like now.

How will we interact with artificial intelligence characters in the media environment?

We host a working group of experts on this subject – people working on the AI problems, the interaction design and other questions. We asked them to predict when they believe we will regularly see AI characters in our lives. The majority believed this would take place in the next 3-5 years. These characters may be animated – taking any form – or they may be hyper-realistic, passing themselves off as human. They will engage with us in all aspects of life – from entertainment to education to healthcare to commerce. They will serve as the first point of contact with the internet – certainly with companies, and potentially with government. There are already examples of what this world might look like.

Of course there are thousands of chatbots and other automated systems that engage us and sometimes frustrate us. But eventually we'll see legions of artificial celebrities, composites of characteristics that may be designed to our individual preferences, with synthesized personalities. And, we'll see celebrities who have passed away re-animated. We will have the ability to easily create puppets out of any person or object or voice, using deep learning methods. This will open up opportunities for good and for bad, and for everything in between, just as all media create such opportunities. Some people have put this to use to re-animate world leaders to say what they wish; others have used the technology to create pornography.

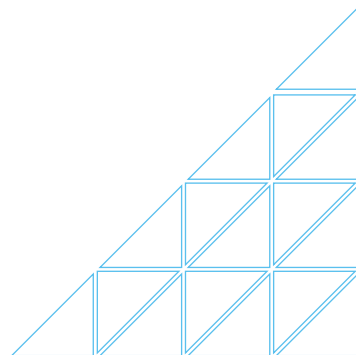
Will we be able to sort out fake news and manipulation in media?

Many fear the blurring of the line between what is real and what is synthesized, of the spread of hoaxes and lies. But these technologies will

also create new means for expression, new tools to create art and engage people. We will have to find a balance. Some technologies for parsing "real" or authentic media will advance more or less at the same time as new threats emerge. In other cases, institutions and agen-

***Eventually we'll see
legions of artificial
celebrities, composites
of characteristics that
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synthesized personalities.***

cies charged with understanding malevolent actors, propaganda and misinformation will evolve to educate society and the effects of disinformation campaigns will be dulled, even if never quite contained. I'm optimistic on this front – but one thing we could all do now to help matters would be to think twice before we share nonsense of dubious origin on social media. We can all play a role in creating a better information ecosystem, today.



JUSTIN HENDRIX Executive Director of NYC Media Lab, a public-private partnership between the City's industry and its universities to drive emerging media and technology innovation and entrepreneurship. Launched by the New York City Economic Development Corporation, NYC Media Lab collaborates with NYU, Columbia, CUNY, The New School, the School of Visual Arts, and Pratt Institute and corporate members such as Bloomberg, the Associated Press, NBCUniversal, Hearst Corporation, Viacom and Verizon. The Lab's interests range across disciplines from data science and design to virtual and augmented reality.



**Mark
Post**

Future of food

What is the future of food when we have to face at least three major challenges: population growth, excessive exploitation of the natural environment and climate changes?

It does not have to be a problem, if we rethink the way we produce and handle food. We have a lot of inefficiencies in the system including food waste, using farm animals to serve as food supply and inefficiently using the available land for agriculture. To achieve this, a combination of technology and behavioral change will be required.

Should we all become vegetarians if we want to save the planet?

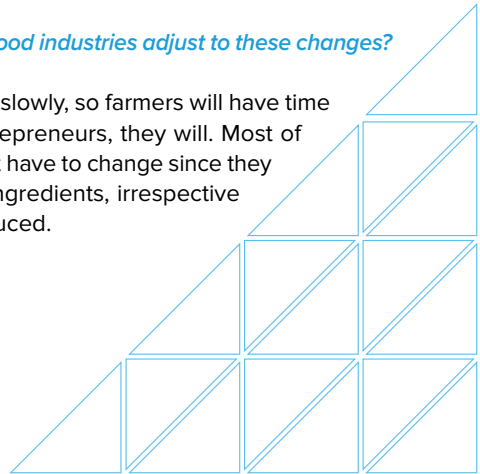
Not necessarily, if the cultured meat, fish and poultry companies are successful in producing meat by largely bypassing the inefficient animals. It is possible and indeed conceivable that our diet will move much more towards a plant-based diet than it currently is.

Can we afford in-vitro burgers?

Over time, yes. Inevitably, they will be introduced as an expensive item, but will become cheaper over time and potentially cheaper than current meat. The first "in-vitro" burger costed about \$250,000, but we estimate that together with the technology development and future scale of production we will be able to go down to the price of regular meat. That's affordable.

How can agriculture and food industries adjust to these changes?

The changes will happen slowly, so farmers will have time to adjust, and being entrepreneurs, they will. Most of the food industries will not have to change since they are processing the raw ingredients, irrespective how they are being produced.



DR. MARK POST MD/PhD, has had several appointments as assistant professor at Utrecht University, Harvard University, as associate professor at Dartmouth college, and as full professor at Eindhoven University of Technology and Maastricht University. He currently holds the chair of the Physiology Department at Maastricht University. He is visiting professor at Harvard, University of Modena and faculty at Singularity University. His main research interest is the engineering of tissues for medical applications and for food. First in-vitro hamburger creator.



MASTERS & ROBOTS

WORK



WORK



Maciej Noga

Managing Partner
of Pracuj Ventures,
Chairman of the
Supervisory Board,
Co-founder
of Grupa Pracuj

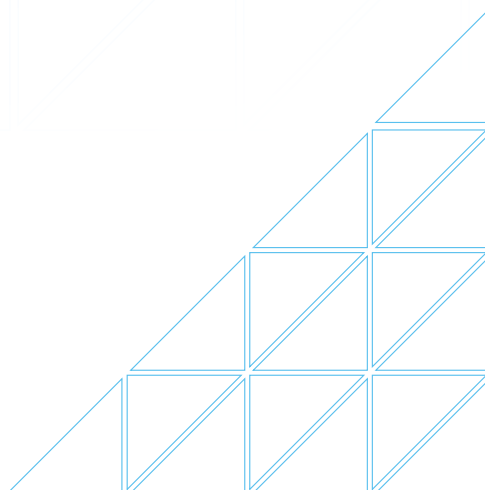
Technology, demography and personalization. These three factors have and will have an increasing impact on how, where and when we work. To remain in the mainstream and maintain market advantages – in an exponentially changing reality – one needs to be particularly sensitive and vulnerable to any changes and trends that imperceptibly redefine the labor market.

Young generations will challenge the existing schemes and disrupt the *status quo*. By focusing on personal development and collecting work-related experiences – more than on a traditional career – they will also change the face of the organization. The employer's role will be to provide young employees with the best possible conditions and workspaces to increase their efficiency, develop individual talents and... retain them within the organization.

Technology will allow us to communicate more effectively, manage more consciously, and analyze key data faster. Artificial intelligence will relieve employees of the most tedious activities, so they can focus on what is more satisfying, more creative and self-developing.

All we have to do is... keep up.

Young generations will challenge the existing schemes and disrupt the status quo.





**Monica
Parker**

Cultivating vulnerability

Few years back you said that cultivating vulnerability will help us manage intense change. Does it also seem to be true in the reality of 2030?

Even more so. We are becoming more and more virtually connected while becoming less and less emotionally connected. Loneliness is reaching epidemic proportions despite more people moving into cities and being "with" each other. Empathy levels continue to drop despite technology and globalisation presenting an even clearer picture of the disparity in the world.

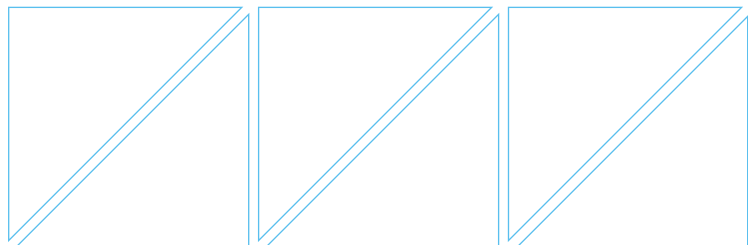
Vulnerability and empathy will help us work more closely in communities, and see each other as human, which leads to better problem solving. Vulnerability will also make us more willing to see the world with curious eyes, rather than being the smartest person in the room, leading to better innovation. Lastly, vulnerability will make us more resilient, which will help us manage the negative physical and psychological stresses of intense change and lead more effectively.

What other skills and abilities will become crucial in the future work environment?

Vulnerability and empathy will help us work more closely in communities, and see each other as human, which leads to better problem solving.

Wonder will be a key skill set. Technology is making our curiosity shallower. While we can find the answer to anything these days with just a google search, that type of curiosity, what's called "diversive" curiosity, does not require as much effort and does not encourage – even inhibits – deep enquiry. "Epistemic" curiosity, which is a desire for knowledge itself, not just specific answers like diverisive curiosity, is the key to true discovery.

Epistemic curiosity must be cultivated, however – like a muscle – can be lost if not exercised. As questions become more complex it will become harder and harder to just seek specific answers to specific questions. The world will need people who explore deep topic areas for the sake of exploration, and in doing so are able to connect that dots in unexpected ways.



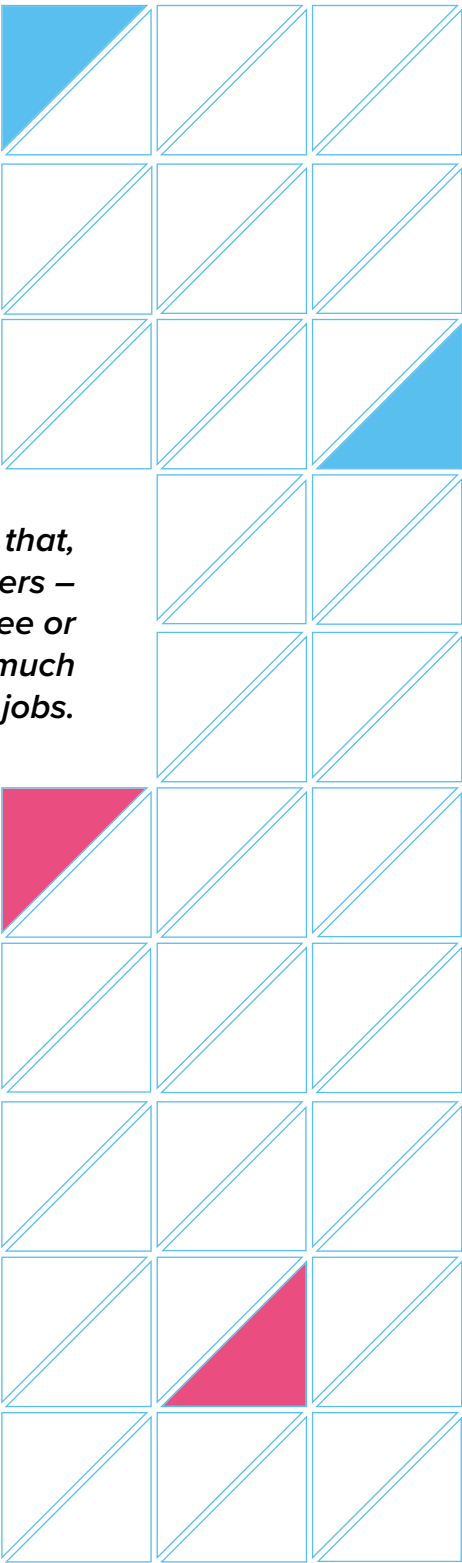
Nowadays employees are encouraged to find and develop their talents that are lined up with organization needs. However the future of work would be constant learning and reskilling. How will it affect talent oriented management?

I think the future of talent management is one that looks away from specific skills and hiring for roles, and instead looks at skills clusters. So rather than defining someone's role as "financial analyst" or "learning & development trainer" both these roles would fall into an "Informer" skills cluster. Recent research shows that, by learning skills in clusters – rather than a narrow degree

Recent research shows that, by learning skills in clusters – rather than a narrow degree or certification – allows for much greater opportunity in finding jobs.

or certification – allows for much greater opportunity in finding jobs. Further, hiring for skills clusters means as roles change due to automation, people can more fluidly shift between roles within the same cluster. It heavily reinforces the general qualifications of a cluster from a neuroscientific point of view, therefore the specifics of each role become easier to unlearn when changing roles.

MONICA PARKER Speaker, author, behavioural nerd & *status quo* challenger inspiring and guiding businesses through change. HR expert. Monica Parker brings to the table a vast knowledge of navigating and communicating organisational change. An international speaker and presenter, she is a regular blogger for the Huffington Post and has appeared on BBC Worldwide as an authority on workplace strategy. Founder of HATCH Analytics





**Philip
Vanhoutte**

Future of work

Will employees still be coming to the office in the future?

Since the arrival of the mobile internet early this century, work is no longer a place you go to but something you do. Smarter Working has become a work management philosophy that gives employees the freedom to select place and time of work as long as results are achieved, costs reduced and our environment is benefiting.

Conscious employers are giving their employees the opportunity to work from home to reduce carbon footprint. Freelancers and startup entrepreneurs understand the power of teaming up in coworking spaces. And the best employers – concerned about well-being – are now advising their associates that some work outside in nature/green settings will boost creativity, productivity and their health. It's called Activity Based Working whereby an employer offers a variety of solo and team working spaces that employees can choose from to perform their best. So no more default heading to your personal desk in an open office environment that's polluted with distracting audio and visual noise. And YES, employees will gladly come to an office if that provides a really productive, stress-free and healthy workspaces.

Accroding to the "Activity Based Working" an employer offers a variety of solo and team working spaces, that employees can choose from to perform their best.

How will the way we work change in the next 10 years?

Technology permitting, we will be able to work just about anywhere, anytime as long as that is smart and productive. But this brings a fresh challenge as the richness of human face to face communications will be lost to some extent.

Working with colleagues / customers remotely, leading a team that's spread across the country or continents will require a new set of skills, behaviours and capabilities for Distributed Work Success.

Physical and Digital work infrastructure will have improved massively thanks to adoption of the principles of Ergonomic work as invented in Poland in the midst of the 19TH century. And the nature of work will have evolved (or gone back) to working with nature due to the application of the Biophilia that cures the nature deficit disorder that we're suffering since industrialization and urbanization began.

What is the workplace of the future?

The workplace of the future will stand out because it's superbly supporting the work humans do best. And we don't have to wait for the future to arrive. Clever employers are getting serious about providing a well-conceived workplace. Leesman, the world largest independent

workspace benchmarking institute, published the Workplace Experience Revolution report in September 2018 revealing how winners are listening to what their associates need and then providing it.

This is what humans want in order of priority: good workspaces to support Individual Focus, Learning from a Team, Relaxing, Taking a Break, Creative Thinking and Planned Meetings. Good workplaces should have great Acoustics to abate Noise, Nice Design with great décor and a good dose of Nature, Proper Stand / Sit Desks, enough Small Meeting spaces and Informal Work Areas. And no surprise... good coffee / tea / refreshments plus clean offices and toilets are always a must. And wonderful workplaces will also help our brains to do top class know-how work!

How can employers redesign the workspace to increase both our efficiency and satisfaction?

It starts by listening to your employees and come to terms with the Human Dimensions of work. The majority of leaders will benefit from taking up courses on psychology, ergonomics, biophilia; not to mention emotional intelligence.

Having yearly employee workspace satisfaction assessments will be foundational. HR leaders will champion this Workplace Experience Revolution change that aims to realize the full potential of their employees. The best talent will choose where the best workplaces are. Employers will have a public TripAdvisor style ranking of the workplace experience level as voted by their associates.

And what it will look like in the nearest future?

Human Realization leaders will work with Info Tech leaders to strive for digital minimalism where big work distractors like social media will be curtailed or addressed by addiction kicking programs.

It starts by listening to your employees and come to terms with the Human Dimensions of work. The majority of leaders will benefit from taking up courses on psychology, ergonomics, biophilia; not to mention emotional intelligence.

A new generation of Well Being focused Facilities/Office Managers will fix the number one problem that hurts productivity: noise... the biggest bugbear of the so-called modern office. They will have been educated in Biophilic Design of the Built Environment, progressively offering nature make-overs and from-the-ground-up nature inspired workspaces.



PHILIP VANHOUTTE During his 10 years ITC career he worked at Accenture and had Executive Roles at Fujitsu ICL, Dell, Sony-Ericsson and Plantronics (now Poly). This matured into a singular purpose: Realization of Human Potential. Author of The Smarter Working Manifesto: Where, When and How to work best. Celebrating Activity Based Working with Veldhoen+Company, Workplace Effectiveness benchmarking with Leesman, SoundScaping with Julian Treasure and Distributed Work Success with WorkevOHlution. He launched a method for Self-Directed Careers at SXSW featuring the Human Fabric, Meaning at Work and Career Fitness profiling.

MEDICINE



MEDICINE



**Julita
Czyżewska**

CEO PZU Zdrowie

Medicine is now at a very important moment. On the one hand, new technologies are dynamically developing and breakthrough solutions are emerging, such as biosensors, i.e. biological sensors, whose operation is based on the specific recognition of the material being in contact with the sensor, digital pills - capsules containing the drug, but also a radio transmitter activated by interaction with acid or nanoparticles that significantly improve the effectiveness of chemotherapy to combat childhood cancer - neuroblastoma.

On the other hand, according to the WHO report, by the year 2035, there will be shortage of as much as 12.9 million white personnel in the world. This will also significantly affect Poland. Medical operators must address this problem, optimizing primarily the treatment process itself. The use of AI and machine learning algorithms will allow the doctor to make a faster diagnosis and increase the effectiveness of the treatment process. As a result, the patient will gain faster access to a doctor by undergoing consultation in a convenient way - by direct or remote visit. Data analysis will allow physicians to quickly detect risk factors or disturbing symptoms and apply an individual treatment plan.

We should also pay attention to the quality of treatment and focus on value-based care. Unlike the traditional healthcare model, VBHC's assumption is to reward the healthcare provider for achieving a specific health effect for the patient. The optics should be changed from treatment to rewarding actions to *cure patients*.

Concluding, the health system should evolve strongly in the forthcoming years, adapting to current demographic and social factors as well as the changing needs of patients, in accordance with the ancient Hippocrates principle: *Salus aegroti suprema lex*, i.e. the health of the sick person by the highest law.

*The optics should be
changed from treatment
to rewarding actions to
cure patients.*



**Divya
Chander**

Future of medicine

In medicine, new technologies are essential and widely implemented. Recently, brain-computer interfaces are capturing a lot of attention. How can they help patients?

Brain-computer (BCI) and brain-machine interfaces (BMI) support the brain in one of its three key functions: motor, sensory or cognitive. In other words, a chip coupled to a computer or algorithm can replace or supplement one of these areas in our brain when it stops functioning properly.

One of the oldest brain-machine interfaces is a cochlear implant – a device that bypasses the peripheral hearing apparatus, digitizes sound from the external world, and stimulates an electrode array on the cochlea. It is the electrode array that stimulates the auditory or 'hearing' nerve. In other words, the machine mediates between sound from the external world and the brain, to bypass this missing or damaged sensory function.

Most of the work since that time has been in brain-machine interfaces in the motor space. Neuroscientists ('brain' scientists) had to discover the brain's code to interpret motor signals. Machine learning algorithms, both supervised and unsupervised learning, help us decode and make sense of these kinds of inputs. Therefore, the signals that drive motor

commands are intercepted before they reach the non-functioning spinal cord, and instead, these signals are used to send commands to some sort of technology outside us – an actuator if you will.

Some of the newest developments in this area of BMIs bypass the external actuators entirely. Imagine you want to walk. An electrode array interprets your desire to walk, and can also stimulate your spinal cord to make your legs move again.

This is how paralyzed people can now use their mind to control robotic arms, exoskeletons, avatars, and even keyboards, to type and open email, and communicate through computers and with the internet. The Braingate academic consortium is one of the many groups working to enable this technology. Private entrepreneurs are also extremely active in this area. One example is Elon Musk's company - Neuralink. A few months ago they made an announcement that they had developed a much denser (i.e. more electrodes) array for detecting neural signals, which increases accuracy and signal. They also reduced the size of these electrodes to the

diameter of threads, meaning they do less damage to brain tissue when inserted. An automated device to thread these electrodes into the brain was also introduced, since this is difficult for a human to do.

Some of the newest developments in this area of BMIs bypass the external actuators entirely. Imagine you want to walk. An electrode array interprets your desire to walk, and can also stimulate your spinal cord to make your legs move again. A group in Lausanne, Switzerland, is sending decoded signals back into the spinal cord, using a spinal cord stimulator,

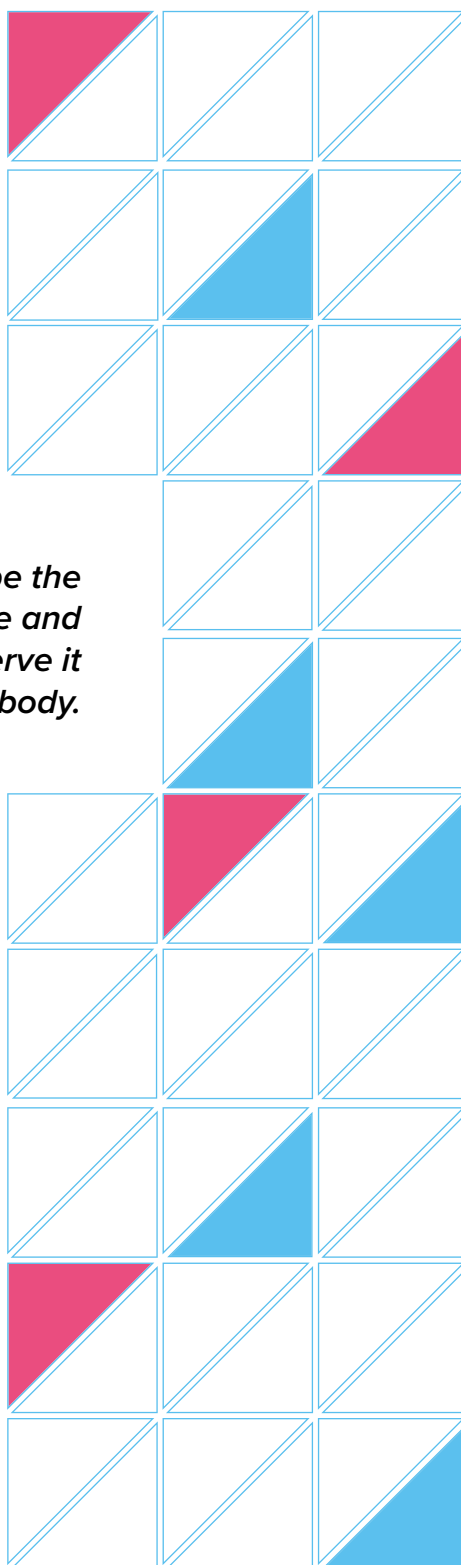
to recover functionality in the damaged organ. There are labs all over the world working on these kinds of projects.

A final development has been in brain-communicative devices. The Braingate academic consortium has been very active in this area, creating interfaces that allow paralyzed people to use their minds to control keyboards and mice to type and access the internet. Some groups are now trying to use brain computer interfaces to directly decode what people want to say into speech. An example is Ed Chang's lab at UCSF, though he is not leading the only group to do so.

The Holy Grail will of course be the ability to save our connectome and brain activity in order to preserve it after the death of the body.

It all sounds quite invasive...

There are new non-invasive approaches to this technology that will make it possible for more people to take advantage of it. Many people don't want their skull cracked open to implant electronic grids! Several groups are working on non-invasive recordings. The easiest technology we have access to for such recordings are electroencephalography [EEG] electrodes. These electrodes are affixed to the outside surface of one's skull. The technology is easy to apply, and it's portable. You can wear the electrodes in a self-contained cap, and carry all the capture and processing hardware with you. Functional MRI technology is not portable yet, but there are inroads being made with technologies like near-infrared. The skull is transparent to this wavelength, so you can use it for both read-write functions.



What are the practical applications of such technology?

Imagine you're paralyzed, and confined at home. Most people with paralysis need a lot of help and support. But with these machines and algorithms, you could wear an EEG cap and send your avatar to go get groceries for you. Or even order those groceries or food online with your thoughts. Imagine you have a spinal cord injury from

the neck down and cannot use your hands?

Imagine a mind-controlled Uber Eats app...

More generally, you could send your avatar to do all sorts of errands for you, and to interact with people in virtual world. At some point in the near future, these devices will connect our minds to interface with our virtual or augmented reality headsets. And then you can have full interactions without having to type or use controllers, with other people in virtual environments. Mark Zuckerberg is the most visible entrepreneur interested in this type of technology, but he would not be the only one. Just think about using your thoughts to interact using Oculus gear!

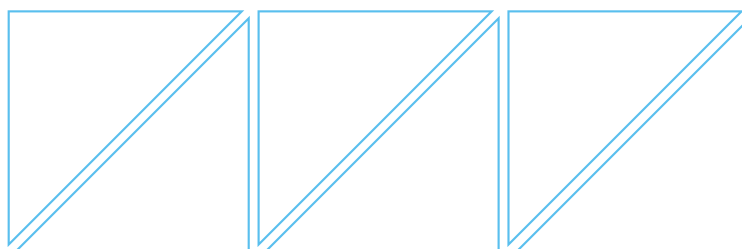
Most people with paralysis need a lot of help and support. But with these machines and algorithms, you could wear an EEG cap and send your avatar to go get groceries for you. Or even order those groceries or food online with your thoughts. Imagine you have a spinal cord injury from the neck down and cannot use your hands? Imagine a mind-controlled Uber Eats app...

Can implants also be used to supernaturally improve our bodies?

Yes, these technologies can also be used to increase our natural abilities. If we talk about cognitive implants, they can enhance our intellectual abilities – for example to study new languages, to focus, acquire mathematical skills, or more generally increase synaptic plasticity.

Plasticity is the ability of the brain to change, to

learn and to form new memories. There are many applications where cognitive implants would help in the treatment of diseases, but I will say it openly that the driving force that encourages some scientists and entrepreneurs to act is the desire to raise the level of human intelligence and performance. And here I think that neuroscience is progressing in very important directions that will change our world.



Do you think that in the next 5-10 years we will gain access to those methods and devices that would expand our natural capabilities?

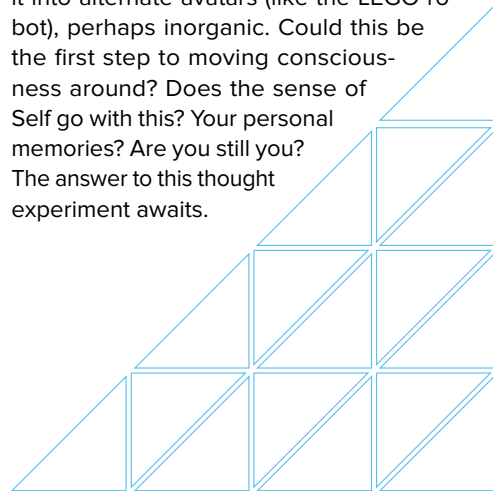
I think we're on the right track. Smaller, less-invasive devices that can be implanted with minor surgery, or no surgery at all, will increase accessibility, even to those people who are trying to augment function rather than replace it. If we could really harness the power of non-invasive neuromodulation, then we would make great strides in augmented capabilities. We have now seen that non-invasive modulation can improve plasticity, so doing things like stimulating the motor cortex before engaging in sports or music training may give us a major boost. But as wearable and stretchable electronics, many of which can be both implanted and stimulated from the outside, become more common, you will see a new era of augmentation. People are already implanting new sensory devices and organs like vibrational sensors, multi-spectral cameras and magnets in their bodies. The brain is modifying itself to be able to interpret these new streams of data. Couple that with things like CRISPR (gene editing), and you will see augmented human capabilities take off.

The Holy Grail will of course be the ability to save our connectome and brain activity in order to preserve it after the death of the body. We don't know exactly what will happen, because no one has yet built a fully functional brain simulation, or means of preserving brains like this.

There's an interesting project called 'Open Worm'. The worm's connectome, all the neurons and connections between them, have been appropriately mapped. A group took that mapping and put it into a robot made of LEGOs. And if you present stimuli to that system, the LEGO robot

There are many applications where cognitive implants would help in the treatment of diseases, but I will say it openly that the driving force that encourages some scientists and entrepreneurs to act is the desire to raise the level of human intelligence and performance.

moves like a worm. The thought experiment is to extend this complexity to capturing the full human connectome and be able to move it into alternate avatars (like the LEGO robot), perhaps inorganic. Could this be the first step to moving consciousness around? Does the sense of Self go with this? Your personal memories? Are you still you? The answer to this thought experiment awaits.



DR. DIVYA CHANDER is a physician, neuroscientist, and futurist who trained at Harvard, UCSF, UCSD, and the Salk Institute. She is currently the Chair of Neuroscience and Faculty in Medicine at Singularity University. She is also a Visiting Scholar in Bioinformatics in the Stanford Department of Medicine, and was a Stanford Anesthesiology Faculty member for 8 years. Her goal is to understand neural mechanisms of consciousness, as well as the evolution of human consciousness secondary to human augmentation. Dr. Chander shares a parallel passion for space exploration and was a finalist for astronaut selection. During her lifetime, it is her deepest desire to see a well-developed architecture to sustain human and robotic exploration of our solar system and beyond.



**Natasha
Vita-More**

On the threshold of longevity

Yuval Noah Harari predicts that in 21ST century humans will wage war against death and certainly against aging. Shall we win?

As humanity enters the third decade of the 21ST century, our medical technologies and scientific breakthroughs in genetics, with more in-depth understanding of DNA. This instruction for each human being directs the molecules"proteins. The more that is discovered about the body and its functions, the better we all can work toward slowing down the aging process the finality of biological death.

Professor Harari's prediction meets forecast of many already working diligently in the field of longevity and industry of life extension. It combines two well-known concepts: ageless thinking and longevity escape velocity. The former is my own theory about the psychology of aging and to overcome the acceptance of death as a natural process and the latter refers to David Gobel's theory of living long enough to be on the cutting edge of anti-aging medicine, and which is often referred to by Ray Kurzweil and Aubrey de Grey.

In the 21ST century humans are already waging the war against aging by basic practices, such as nutrition and exercise. These are basic practices but extremely essential.

In the 21ST century humans are already waging the war against aging by basic practices such as nutrition and exercise. These are basic practices but extremely essential. Beyond this, both women and men use hormone replacement therapies to replace the lost estradiol and testosterone in their bodies. While seemingly trivial, both men and women undergo cosmetic surgeries and injections to reduce the outer signs of aging.

More serious and life-threatening mitigating interventions also include processes such as heart valve replacement and other organs that have deteriorated to a point of a need of replacement.

Prosthetics has become highly sophisticated with robotics, haptic-systems, and neuronal interfaces. My forecast dating back to 1997 and realized in the future body prototype "Primo Posthuman" proposes that we will have alternatives to the biological bodies with semi-biological whole-body prosthetics the replaces worn out body parts with new ones.

How will technologies of tomorrow bring us closer to defeat aging?

Technologies of tomorrow are being investigated and researched today. These technologies include nanomedicine, the concept of tiny robot who are programmed to clean up cellular breakdown within the body and perform repair tactics. Another area of using technology appears in genetics – such as gene therapies, which will edit out genes that cause horrific diseases. Through these two medical technologies, the human

body will be able to continually renew itself and aging will be a concept of the past.

Beyond these biological mitigating technologies that directly rescript human nature and provide an evolution of human biology, there are other possibilities that offer novel ways to defeat aging. These include the process of backing up the brain onto computational systems and providing alternatives to biosphere environments. For example, a person could co-exist in the biosphere material world and travel within a well-organized data system to co-exist in the codesphere.

A simple way to explain this is in the concept of the Avatar. However, it is my view that the future will not be one size fits all. It will continue to be personalized and diverse.

How can individuals as well as societies prepare for the human, machine and AI integration?

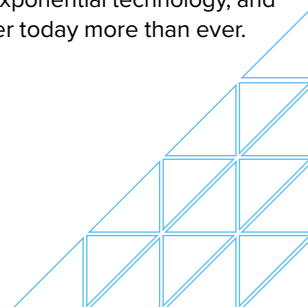
We all can prepare and must prepare for the future integration of the human species, the machine, and the developing of narrow AI toward strong AI (often referred to as artificial general intelligence). The blending of technology and biology has always been about improving human life.

Today, more than ever, critical thinking is consequential to this blending. For example, being alert to the fact that social media alters information and that we live in a boastful society ought to make us more cautious to naturally and instinctively question information, identify nonsense, and be self-responsible.

We must be aware of identifying evidence-based science from hearsay or even theoretical propositions that could work but have never been tested. With this in mind, we all need to be acquainted with the entrepreneurs, innovators,

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scientists, and technologists and their unique breakthroughs. While these are key factors to ethical longevity, they are also deeply linked to existential risk, exponential technology, and why ethics matter today more than ever.



PROF. NATASHA VITA-MORE is a strategic designer, author, speaker and innovator within the scientific and technological framework of human enhancement and life extension. Her interests are located within the ethical uses of science and technology and socio-political implications of revolutionary advances impacting humanity's future. Natasha Vita-More holds a PhD degree, University of Plymouth, School of Media Arts, Design and Architecture; a MPhil, University of Plymouth, School of Communications and Media Studies; an MSc, University of Houston, School of Sciences and Technology – Future Studies. Called an "early adopter of revolutionary changes and a "role model for superlongevity", her conceptual whole-body prototype "Primo Posthuman" received international recognition. While her media design works have been honored at Women in Video, the Moscow Film Festival, her most recent scientific research has been a breakthrough within the field of cryonics and long-term memory of the simple animal, the *C. elegans*.



**György
Lévy**

Year 2030: new generation of prosthesis

Currently some of the biggest challenges we face in the field of brain – computer interfaces is a lack of understanding of exactly how certain processes happen in our nervous system. Possibly the most challenging question right now is how to convey what is called proprioceptive information to the brain.

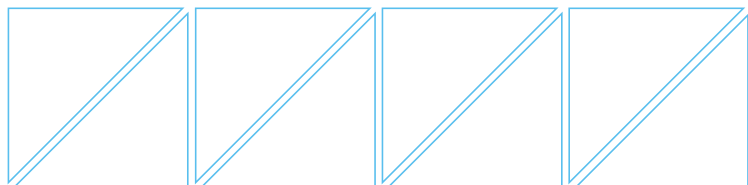
Proprioception is one of our most basic sensory modalities that allow us to function in the world. It provides the fundamental information of where our body is in space, so when I know that I've put my phone in my back pocket I can very precisely position my hand to it without even looking.

This sensation of embodiment connects our brain to our body every moment of every day. Currently we do not have a complete understanding of how our body feeds back this information to the brain, and how the brain processes this information, but it is clear that without the ability to "feel" a prosthesis we will continue to see these devices as tools rather than parts of our bodies.

One day people might replace their healthy limbs for prosthetic devices because they perform better than their biological counterparts, but why replace it when you can just add on?

To achieve this there have to be significant advances in engineering (when it comes to developing high definition direct nerve interfaces), computer science (to be able to code and decode sensory information to and from the brain), and neuroscience (to understand how our sensory processes are carried out by our nervous system). That's quite a tall order for the next 10 years, but with hard work and a few lucky breaks it's not impossible that by 2030 the 1ST neural-integrated prosthetic limb will already be in use.

Moreover, experiments have shown that the human brain can control several more peripheries (or limbs) independently from each other than just our arms and legs. A common belief or fear is that one day people might replace their healthy limbs for prosthetic devices because they perform better than their biological counterparts, but why replace when you can just add on?



Once complete sensory feedback is established between external devices and the human brain there is no reason to believe the technology would not make its way to anyone who can afford it. It will begin in high-risk industrial settings such as deep-sea robotics and space exploration (sending robots into extreme environments whose mechanical body an operator can feel as their own) and will likely gain

By 2030 I fully expect people to be using prosthetic systems that are controlled the same way as and are physically capable of the same functions as the original limbs.

widespread popularity when interfacing with virtual realities where physical devices such as robots do not have to be purchased, keeping costs relatively low.

By 2030 I fully expect people to be using prosthetic systems that are controlled the same way as and are physically capable of the same functions as the original limbs. They will still be limited in many ways due to biomechanical constraints (such as the inability to heal and charge autonomously) but will provide practical functionality as compared to today's systems.

GYÖRGY LÉVAY is a Research Engineering Consultant for upper limb prostheses and Research Manager at Infinite Biomedical Technologies, a US company specializing in upper limb prosthesis accessories. Originally from Hungary, Lévy completed his Master's Degree in Biomedical Engineering on a Fulbright scholarship at Johns Hopkins University.

THE FUTURE
IS FASTER
THAN YOU
THINK

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Digital University is an educational organization focused on development through innovation and new technologies. Its beneficiaries are entrepreneurs and business people professionally interested in digital transformation, as well as children and young people who learn about the world of the latest technologies and solutions that change everyday life

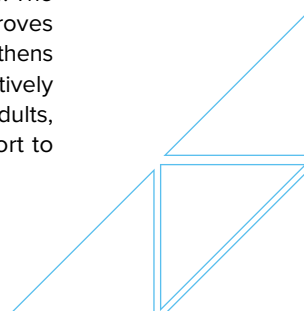
They organize conferences, lectures, socio-educational campaigns and business-dedicated training. Experts gathered around Digital University help develop innovative capacity and acumen in organizations and show possible development paths for their areas and business.

Digital University supports the development of digital skills and competences in line with the latest global technological trends. By running the Speakers Office, it offers access to unique global knowledge represented by many renowned visionaries, experts, scientists and entrepreneurs who create innovative solutions that change all areas of life on a daily basis.

The quality and the highest level of knowledge is also confirmed by the cooperation with esteemed academic centers and think tanks – Harvard Business School, Stanford University, MIT, SGH, SWPS – as well as many recognized international experts and lecturers from around the world.

Digital University organizes the Masters&Robots conference, the first edition of which gathered over 1,000 managers, 35 lecturers from 3 continents and addressed topics such as: artificial intelligence, nanotechnology, robotics, Blockchain, IoT, Smart Cities. Since 2017, Digital University is the sole representative of Singularity University in Poland.

For the youngest, Digital University Foundation organizes DigiKids technology workshops, during which it proves that computer science, mathematics, entrepreneurship and robotics are fun and not difficult. The foundation teaches children how to solve problems creatively, improves logical thinking, teaches individual and group work, as well as strengthens self-confidence and faith in their own abilities. The Foundation actively supports the fight against technological exclusion of children and adults, as well as teaches professions of the future by providing support to children from community centers and orphanages.



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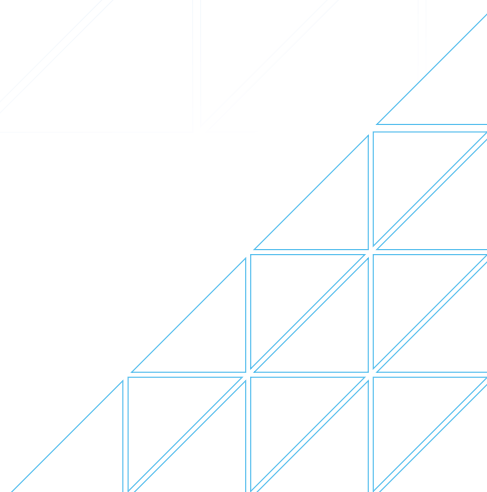
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