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 GINNING OF THE PROCESS? THE HUMAN MIND CAN IT KEED UP WITH DIGITALISATION? DIGITAL GENERATION THE WEAPON IN THE OLIMATE STBUGOLE? DIGITALELI





























LOCAL? LOCAL AND GLOBAL_GLOCAL? NATURE, MAN, SOCIETY_CAN THEY BE INTERPRETED GLO

The turn of the century, which was also a turn of the millennium, was exciting because it was expected to take place with so much fanfare-but nothing of the sort happened. I believe that the 21st century began in March 2020, when the greatest drama of the century commenced. I do not think it will be the greatest ever, yet what happened has not just shaped the attitude of one country but the thinking of the whole world.
The generation that was born into and experienced the pandemic will not be able to consciously free themselves from the fact that it happened and that such a thing is possible. In many respects the epidemic will determine the thinking of the subsequent generations as well. It has changed our lives, our working rhythms, our relationships, and in the briefest of time, we also learned how to operate digitally. In the years we need to work out what we retrieve from our old lives and what should be retained from this learning process. The pandemic has become a reference point because it was the first event, moreover, a tragedy, that engulfed the entire world and has been accurately recorded through data. In the decades to come we will repeatedly look back at what happened, who was where, what we did, and how it could have been done differently The picture is further diversified by the fact that every country and every community experienced the process differently and these differences were recorded.

It will be difficult to escape from this reference point,
///László Barabási-Albert

It is difficult to find similarities in the history of pandemics. The differences of historical periods as well as their different strata and social-technological development call for different conclusions. The pandemic of the 21st century came at a phase in the digital age and at a time when air travel in the globalised world made it possible for pathogens to be transported into the homes of billions of people in just hours. This was not difficult because never before in the course of history were cities so densely populated and never before was there such overall population density creating such convenient circumstances for the rapid spread of the disease. We knew the fact of this but we did not believe what we saw; we thought but we did not act. Perhaps we have only now come to understand what globalisation means. Various reactions also sharply demonstrated the cultural differences that hold sway in the world. Compared to the individualist approach of far richer, more developed western democracies, the majority of the Asian countries reacted quickly, with the amplified application of habits honed over the centuries. While contact research was mandatory in Asian countries and everybody accepted the nature of the use of applications based on mobile technology, in western democracies people were protective of their basic freedoms and quoting their constitutional rights, demanded access to unrestricted movement. What can be generally said on an international scale is that we did not believe what information service providers said to us, or that we at least did not regard them as credible sources, with such reactions being closely related to the internet bubbles of social media. Perhaps this might have been the reason why in many cases the focus was not on the pandemic but rather on the personal ambitions that resulted from it. Understanding the 21st century is now no longer possible without processing the phenomena of the pandemic, and perhaps we can feel confident that we know more about ourselves and the world than at any time before it.

## ///Diána Ürge-Vorsatz

Development does not follow an even path, neither in nature nor in human society. In the evolution of living creatures development continually surges ahead and then a new balance sets in, which can remain unchanged for millions of years, after which new revolutionary changes ensue. Our task is to understand and grasp what the dimension of change is. We can see that there is a qualitative constellation in history and a conjunction of circumstances when an explosion occurs. The Renaissance is well known for this: it was a concentration of brilliant minds, which set development on a new path for centuries. Changes are not necessarily tied to the turn of centuries but can much rather be generated by an interplay of time, space and circumstances. Every sign indicates that at the beginning of the 21st century humanity entered an exponentially developing, explosive period.
///László Acsády

The recent turns of the century brought about an industrial revolution followed by an information revolution. It may seem logical to think that the industrial revolution of the 20th century was legitimately followed by the information revolution of the 21st century, which however, did not pertain to the turn of centuries but rather to periodicity associated with development. A certain span of time is required for impulse-like, repetitive leaps to occur in the evolutionary curve. While pivotal events take place, wars are waged and peace treaties signed, the most fundamental change for the whole of mankind is constituted by periodic leaps that alter the fabric of how societies think, their relationship to life and the visions formed of the future.
///Diána Ürge-Vorsatz

n 1997 we will be able to download films at the press of a switch while sitting in our own homes, in 2000 cancer will become curable though gene therapy, by 2003 the universal video telephone will appear, and two years after this the first xenotransplantation, i.e. cross-species, or animal to human transplantation of organs will be carried out. By 2006 a quarter of the population of North America will live in "smart homes", which will ensure their residents' comfort through the use of customised communicating devices. In 2009 the first virtual reality goggles will appear, and a year ater CDs as a general data storage format will be pushed into the background, while by 2013 books will have become digital. By 2016 we will have detached ourselves from our immediate physical space and appear as holograms in distant points around the world. In 2019 self-driving cars will be introduced onto the roads. In 2020 we will conquer Mars! In 2043 the first human body will be brought back to life from a cryogenic state, essentially enabling us to transcend mortality. One year later robots with the ability to reproduce themselves will roll off the production line. By 2225 we will be able to design our senses and retune our nervous systems to our liking

These predictions were made in the mid-90s by WIRED, which was regarded as a cult magazine on digital culture and emerging technologies. ${ }^{1}$ They were broadly correct in regard to the disappearance of CDs, the digitalisation of written content and the "universal video telephone" but were somewhat off about a Mars landing, everyday xenotransplantation and holograms. WIRED did not mention certain developments in its predictions that later did make a robust appearance in society - with social media, blockchain technology, 3D printing and multi-functional smart phones not making the list. The caption on the front cover of the publication ("here's the real future") suggests a certain irony and Bruce Sterling, the author of the foreword, implies that cultivating technofuturology is in itself a dubious undertaking, which nevertheless does no harm if it avoids the pretence of being scientific.

WIRED magazine is the heir to intellectual trends that were proliferated by earlier platforms such as Omni magazine, launched in the 70s, and by Mondo 2000, distributed in California in the 80s and 90s. By combining scientific facts and science-fiction both magazines created an open platform for speculation and included such authors in their ranks as the aforementioned Bruce Sterling as well as William Gibson and Douglas Rushkoff. Cyber and hacker culture, virtual reality, nanotechnology and biotechnology were combined on these pages with developments designed to prolong human life and with chemical compounds. Mondo 2000 quite deliberately stood for what it apostrophised as "fringe science." 2 On the one hand, this approach was characterised by interoperability and the hybridisation of various branches of science, and on the other hand, by open scenarios and a susceptibility to emerging or speculative technologies

Cryonics is a pseudo-scientific process, which entails the deep freezing and storing for an unspecified period of a dead human body or severed head. Cryonics uses temperatures below $-130^{\circ} \mathrm{C}$ to preserve the nervous system and tissues in order to leave open the possibility for the development of future resuscitation. The intervention must be carried out in the moments following death, thus before they die clients are in constant contact with the company providing the service. Following death a vitrification solution is pumped into the vascular system, thus preventing the tissues from crystallising at the low temperatures, then the body is placed into a container of liquid nitrogen to await resurrection whenever scientific developments make this possible. Given the current technological fundamentals, even the application of the best methods causes irreversible damage in the body. It was Robert Ettinger, one of the pioneers of transhumanism, who laid the foundations for the promise of cryonics and immortality in 1962 in his book titled The Prospect of Immortality. The first attempts at hibernation took place in the late 60s, while the first client was preserved in Liquid nitrogen in 1976 at the Cryonics Institute founded by Ettinger. Most of the early cryonics companies went bankrupt and could not fulfil their promises. Nowadays there are companies dealing with cryonics in America, Russia and China. The Alcor Life Extension Foundation directed by the philosopher of transhumanism, Max More, until 2021, charges 200,000 dollars to store a whole body and 80,000 dollars to preserve a brain.

Even though the prognoses of WIRED in the 90s were by no means bereft of humour and left room for speculation, they shared a presupposition that seems entirely valid: the predictions identify the Future as the road of endless progress. According to this human-centric technooptimism, it is merely a matter of time before humans extend their scope of control over every creature and corner of the world, while colonising alien worlds and biologically designing themselves. The Future here is presented as one of targeted, inear ascent: a vertical innovation superhighway. According to the promise, the Mars colonies, the immortality of the body and a neural network could all become the subjects of human design; design strives for totality and a techno-driven utopia will become reality. t is no wonder that at the turn of the 80 s and 90 s one of the founding authors of the transhumanist sphere of thought, Fereidoun M. Esfandiary (chosen name: FM-2030), felt a 'profound nostalgia' for the future of the 21st century and proclaimed the acceleration of progress as a moral norm:
"Transhumans (trans) are a new kind of being crystallizing from the monumental breakthroughs of the late 20th century. [...] They are the earliest manifestations of new evolutionary beings."3

FM-2030 envisioned a new evolutionary stage taking shape in the image of man extended by technological means and networks. These days it is clear that transcending mankind, biologically superseding and technologically augmenting the human body, is not at all mere science fiction and transhumanism is not an isolated philosophical dead end but rather a part of the basic logic of innovation-centric technooptimism. The promise of transhumanism formulated its utopia here on earth within the modern concept of progress. According to transhumanism, perfecting the abilities of the biological body, expanding the senses, eradicating illnesses and extending life can be achieved through science and technology. In this context, the future is a never-ending process of levelling up product development and optimisation.

Within the transhumanist credo we can discover the hyper-concentration of the modern myth of endless growth and progress, which connects FM-2030 and his adherents to the contemporary culture of innovation. The programme to ameliorate the biological body and expand the senses are essential in the strategies of today's research and development strategies-and we are not thinking here only of the digital gadgets flooding out of Silicone Valley and the Shenzhen region of China-since equally a part of this culture is the Neuralink mind-computer interface, Jeff Bezos' private space programme, the Facebook metaverse, Alcor's cryogenic service and biotechnological services, including the CRISP-Cas9 gene editing system. ${ }^{4}$ The latter has recently become highly controversial ${ }^{5}$ since gene editing could literally make the human body the subject of design, which raises ethical concerns regarding 'designer babies' - that used to appear far off-and urges the redefinition of the role of designers in biodesign and body hacking.

Gene editing denotes a group of technologies, which make it possible to change the DNA of an organism, add or remove genetic information, or alter it in certain points of the genome. CRISP-Cas9 is regarded as one of the latest systems of genome editing and has stirred great excitement in the scientific community because it is quicker, cheaper as well as more accurate and effective than other techniques. In 2020 Jennifer Doudna and Emmanuelle Charpentier won the Nobel Prize in Chemistry for inventing the system. The CRISP-Cas9 editing is done using enzymes, which are designed to target a given DNA sequence, where cuts are introduced to make it possible to remove existing strands of DNA and insert replacement DNA. The genetic design of spermatozoon and embryos have come into conflict with the law in many countries because of the ethical dilemmas and scientific uncertainties surrounding the technology. At the end of 2018 He Jiankui, a Chinese biophysicist, announced that the world's first genetically edited babies had been born. The twin girls carry an edited gene that decreases the risk of HIV infection. Following this, the international scientific community published an open letter demanding the introduction of a temporary moratorium of CRISP-Cas9. In 2020 He Jiankui was sentenced by the Chinese courts to three years' imprisonment for engaging in illegal medical activities.

The explosive expansion and sophistication of 20th-century technology led mankind into a trans-human state, which, according to FM-2030, holds out the hope that in the long term we will be able to exempt ourselves from the laws of nature and the next stage of evolution can be executed within the scope of our own competence. This intention is manifest, for example, in areas related to self-design such as the Qualified Self movement, which seeks to maximise individual control through the constant technological monitoring and quantification of bodily processes. On a different scale-not linked to the concrete body-it can also be discovered in geo-engineering, which proposes the artificial alteration and design of the Earth's climate as a solution to the on-going climate change. In the meantime, it can also be observed that radical technological innovations are often adopted into the lives of ordinary users from the weapons industry ${ }^{6}$ and healthcare sector

FM-2030's book titled Are You a Transhuman? has an unusual genre: a kind of Q \& A guidebook of transhumanism, which readers can use to test themselves. The subtitle of the book is Monitoring and Stimulating Your Personal Rate of Growth in a Rapidly Changing World. Some of the chapters really are questions aimed at the readers and at the end of the book everyone can use the points they score to find out where they are on the scale of transhuman development. It is important for us to see that theory-making and practice have gone hand in hand in the case of transhumanism from the very outset. The theory s inseparable from the project to be implemented and from its tools.

At some point of technical and scientific progress 'transhuman' man will burst out of his thus far known frameworks. At this point mankind will link up with such assumed technological developments as whole brain emulation; reproducing individual consciousness in a synthetic body; technological singularity, which must be reckoned with along with the radical breakthroughs in artificial intelligence; and cryonics, which preserves the body for extended periods in the hope that it can be resurrected in the future. Humanity as a space colonising species leaving the Earth behind could constitute a similar posthuman turning point.

Accelerating change is the norm,"7 says FM-2030 in his book. Viewed from this perspective, the everyday consciousness of individual people must accelerate to keep up with the speed of technological progress; whoever complains about information overload is blocking necessary change. The author of Are You Transhuman represents a techno-determinist stance, according to which technology and science will inevitably find a solution to the crises of society and ecology in the future.

In transhumanist discourse art and design address the idea that "man can be transformed."8 According to the Transhumanism Art Manifesto of 1983, the objectives of transhumanist artists are aimed at endless self-transformation, limitless individual freedom, intellectual and creative augmentation, biotech interfaces as well as the conquering of death and the exploration of the universe. The revised Transhumanist Arts Statement of 2003 expressed this somewhat more modestly:

Datafication (or in the context of machine learning systems: quantification) means the recording of every facet of life as quantifiable data. Technological tools and systems that enable the real-time monitoring of phenomena, their conversion into digital data and the algorithmic processing of data are inseparable from datafication. A role in big data generation is played by various sensors, portable technologies, 'smart devices' connected to the Internet of Things, digital software and, mainly, human users, who in this context are both data consumers and providers in every single interaction. The fundamental objective of datafication is the ever more sophisticated and efficient optimisation of processes. According to a book by Google's director of engineering, Ray Kurzweil, titled The Singularity is Near: When Humans Transcend Biology (2005), systems of society, physics, chemistry and biology can without exception be defined as parts of an information system, i.e. every single phenomenon can be seen as digitalisable and quantifiable data. According to the video Selfish Ledger, leaked from Google's research and development department $X$ in 2016, the company speculated on a society transformable through total data collection. It was envisioned that multigenerational, transmissible data ledgers would record every interaction between the users of the Google system and that this would be channelled into the company's central big data ledger. In this grandiose vision, the key to solving global problems is based on the trend of optimal behavioural and choice patterns precisely calculated for individual users using algorithm-based data analysis. The statistics-based management of social behaviour patterns In this automated system marks the beginning of the cognitive 'programming' of biological organisms and points towards the creation of a machine learning system that transcends humans. Given the Selfish Ledger concept, it is no surprise that in 2015 a former Google engineer, Anthony Levandowski, established The Way of the Future Church, proclaiming the divine-like rise of artificial intelligence, making datafication quite literally the religion of Silicone Valley.

Transhumans want to improve and extend life [...] to enhance our senses and understanding."9

An obsession with the body is clearly manifest in this excessively human-centric approach. Freeing themselves from the fetters of nature, Transhumans see themselves as the navigators of evolution, and the governors of material. Perhaps the most important thing to recognise here is that transhumanism is not a marginal philosophical experiment: its theoretical framework and motivations underpin contemporary innovation culture even though these players do not call themselves transhumanists. In regard to the spirit of the age, the term 'transhumanism' could in many cases be replaced by 'technooptimism' or the 'California ideology,' propagated by WIRED. Today it seems that the utopian potential of neoliberal capitalism has been realised in innovation-based visions such as datafication.
"The modern economy needs constant and indefinite growth in order to survive. [...] An economy built on everlasting growth needs endless projects-just like the quests for immortality, bliss and divinity."10

At the same time, the feasibility of the accelerationist stance is significantly overshadowed by the IPCC (Intergovernmental Panel on Climate Change) report of 2018, which created a wide response." The researchers of IPCC synthesised the results of thousands of studies on climate change and drew the following raw conclusions: if we do not reduce harmful emissions by $45 \%$ by 2030 as compared to 2010 levels, we will reach an increase in temperature of one and a half Celsius, which in all probability will generate irreversible changes in the climate system. However, if we are completely unable to slow down the present rate of emissions, we will exceed the two-Celsius level of increase in temperature, which would bring about such consequences, among others, as extremely hot days becoming the norm, the complete destruction of the coral reefs and a significant increase in sea levels.
"Capitalist growth is in crisis not only because it is capitalist but also because it is encountering physical limits,"12 wrote André Gorz. The ideology of indefinite technological and economic growth, which increased in popularity from the 50s, has been replaced by a more narrow horizon, in which enforced manoeuvring, nostalgia for unrealised visions of the future and improvised rescue operations are seen as more modern than the previously embraced faith in the development of supermen, social engineering and fully automated luxury communism. ${ }^{13}$ The ecological crisis entails not only a material but a mental and mythological crisis too. David Wallace-Wells thoughts on linear progress are marked by profound scepticism:

Whole brain emulation, or mind uploading, is the name given to a speculative technological process, which facilitates the neuro-anatomical mapping of humans as well as its digital transfer or copy into a different material environment. It addresses the issue of consciousness separated from the biological body, which is linked with the design of brain-computer interfaces. At Neuralink, established by Elon Musk in 2016, work is in progress on connecting the digital network and the human nervous system. According to Musk's narrative, even in the most favourable scenario of the development of artificial intelligence man will be "left behind" and our only chance is neural "union" with machine learning systems.14 Mind uploading points far beyond brain-computer interfaces and offers the complete machine reproduction of consciousness. Can we imagine synthetic eternal life outside of the perishable biological body, holding out the promise to populate virtual realities and world simulations inside a computer? According to Ralph C. Merkle, the author of the article titled "Uploading", ${ }^{15}$ published in the transhumanist publication Extropy in 1993, mind upload would require a computer with a $10^{18}$ bps memory able to perform $10^{16}$ operations per second. "In the early 21st century a computer with such a capacity could easily fit into a one-cubic-centimetre space," he wrote. To provide a comparison, in 2021 the Japanese Fugaku super computer already has the capacity to carry out $10^{18}$ operations per second, which in human terms means we would have to perform one calculation every second for 31,688,765,000 years to keep up with it. ${ }^{16}$ Despite this, whole brain emulation is only topical as a philosophical problem.
[...] proposing not only that history can move in reverse, but that the entire project of human settlement and civilization, which we know as 'history' and which has given us climate change, has been, in fact, a jet stream backward. As climate horrors accumulate, this anti-progressive perspective is sure to blossom." ${ }^{17}$

Not only do we have to reckon with the natural and economic systems being tipped off balance but also with the fragmentation of the modern myth that fuses together the social "machine," ${ }^{18}$ if we are serious about what has been globally marketed in recent decades as 'sustainability'. The central position of man and the notion of inear development have become equally uncertain; hence, no 'new beginnings' can be contemplated in the 21st century without a critical revision of these modern myths. Standing on this threshold, the technologies of transhuman ascent seem to hold the promise of a utopia that can never be realised. However, more relevant than devising technodeterminist projects aimed at the future is the revision of the concept of man along with addressing the issue of the ontological relationship between man and technology. What do our technologies make possible and what do we wish to use them for? In the early 90 s there was a brief moment of technological change, when
"[..] the digital future felt open-ended and up for our invention. Technology was becoming a playground for the counterculture, who saw in it the opportunity to create a more inclusive, distributed, and pro-human future." ${ }^{19}$

It is also part of Douglas Rushkoff's diagnosis that the history of the digital worldwide web can be traced back to the 60s, when the communication developments of the defence industry started to filter down into the civil sphere. In the United States of America it was precisely in this decade that the post-war generation that expressly wished to break away from the classical, hierarchical practices of social structures came of age.' From this collectivist grassroots organisation many saw computer science and systems theory as the means to replace the existing top-down power structures. ronically, the technical background for this was produced by the military sphere organised along command mechanisms.
"Freedom, cheapness, openness and the bottom-up, communal and selfgoverning spirit were values transmitted from counterculture and cybernetics into the virtual world,"20 wrote Balázs Bodó in his book A szerzői jog kalózai [Pirates of Copyright Law]. From the outset the Internet used in the civilian sphere was sustained by sharing based on reciprocity and gifting. The fact that information can also have business value remained unrecognised by the participating individuals. Knowledge-transfer between endpoints provides the basis of the network model based on dataflow to this day, despite the fact that in our 'global village' the Internet is synonymous for many people with Facebook or Instagram and that the corporate colonisation of cyberspace had been carried out by the 21st century

Terraforming is the hypothetical process in which the atmosphere and terrain of certain planets are changed based on human design in order to make them similar to those of the Earth and thus inhabitable. Stimulated by the latest developments of private commercial space travel (e.g. Blue Origin, SpaceX), a new impetus has been lent to the ideas to colonise Mars and the interplanetary evacuation of the economic elite, although the bankruptcy of Mars One in 2021 put a damper on the viability of such market aspirations. According to a statement by NASA, the terraforming of Mars is not possible using presentday technology. ${ }^{21}$ The concept of terraforming can also be related to ideas put forward by geoengineers aimed at the technological interventions in natural systems to address the Earth's climate change. Within the context of an ecological crisis, some people regard 21st-century aspirations to colonise space as "obscene,"22 while in Douglas Rushkoff's view in the next stage of scientifictechnological progress the status of an individual's wealth may count as a stronger principle for selection than ever before if private space programmes are seen as strategies of escape and survival. ${ }^{23}$ Even if an exodus from the planet merely remains a transhumanist dream, based on its scale and complexity, terraforming still provides a speculative design framework that takes a radical break from the phenomenological dimension of the individual as well as his temporal and spatial dimensions, while guiding our attention to systems and megastructures that transcend man.

The fluctuations in the results of futurology demonstrate that the future is not unfolding along a linear course of development. We are able to imagine the trend of a possible future but its actual realisation is taking place through the continuous rearrangement of the elements of the present.
The complexity and fluidity of this continual rearrangement does not allow us to envision the future as a logical outcome or inevitable consequence:

The present state of the world can be described as the vibrating coincidences of numerous possibilities. [...] The present does not contain the future as a linear development.
"The present state of the world can be described as the vibrational concurrence of many possibilities. [...] The present does not contain the future as a linear development." ${ }^{24}$

In light of the above, it would be more accurate to talk about futures, rather than the Future. At the same time, it is clear that the data-based automation of the future is now seen as a feasible aspiration in the "Californian ideology" of technooptimism. We need speculative practices disassociated from the notion of ascent and the myth of growth to be able to keep the plural form of the future. According to the accelerationist manifesto of 2013, "in this paralysis of the political imaginary, the future has been cancelled." ${ }^{25}$ The innovation sphere, dominated by neoliberal capitalism, is incapable of realising anything else from the social opportunities inherent in technological developments than the reproduction of its own logic and in this sense holds captive everything which we regard today as conceivable. Now, in the 21st century, when we are facing the paralysis referred to in the aforesaid manifesto under the shadow of ecological and social crises, what we would need instead of the rigid, one-way privatisation of the imagination is to pursue accelerationist strategies of experimentation and retuning. Acceleration in this context would not point towards a transhumanist technoutopia but rather towards a technological zone outside the narrative of linear ascent. As artists, designers and social scientists, we have to understand what is at stake in just the same way as engineers and software designers. As the philosopher, Peter Sloterdijk puts it, "One has to become a cybernetician to remain a humanist." ${ }^{26}$ The most exciting ideas emerge when points of junction are sought between the areas of art, design, science and technology. These types of initiatives confirm that instead of limited knowledge and professional niches, alternatives for cooperation must be created as soon as possible; new models and new ways of thinking are needed to understand and shape even the closest future.

Of course all of this is at least as much a matter of attitude as it is an issue of an institutional system. Places facilitating the suspension of conventional systems of norms and open to exploring perspectives, alternatives and scenarios that could not be explored elsewhere can be regarded as zones of speculation. ${ }^{27}$ This is of key importance in regard to the scientific and technological movements that do not yet have a fixed social direction, such as developments in the fields of NBIC (nanotechnology, biotechnology, information technology and cognitive science), but the acceleration of climate change also demands the tactical suspension or critical revision of the normative status quo

Universities are regarded as the most productive speculative zones. Even in the 21st century they are, after all, potential places of critical and quasi-utopian thinking, where it is at least possible oo raise questions in regard to alternatives to the established practices of innovation and social operation. In this sense, the question of the future is linked with issue of the autonomy of universities: are these institutions capable of operating as catalysts of change, and do they allow space for tactical suspensions that can point beyond the reproductive logic of economic and social systems? In light of mass produced images of the future and the looming ecological crisis, creative pursuits, research, speculation and diversion are not self-seeking activities but rather the tools of "prototyping new norms" ${ }^{\prime 28}$ that are critical for social self-reflection and rejuvenation. In our mythologically destabilised age we are experiencing the burden of speculation rather than the dream of eternal ascent.

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Franco "Bifo" Berardi, Futurability: The Age of Impotence and the
Herizon Horizon of Possibility (London - New York: Verso, 2019 [2017]), 14 25
Alex Williams and Nick Srnicek, "\#Accelerate: Manifesto for an Reader, ed. Robin Mackay and Armen Avanessian, 347-362
(Berlin: Urbanovic \& Merve, 2014 [2013]), 349.
${ }_{P}^{26}$
Peter Sloterdijk Nicht gerettet: Versuche nach Heidegger
Frankfurt am Main: Sunrkamp, 2001). The quoted line in Englis was used by Adam Greenfield as a motto in his book Radical echnologies. See: Greenfield, Radical Technologies: The Design of ${ }_{27} 27$
In relation to speculative design Benjamin H. Bratton describes a zone "where the tactical exceptions to norms can be granted
Bratton, "On Speculative Design", in The Time Complex: PostContemporary, eds. Armen Avanessian and Malik Suhail, 57-8a City Name Pulications 2016), 82
${ }_{2}^{28}{ }_{1}$ bid.
Certain sections of the text are taken from the author's doctoral dissertation titled Az emberközpontú tervezés határai: spekulatív
design és poszthumán ollapot tThe Boundaries of Human-centric lesign es poszthuman illapot the Boundaries of Hum
Design: : peeculative Design and the Posthuman State] Design: Speculative Design and the Posthuman State]
(Doctoral Shool of the Moholy-Nagy University of Art and Design
Budapest, 2021).


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Tradition and progress cannot exist without each other. When we see progress as the upcoming generations having no knowledge of history, tradition or the past, we are on the wrong track. When we invoke tradition because of our uncertainty or inaction, we are also on the wrong track. Models are needed for value-based choices, however these are difficult to measure and compare against the opportunities of the digital era. However, prior knowledge must be acquired since there is as yet no answer as to how a civilisation can survive if it does not know and has not learned from its past. Human life is too short to allow us to think that we can solve everything with mere recourse to our own experiences. Bridges between generations are needed, and this applies to future generations too. I have no doubt that the digital generation already knows something different than we do but this should not mean disregard for the lives and experiences of what went before them
///Diána Ürge-Vorsatz


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It is an epoch-making exception if somebody is able to produce an international achievement in a closed world without partners. One such story from the last fifty years is the Rubik phenomenon, which is a piece of science-fiction in its own genre since it came from a vacuum and became a global player in the area of design. These days it is possible to do this. The historical and technological environments have changed: the generations of today can join international trends and activities, whether they are related to business or the arts. In our region opportunities to start an enterprise or to engage in any creative activity in general, were never better. Today's world provides an excellent window of opportunity for those who have the drive to make themselves seen and to appear on the international scene.
/// Gyula Fehér

_Samu Gryllus
"The Hostage Opera is a documentary-based chamber opera in four parts, an integral part of which is the interaction of the online audience. Its performers are the composer-conductor, two opera singers, two actors, the video artist, the chamber orchestra and the viewers themselves. The reactions of the latter shape the opera via the online Spatial Chat platform; what is more, they can join the performance as vocalists."

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FIFTH NIGHT
Love letters
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 You sil-ly - lit-tle girl,


11 mf-ff

14) $m p-m f$


You would come to my fu-ne-ral, and think that a mad-man had passed a-way, and he de-served it.
${ }_{12} \boldsymbol{p}$ - $\boldsymbol{f}$
r'll ne-ver for-get the mo-ment when you pick up the cloth and I touch your hand.
10 ) $\boldsymbol{p} \boldsymbol{p} \boldsymbol{f}$


If they put me in pri-son I know you'll wait for me, and I don't want that.
[17 $p p-f f$


Please, think of the cir-cum-stan-ces in which you met me,
${ }^{[16} \boldsymbol{p} \boldsymbol{f} \boldsymbol{f}$


119 mf $-f$

He's not ca-pa-ble of kill-ing a-ny-one.
$24 m p-m f \quad$ 25] $p-m p$
25 $\boldsymbol{p}-m p$

28] $p p-m f$
27) $\boldsymbol{p}-\boldsymbol{f}$
$\cdots$ ?
You were so sweet to-night,
29] $m \boldsymbol{p}-\boldsymbol{f}$

${ }^{33} \boldsymbol{p p}-\boldsymbol{f f}$
I'll con-ti-nue la - ter..

34) $p \boldsymbol{p}-\boldsymbol{f}$
[35] $\boldsymbol{p}-\boldsymbol{f}$
36. $\boldsymbol{f}-\boldsymbol{f f}$

37 $\boldsymbol{m p} \boldsymbol{p}-\boldsymbol{f}$


I don't know why I feel the need to keep on liv- ing. the roles.




## NEW GENERATION

NEW GENERATION

Big changes are not brought about by the turning of centuries but rather by social and economic cycles. This is substantiated by the cyclic character of economic sectors as well as by generational alternations. New generations appear, they become active and then a passive stage ensues followed by the new generation, and so it goes on in a continuous cycle. Underlying the social processes that can be observed today might be the fact that the baby boomer generation is now going into the stage of passivity, after been dominant for forty years and is still the beneficiary of the accumulated assets resulting from the process we refer to as globalisation. It is by no means clear how the members of generation $Y$ or $Z$, now entering the vacant position, will be able to start their lives under good circumstances. In fact, this will be the first generation in the western world
to have a lower standard of living than their parents.
/// Gyula Fehér

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It is not the priority of the new generation to listen to old people. However, it is an interesting phenomenon that this relationship differs from one culture to another. It is different in Asia, where there is a great deal of respect for the elderly, and it is different in Europe or America, where this respect is far less pronounced. In the latter cultures the new generations generally feel that they have something better to show the world. It would be very good if this were true but unfortunately in the case of the new generations, our offspring, it can be seen that there are things they do not know either.
This is partly because in a great many ways they resemble those exiting the stage:
i.e. us. Quite often more than we would like. This similarity includes good characteristics but also bad ones. There is a high probability that the new generation will also be capable of repeating what we did and thought wrongly. I believe it is our responsibility to help the next generation to make fewer mistakes and to rather follow our positives. To teach them what we were not taught at all or at least not fully: how important it is to know ourselves. We have to be aware of who we are, what we are capable of and what we are destined to do. This primarily means having the ability to know oneself, one's own personality and to recognise opportunities. What is in our mobile phones, including artificial intelligence,
should be sought there. What the new generation should be prepared to do is to distinguish between truth and lies, reality and falsehoods, and at the same time to be able to react to an increasingly complex system of relations. Quick recognition influences the direction of action and helps to avoid making the wrong decisions. Whoever does not acquire the necessary skills will not have a toolkit, and will have nothing to live with or live from; they will then be at a disadvantage and suffer shortages in their lives.
/// Ernő Rubik

The new generation wants to broadcast rather than receive, and to mediate about and for themselves. The majority of the information they mediate is private content moving within a rather narrow intellectual range, thus making its rate of expiry huge. At the same time, sharing and following daily news acts as a kind of drug fuelled by the high number of responses being instantly visible. The intensification of identical fashions and the identical use of words can also be observed, acting as a catalyst in the shaping identity of the digital generation. The new generation is trying to define itself, it is looking for points of orientation and for the use of the opportunities provided by digitalisation.

They cannot be blamed for the cultural deficiencies since the digital world itself is
trying to define and understand its identity. It is difficult to be young now but we can be sure that this generation can also feel and understand the order,
approaches and meaning of the developing, new world.
/// Diána Ürge-Vorsatz
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I make a distinction between the people who make something, the things they make and the effect those things generate or suggest to others. With the Cube the maker is the least interesting aspect, and even the thing created is only interesting in a technical sense, and not for its aesthetics or artistic quality. It's a bit like the human skeleton, which is a wonderful mechanical apparatus, yet it is not what we admire when we see someone as beautiful. The decisive factor is the final result, coupled with a characteristic feature of the world, namely that regardless of age, culture or abilities, people have some shared, permanent elements that make the appreciation of things possible and provide a background for their understanding. The Cube is good for nothing else than to be itself as nothing can be created with it; it is not a tool to do something useful with. I also think it is useful enough in the sense that the time spent using it teaches and entertains people. The almost 50-year history of the Cube confirms that living on the edge of the digital and analogue worlds we, human beings like reality, objects that be physically held; we like to do things simultaneously with our minds and our hands and what we see and sense has its own aesthetics and a potential to make us happy. It is perhaps also important that life is full of challenges that need to be solved and finding solutions provides happiness, the sort of happiness that is very hard to replace with another sort. It was a revelation to me that the Cube is typically an object that children are better at than adults, and this holds out a promise for the future because this is the generation that will build it.
/// Ernő Rubik

The key positions in the economy and in politics are mainly held by the older generation.
A role in this is also played by the fact that their biological lifecycles are longer, thus their time of dominance has also been extended. Generations $Y$ and $Z$ do not have the influence, the material assets and positions that their parents had at a similar age. There has never been a good ending in society when a large number of young people bursting with life felt that they were the underdogs. It was always the given period and political system that
determined the direction of the eruption that followed. It is also worth observing that equality and liberty generally move in reverse directions. In systems where equality is realised, or where it is stated to have been realised, there is generally a low level of freedom. If somebody has the desire to start an enterprise or realise a serious ambition, it is probably not worth it for them to complain about the lack of freedom.
/// Gyula Fehér
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In order for us to evaluate changes, they must first take place. I believe that despite living in the digital present, the new generation has preserved the ability to learn from our mistakes and to move in directions which we could only imagine but for them are already evident and natural processes. This is to all intents and purposes evolution, which has always been a series of vicissitudes. Part of evolution is that in many respects the generation that is young right now is living through a very difficult period, and I do not envy them. At a crucial age they are faced with the consequences of a worldwide epidemic, a significantly disruptive situation, in which it is very difficult to remain mentally and physically healthy. They will take this experience along with them and hopefully it is the benefits of mobile technology that will help them to thrive. In any event, it is encouraging that the digital community is a natural environment, a part of their socialisation, thus they also have a chance to rise above the difficulties that were caused
by the absurdities on a global scale, and have a good chance of growing old.

## /// Ernő Rubik

There has always been tension between generations but the gap today could be described as radical. The generational divide has never been so wide as now, at the beginning of the 21st century. The unexpected scale of digital technology has led to generations thinking, communicating and functioning completely differently. It can also be observed that the rapid development of technology, along with its continuous shifts and changes, have generated tension even between the generations that are closer to one another.
The members of today's digital generation are not the adolescents but the younger children, and if we examine this epoch-making digital shift in the context of the climate crisis, we can say that our generation has consumed their future and the chance for them to prosper. Our golden age has caused the drama of the digital generation. The contention that every generation lives better than the one that preceded seems to be evaporating

It can be clearly seen that what we will have left behind is climate change,
the collapse of biodiversity and pandemic. This foreshadows a difficult future and if the digital generations want to protect themselves, they will have a high price to pay
/// Diána Ürge-Vorsatz
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Digitalisation has introduced a fundamental change in the relations between man and his environment, which plays out in the human nervous system, so our nervous system has to deal with numerous unprecedented challenges, whether they are related to memory, visual, sound or any other areas. The moment in the history of humankind that enabled us to hold a tiny device and access any information in the world at any point of the world is such a quantum leap that exceeds even the importance, as well as the impact, of printing books. At the same time, staying connected to the past is an ancient human attribute and will presumably remain so for good. The 'engrams' will be inherited from generation to generation, regardless of the changed formats of data carriers. However, what raises serious questions is whether the relationships between people will change or not. We do not yet know this because the generational pyramid, i.e. the subjects of the experiment have not reached the age that would allow us to draw definite conclusions. ///László Acsády

The digital revolution rests on three pillars. One is the emergence of sensors, which allows everything to be measured. The other one is the low price of data storage, i.e. unlimited storage space. The third one is the appearance of algorithms and devices enabling us to process the information. The value of the information revolution is that longitudinal information appears in longitudinal time, in which periods of silence can be clearly seen. In the 21st century everything has a digital trace, so the historiography of this century will be about how real events can be extracted from the available data.

## ///László Barabási-Albert

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Some research shows that pessimistic comments always appear more astute but pessimism in our case is justified for another reason. We have no idea where we'll be in forty or fifty years since human thinking is linear, while development is exponential. Anything can happen, especially when we see how two-year-olds can use digital devices. They will be digital natives and it will be natural for them that what they see is only one perspective, one piece of possible information. This means that they will experience digitalism as a given, with all its positives and negatives, the primary excitement will disappear and technology will be reduced to the level of a tool. Radio broadcasts informed our grandparents about what was happening in the world. Let's hope that the current shock caused by the digital media will be seen by posterity as naiveté that brings on a smile.
///Gyula Fehér

In the 90's I came across a book, titled How to Go Digital, written by Nicholas Negroponte the founder of the MIT Media Lab. It came to me as a surprise and made me think. Since then the term 'digital' has become universal and in a sense something of a cliché. It is often the case that concepts that are used in too many contexts and interpretations become empty, losing their gravity and real meaning. I think when we talk about change we are not talking about distance but quality. I find it very difficult to find a conceptual analogy for the notion of quality, one which would be meter for the distance, as I have not got a dimension I can measure quality with. That's why I'm saying that change is not about distance but quality, and this is the same in the context of being digital. It is about the speed of change. It's more connected with time, i.e. speed: something becomes something else and this happens faster than it did in my youth, let alone in the last century. This speed takes us to new norms, which l'd prefer to call different rather than new since in this case too it will be the resultant quality that will determine the possibilities of living together and not digitalisation.
///Ernő Rubik
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The tactile world is being pushed into the background. Offline meetings are being replaced by online messaging, which is a significant reduction in dimensions, moreover the length of the messages is also limited. Primates are fundamentally social beings, i.e. they cannot be imagined without companions during their ontogenesis. Compared with this, it is an astounding shift in today's world that the other, the companion, is no longer there. However, when reaching our twenties, i.e. adulthood, we need to solve problems that require creativity, global solutions and collaboration, then we are faced with a social experiment. When children get stuck in the digital world between ages ten to eighteen, their social skills cannot develop. It is well known that there are sensitive periods, when the development of the nervous system requires impulses from the outside world, biological-social interaction. If these do not come, the nervous system is unable to learn how to process and retain impulses. Seeing the majority of children looking at the world and connecting with it on an iPad brings the speed and coded explosion of change into perspective.

## ///László Acsády

Our energy consumption culture is utterly obsolete. We are operating structures that characterise the era of the industrial revolution rather than the digital reality of the 21st century. The paradigm shift, the transformation of economic systems and human insight did not manage to exploit the opportunities of the sudden eruption of mobile technology. It could not since the centuries old structures, routines and the attributes of the built environment only allow the gradual adoption of positive trends. We must also understand and internalise that development does not follow a straight line and is not exclusive either as numerous things can be adapted from the values and practices of previous eras to the digital age; for example, think of the positive messages in the area of the built environment. We should not exclude but integrate the sustenance and application of these. It is a huge debt of the 20th century that it untaught society to exercise self-restraint and value-based thinking, while, having gone into overdrive, it advocated consumption as the ideal of a sustainable world. Today we know we were wrong. It was not only new technologies but also a new generation that the digital world ushered into the 21st century. Their way of thinking may provide a new opportunity
for us to win the battle against climate change as they are less committed to
the existing structures while being part and knowers of a technological leap that has a new dimension. The question is how they will look at and apply mobile technology, which, by itself, is only a tool and not the solution.
///Diána Ürge-Vorsatz

Viewed in a historical context, digitalisation has just arrived at our doorstep. We see some phenomena but stating big truths would be premature at this stage. How long an impulse is visible, how long I can take it in and how I can connect it with other impulses obviously work completely differently in a primarily visual environment of flashing images than in an analogue world. People have a given attention span, which determines how long they are able to receive a flow of ideas with sustained focus. The multitude of pieces of short-term information make people less able to take in longer-term information Of course the question arises whether long-term information is necessary or if we can convey the messages of the world using only short-term information? Indeed, we cannot Most phenomena are complex and can only be represented in a longer-term analogue or digital environment, hence the solution of complex problems will always require a longer attention span. If at a young age the brain is not trained in this way, it is questionable if it will later be capable of doing this. The human nervous system has a kind of plasticity, an ability to change, and the neural connections are constantly made and broken, with the nervous system changing upon the formation of every new engram. This change has two main phases: ontogenesis and adulthood. The great secret of ontogenesis is that there is a genetic programme running in us from the moment of our conception: genes switch on and off, cells begin to multiply, the head and the brain develop and start to expect impulses for the necessary connections to form. One of the great discoveries of recent years is that ontogenesis lasts up until age 21/22 at least Therefore, as long as this genetic programme is running, especially in adolescence, a complete restructuring of the nervous system is taking place. The big question is which of the effects of digitalisation become imprinted by adulthood.
///László Acsády

I use virtuality, I spend a considerable amount of time in the virtual space but in my personal life I regard it more as a substitute for experiences. If we allow our moods, feelings and self-esteem to be affected by what appears on a bright display, or what somebody says, we are going down a perilous path. It is worth doing everything in our power not to let our general well-being be undermined by messages coming from the virtual space. The extent to which we can do this also depends on the given situation but we should prepare ourselves mentally since the more conscious decisions are in the background the less vulnerable we are. The best therapy, however, is if we are able to discover what great value the analogue world has. Anyone, when looking back on their life, will realise that the most important moments were not when they were staring at an illuminated display but various experiences shared with other people.
///Gyula Fehér

隹densing time is part of natural development. During this process we can see how time management changes, and so does communication. The effects of digitalisation can be studied in a number of dimensions and each will provide a different answer. They can be examined in the dimensions of creativity, sustainability or even social relations. In the context of creativity we can state that there is a thing called digital creativity, the only question being if it brings fulfilment to people. In the contexts of sustainability and social relations it can be measured whether masses of people communicating in this way are able to respond or not to problems that arise. Digitalisation gave rise to global solutions and movements of an unprecedented scale have started. A solution was also found for the pandemic, providing an experience-based solution to bridge offline distance in online space, utilising the results of creativity and digitalisation. We are participants in a volcanic eruption and cannot see clearly but it is becoming obvious that digitalisation can be used for brilliant ends. Whether it will bring benefits or doom to 20th-century analogue thinking - which we tend to see as the peak of human potential-would be too early to say. However, we can say with certainty that the human brain can keep up with the pace of digitalisation: for the brain it is all the same if it's in an analogue world or in one where keys are pressed on a touchscreen. What can be seen as a deficiency in processing pertains to a kind of inner tension and it relates not to computerisation but its long-term effects. What can be seen is that people can react online and press the right buttons, but it is another question how it will all affect us in the long term.
///László Acsády

Responsibility is an overarching notion that is not linked to a given era, to the analogue or digital world. What always matters is one's value system since that will determine whether I will feel responsible for something. There is nobody who has no attachment to anything, be it their family, a soccer team or an object. It's plausible that the isolating effect of the digital world acts against a sense of responsibility but this in itself is not down to digitalisation but rather to the ways in which the newly emerged digital world is used by individuals.
///László Acsády
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do not see much chance that we will detach ourselves from our inherently analogue ///Ernő Rubik

The question is what will remain from the accumulated cultural assets in the digital world, a world dominated by social media and business interests. The contemporary interpretation of our approach to cultural assets seems frightening. Culture is not synonymous with entertainment: culture is what we learn from, what enriches us and what opens new doors for us, or at times brings us inner peace. The kind of culture that can be sold in the digital world, what we can click and what dominates is no more than three minutes long, and most people prefer it to be even shorter, but it is best if it gets a lot of likes. It might be that the cultural identity of the digital world has not developed yet, but it's also possible that we are in a transitional stage where the generational divide cannot be bridged. The Mona Lisa cannot be appreciated with likes, you need to see it

The creation of cultural assets had, for a long time, presumed tactile presence and perception, the present tense of human communication. That constituted our shared canon, the benchmark of value. It seems that the canon of the digital world is still in the making

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It is possible that the new world is already being built but for now it's worth starting out from the definition of man, from the essence of man still functioning today. People are visual and manipulative beings, and added to this is the use of language. People have the most acute visual ability, we are the best at visually translating our environment, and focused sharp vision is also our privilege. Add to this our hands, which have developed to manipulate 3D objects. These dimensions, i.e. the coordinated use our vision, our extremities and our language/tongue brings happiness and sends a signal to our inner reward mechanism. This multidimensional existence started developing in the analogue world and became man's natural environment. In the digital world the process of making someone happy has been reduced to a series of "likes," which is a transitional state that is unsustainable in the long term since romantic relationship, raising children and work-based communities are not built on and do not work based on "likes."
When the majority of people see their lives in a kind of digital matrix, we can say that we have arrived in a new world. Regardless of the unforeseeable consequences of such changes, it's also worth noting the benefits of digitalisation, which,
if used as a tool, can help to save us from apocalyptic outcomes
///László Acsády
 a kind of opportunity for various layers of society. It can practically be stated now that there is democracy in the mobile phone culture, as today it's not a matter of being wealthy or poor if someone can own a mobile phone. Mobile technology is an opportunity but I think there continues to be inequality, what's more, huge differences, in how this opportunity can be exploited. Devices are extremely important of course, since mankind was and is being made into what it is thanks to tools. I regarded the computer as a tool too, and I still do today. It's not smarter than us and a tool only works when we can use it well, so we need to learn how to use it, just like we have to master the skill of cutting with a knife. Besides, we must also make sure that our tools - whether a knife or a mobile phone-are maintained. This also means that for now people and their tools cannot be independent of each other. However, a great shift is anticipated. We're not there yet but we're reaching a point when computers will be able to maintain themselves, when the use of Al will enable machines to be smarter than us. There is no doubt that extremely fast computers capable of storing lots of gigabytes of information have been smarter than people for a long time. There are only very few people with extraordinary abilities, who are fast enough to keep up with the speed of a manual calculator. There are some but it's a very special talent. And when we talk about new large computer parks there is no human being, and presumably nor there will be one, who will be able to compete either in terms of the knowledge stored, speed or accuracy.

## ///Ernő Rubik

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Today we can define the human body as a kind of biological machine. Although we don't yet know how to define the self-concept, we are nevertheless looking for it in the genome of the embryo, while clinging to artificial intelligence and regularly using it as a reference. The starting point is that artificial intelligence is like human intelligence except that it is synthetic. At the same time, AI has no soul, nor feelings. And although it is already capable of perceiving human emotions and showing human emotions, in reality
it is unable to feel. A famous researcher once said in connection with this phenomenon that Al is a perfect psychopath. If we think about the fact that one day people will want to satisfy their emotional and bodily needs using humanoid robots, we can honestly state that it's better to live in today's outdated world.

## ///Gyula Fehér

We have not yet been able to scientifically define consciousness and self. We intuitively know what the two words mean but we cannot list their characteristics. Even if these concepts existed in the natural sciences and were not human creations -since unfortunately the human nervous system is not organised according to human thoughts -it would remain a question what the neurological background to these are. The answer to this is still light years away and the same problem arises when we come to the question of the consciousness and self of AI. If we cannot properly define the consciousness of humans or even animals, we will come up against the same problem with artificial intelligence. There is a new, promising initiative that has brought the best philosophers and psychologists as well as the top neuroscientists together so that they might say something about this issue. They have three years to complete their task.
///László Acsády
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We have no formula for a clear definition of global and local. What could give reason for concern is that all organisms have a finite lifespan and because of globalisation the Earth has become an organism. Cultures have been assimilating and we are heading in a direction that will mean one culture on Earth by the end of the century. Our lifestyles and customs have now become completely globalised, the price of which is that monocultures will sooner or later die out. If a virus emerges wiping out monocultures, there will be no island remaining in a completely globalised world. The virus is a good example: it was a warning to us and although based on the proportion of its destruction it was not really too dangerous. But what if a virus came with a death rate of 70 percent, from which there is no escape route in a globalised world? Of course, the virus is just an example since there are many mechanisms that can be fatal to the life of an organism. Globalisation is leading the world in the direction of becoming one institution and one world, which makes humanity more vulnerable. We can already see the signs of these cracks. When we reach the point where we cannot produce food locally and water has to be supplied from global resources in certain regions, globalisation may spell our demise. At the same time, there are other processes, too. Changes in food supply have a positive effect however, since locally produced food can be delivered to people more easily, and transport routes are shorter thanks to the mobile revolution, thus the network of food chains, which in many cases are wasteful, can be reduced,

> and better quality goods can often be directly sold via shorter routes.

## ///László Barabási-Albert

These two concepts can be connected based on two value principles. One of them is the welfare of the individual and the other the survival of the Earth. Mature, rich and diverse local connections are indispensable for the welfare of the individual, even if these local connections now take place on Zoom or some other platform. Without these ties human existence, i.e. the values that largely make life worth living are threatened. It is a critical factor that mankind's ability to experience things-despite the world being globalis still almost exclusively limited to concentrating on the local. We have no receptors for the global, only for the local. We cannot perceive it and we cannot understand At because it does not resonate within us, because this is not how we developed. However, if these receptors do not develop, the Earth has no future. The situation is far from perfect because we cannot intensively engage with things that do not happen -a to us. A good example for this is the recent pandemic. As long as we just heard the facts -and our lives were not perceptibly changed, our behaviour did not change, but when an the consequences of the epidemic had reached our immediate environment, we did start (an to change it. We were not only unable to fully empathise with the global problem but -also had no global answers. It is imperative that we build global receptors if we wish - to stay alive. Man is fundamentally local: this has enormous value and it makes us human. But in the 21st century we have entered a new dimension and if we really want to survive, we have to develop globality in ourselves. We must influence global processes in such a way as to allow us to maintain our local lives too.

## ///László Acsády

The major challenge of our times is how to maintain our balance between global and local. Neither of these concepts is worth defining positively or negatively because we can be beneficiaries and losers of both. It is the young generation who are the beneficiaries of global processes because they can set up a US-based tech company any time since they were born into an age when they can go to America as easily as they would to a neighbouring town. The older generation remembers that it was not always like this: there was a red and a blue passport and the majority were given 0 an the red one. What is regarded as the advantageous side to globalisation must be preserved even when we think of local values since we can only appreciate and enjoy what is local if in the meantime we do not lose global values and advantages. The conflicting interests linked to these two poles are clearly palpable, partly because of the attributes of large systems and partly because of the moral expectations we have of ourselves.

We already understand the problem; the optimal solution is yet to come.

## ///Gyula Fehér

We have no choice［between global or local］but we can make decisions pertaining to our lifestyle and our personal lives，which can help us maintain a balance between global and local value differences．Enormous tension can be observed between the intentions and the consequences of globalisation processes but we enjoy their advantages．At the same time，we can see that in the majority of cases the solution to our happiness is on a local level．Global economic or even political optimisation cannot put an end to people＇s clinging onto local values since in many cases the optimal solution is only possible locally．It is our natural need to preserve local colour，to consider local coAt opportunities and put them into practice．Eight billion people cannot travel around －ロッド the world：this contradicts the naturalness of human existence and the capacity （a）of our planet to bear it．The global pandemic of 2020－2021 served as a good example －to make us think through those de－urbanisation processes and opportunities that are －a technologically already at our disposal but which have not yet been mentally integrated －into our decision－making processes．If we stop planting decorative trees in the garden －in the place of fruit trees，then perhaps we will be able to say that we understand something of the connection between the global and the local worlds．
／／／Diána Ürge－Vorsatz

Theoretically we live in a world that has been completely globalised．The big question is how the Al revolution，which exploded in America three to four years ago，will appear in the other regions of the world and what kind of reactions it will generate．Identity is an absolute human need and one that cannot be dispensed with，but this must not mean any form of rejection of AI．Adapting to the local environment，local needs and local traditions could be a good response．It could foster a dialogue between development，progress and local values．Tradition sometimes takes us forward and sometimes draws us back． It was precisely the pandemic that demonstrated how the disease spread with more difficulty in isolated，atomised societies because of their local features，which afforded protection to people，showing how strongly tradition defines the life of small communities． It remains a question how these communities will adapt to new technologies，which are spreading just like viruses．We can see that what was an advantage during Covid could be a disadvantage in innovation．If we do not communicate，come together

# or recognise the opportunities at hand，there will be no progress． 

／／／László Barabási－Albert
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There is delight in diversity．Nature is only stable and capable of development If it is varied，and the entire biome is only stable and capable of flexibly responding to allenges if it is diverse．In Hungary every village had its own folk costumes and dances， which bore their identities，and they were a delight to behold．In the world of today， this is all exponentially disappearing into nothingness．Folk costumes，folk music and even spoken languages are becoming extinct even faster than animal species．
－a．If we contrast this with progress，i．e．that everyone is drumming to the relatively simple －hand banal beat from North America to Korea，homogenisation presents a sad picture －A．indeed．Based on the study of biological samples progress that eliminates diversity is －A．more vulnerable since the entire system becomes more vulnerable upon global impact．
－4．Of course，there are also the kinds of progress where one layer is built upon another， －A．Where things are built and prosper while tradition is preserved．No matter how digital and no matter how online everything is，at present nothing can replace personal B9A－8 interaction，and being taught face to face by somebody who keeps traditions． However，the entire environment is constantly changing；there are upheavals but the fact gh that the student，the successor，will pass on tradition makes a fundamentally different － 4 method of approach possible than if we existed with nothing whatsoever behind us． 4－92

## ／／／László Acsády

Human beings are genetically coded to live independently or in small communities but collective responsibility has still not fully developed．In a society defined by borders， where optimisation takes place locally，it is very difficult to achieve coordination where everybody says and understands what their common interests are．We often only make a move when the house is on fire．Individual responsibility is huge but it is limited： its culture has developed and we know what it means and how to assess it．However， there is nobody accountable when it comes to global responsibility．A global mindset has not developed；we still think and live with a local one．
／／／László Barabási－Albert





THEY LOST THEIR IMPORTANCE? INFORMATION DENSITY_DOES IT KILL TIME? TIME













































 INTELLECTUAL MANAGEMENT OF VIRTUALITY_ARE WE AT THE BEGINNING OF THE PROCESS? THE HUMAN MIND_CAN IT KEEP UP WITH DIGITALISATION? DIGITAL GENERATION_THE WEAPON
LOCAL? LOCAL AND GLOBAL_GLOCAL? NATURE, MAN, SOCIETY_CAN THEY BE INTERPRETED OLD
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## These mathematical terms regularly pop up and mathematics is a very interesting

 human skill. In mathematics there are 1 and 2, which represent only 1 and 2i.e. cardinality, but this cardinality has no concrete content. In contrast, there are cold and warm and if we mix these two we get lukewarm, where everything has the same temperature and where there is no flow creating tension. If there were no positive and negative tension, there would be no electricity. Electricity does not exist because we made it up but because we discovered its existence and realised it could be used. Applying this to the contexts of wealth and poverty, we see polarisation. For me, however, wealth is something that cannot be expressed in numbers. In other words, wealth is what is in our minds and in our brains. The extent and content of this can provide the basis of real wealth, or, for that matter, real poverty. However, society creates more complex courses of life than this: we can become poor while having the ability to be wealthy, and we can get rich while not having such an ability. The optimal course of life is not only determined by abilities but also by circumstances and the uncertainty of probability. Resulting from the overlap of these factors, we see our lives as successful or unsuccessful. Added to this is our own perspective since what is seen by others as a failure might be experienced by us as success, and vice versa: success can be experienced as failure if we are not ready to deal with it and ready to realise
the real values inherent in it.
///Ernő Rubik

Traditionally, wars have ironed out differences in the history of mankind. In extended periods of great peace this correlation ceases to work and there tend to be increasing inequalities in income and the distribution of wealth. Covid has made this process even more extreme. There has been no reorganisazion; on the contrary, the gap between poverty and wealth has grown wider and there is nothing on the horizon that seems able to curb this. If everyone had a proper income and the chance to live a dignified life, there would be less confrontation. We are at a point now where billionaires are implementing what humanity is unable to. They are the ones who think about the need to sooner or later leave the Earth, colonise Mars and travel beyond the solar system. In the fifties and sixties, i.e. the Cold War era, humanity still had the enthusiasm to do all these things but it seems that in democracy such formidable missions are not carried out. Billionaires have taken over this role and they function like a good immune system because they do what governments should. They collect taxes from the whole world in exchange for what they are doing for humanity, since they have global markets and from this source they can afford to devote resources to tasks that humankind should. Roles are reversed and we do not know where this will lead. What we can see is that the institution of democracy has been totally failing for some twenty years and that the era of democratic systems is past its sell-by date. The system is hacked and sooner or later everything can be hacked. There is an institutional and systemic crisis, which breeds constant uncertainty. In well-oiled democratic systems the focus is on winning the elections and not necessarily on what
is best for people. Retaining power is so complex-a 24 -hour process-that those
in power lose sight of the actual purpose of it. The societal system exported by Americans to various parts of the world is only partially functional but, unfortunately, we have not yet found a better one to replace it, and doing so will be a formidable challenge.

## ///László Barabási-Albert

In the past I tended to think that people are poor where the country, the society, is poor. Then I spent an extended period in the USA, mainly in San Francisco, where, if we take a look at the size of the residents' wealth and calculate it per capita, we will get one of the highest concentrations of wealth in the world. At the same time, there is abject poverty in the region with dilapidated streets and homeless people. After some time I realised that it is not the concentration of wealth that fundamentally determines
the state of a society but rather its approach to distributing wealth and supporting those on the margins, and even to controlled redistribution. Safety nets are developed and consolidated based on a given society's priorities. There are a lot of countries in the world where people have considerably less money but there are no extremes. Every society and people has some identity-based awareness and thoughts about this phenomenon and it implements these in practice. There are societies that take pride in the fact that they have no homeless people going hungry in the streets. Then there are those societies that try to address problems, and there are those who take no interest in such matters. In certain societies the majority of people simply do not have, and never had, the need to empower the state operating their country with licences and competences that would enable them to reduce inequality and the degree of vulnerability.

## ///Gyula Fehér

The responsibility is shared but action must start in the economic sphere. Unless poverty is diminished, positive social trends will not last either in the area of climate protection, urbanisation or education. However, allowing immense wealth to concentrate while seeing societies of almost entire continents sink into poverty is the shared problem and responsibility of all humanity. Personal responsibility cannot be circumvented either since the chance to become rich or poor is also dependent on the lifestyle of individuals. The real problem is represented by extremes, which create tension and cause havoc in the world. We like to think that overpopulation is the cause of all ills but it is hard to justify if we look at the research. While the poorer half of humankind is only responsible for seven percent of the world's total emissions, the richest tenth is unwilling to reduce emissions to the EU average level, which would lead to the reduction of the burden on the Earth's climate by one third. We have reached a point where the top ten percentincluding ourselves - is hiding from problems behind a shield, while those taking the brunt of climate change are in the poorest status. In their status they are the least able to act, while those who could do something give priority to other interests.
///Diána Ürge-Vorsatz

Only one of the extremes is problematic for me. As long as somebody acquires their wealth legally, this extreme does not bother me at all. If a percentage of this wealth is reinvested into processes that humanity can benefit from, we can even be grateful. Envy rules in the world but it always moves in the same direction; at the same time, criminal offenders are equally problematic regardless of whether they are poor or rich. The other extreme, i.e. poverty, should be simply eradicated. All the social and economic processes aimed at this, either globally or locally, should be granted unconditional support. There are data that make us see the situation as worse than it really is. In reality there is slow improvement, which has been going on for centuries, and if resources are not depleted, fewer and fewer people will live in abject poverty on Earth.

## ///László Acsády



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& \text { HOOSHANA ZUBOFF, MLAN LAU KUDERA, HERBERT MARCUSE, MARTIN HEIDEGGER, MIKE FEATEERSTONE, RRNESTO FRAN } \\
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...ours is an apocalyptic age - the global climate disaster is tearing apart the Mava's veil of design capitalism. Ever more disturbing truths are emerging despite all forms of designed fake news, populist political strategies and the opium of consumer culture hegemony. Ours is an apocalyptic age but it does not mean that it is also eschatological-although these two are frequently confused in our contemporary world, even among eggheads. We are living in extreme times but not the end of time. The end of unsustainable design capitalism will
not be the end of humanity but rather the end of the consumer culture we are so accustomed to. In this state, in contrast to design approaches linked to capitalist realism, the world of design for dectine and emergency aesthetics will arise: What is at stake is decent decline and how we will be able to manage controlled collapse. We should act in the spirit of art throwing light on real disasters and emergencies...
...in the neoliberal sensorium our
Lifeworlds are alarmingly easily accessible, while our embeddedness is rather uncertain and vulnerable: we are victims of digital surveillance, and our freedom is a mere illusion. The essence of design capitalism is the unbearable designedness of being, overbearingly
unaware alienation and brilliantly sublimated slavery: infinite vulnerability
has taken on an attractive guise and submission has become desirable-Sein und Design. What is banal, superficial, and blatantly mundane poses as art This form of capitalism is uncontrollably (an)aesthetic; it is artistic, but it is not of art with a capital A. So much so that it is stupefyingly realist: its dimenșion is
seemingly without an alternative, its laws have donned the primitive disguise of necessity as if they were akin to natural sciences, and they . uxuriate in an incessantly excessive data fetish...
....art is transcendent, hence it creates distance and is critical; design is immanent and sustains the prevalent order; it does not keep a distance and it is not critical. A work of art is an ontological revelation, the place and event of truth happening, while a designed object is an ontological veiling, a brilliant tool of the forgettullness of being. The philosophy
of the new, radical enlightenment
demands metanoia, a radical change
in thinking, and kenosis, that is selfemptying. Art operating in the spirit of emergency aesthetics submerges, making sensual everything that has only been conceptually grasped so far. The design
culture of decent decline, design for survival and non-growth is life according to a new gospel...
....is design really diffused and is everybody a designer in their own way? Is it true that everybody is talented? Is this approach still emancipatory, as its greatest advocates once conceived it, or on the contrary, is it only another légitimising trick of capitalist realism? Is it a tricky way of salvaging the opium of postmodern creative consumption, as suggested by the affirmative
interpretation of design capitalism? Can everything be turned into algorithms,
can everything be mechanised and thus automated, except genuine creativity? The creative aspect of language use?
The creative moments of our existence?
...design research at universities is
distinctly different from applied research linked to vocational education and training but also those carried out in the market sphere. Market research in the capital-driven design profession is applied research typically placing solutions and products at its centre, with the main driving force virtually always being profit maximisation and the economic sustainability of a business enterprise, while in the sphere of design education design research projects are special tools of interpretation as well as a contemplative, practical and creative understanding, therefore, they are typically understood as basic research. This fundamental work of cultural and intellectual interpretation is often directed at non-discursive and non-rational aspects of culture that are sensual, bodily perceptible, spatial or, in the original meaning of the word: aesthetic. Thus, design research, taken as basic research in the academic world,
can be the experimental ground for riṣky thinking, enhancing complexity, which could provide a continuous set of alternatives for survival in our disasterstricken and unsustainably posthuman condition, unlike today's usual power- and
profit-oriented mode of speaking, which decreases all forms of complexity, is intolerant of criticism and for this very reason unsustainable...




The concept itself involves a great deal of doubt and uncertainty. What does crisis mean? Evolution created pain to prevent something far worse. If something hurts, it is a sign of the body to the living being, to the controlling mind. This is true for humanity on the whole Crisis means that certain signals, which can be evaluated as negative, have exceeded a tolerable value. For example, there are the epidemics, an economic problem or a natural catastrophe, which, depending on their scale, could affect entire continents but definitely countries or parts of countries. These are all signs and processes that warn of something

For me two things seem important. One is that we learn how to solve a problem, but perhaps what's more important is that we know how to prevent it. The greatest experience bestowed by a crisis in addition to how to deal with it is the aspirations aimed at preventing it and the knowledge how to avoid it. At the same time, a crisis serves as a catalyst. If I'm being chased by a wild animal, my mind is activated to make me run faster but it also helps to stop me from going to places that are dangerous. Survival does not simply mean the preservation of physical integrity but also restoring an earlier state, which with the passing of time will not be that same state, since by then we will have already been carrying inside us all that happened in the meantime.
///Ernő Rubik

There is an emergency. The climate crisis is only one of many since we could also discuss the emergency linked to our biodiversity, disappearing rivers, the plastic emergency, the danger of plastic particles entering the food chain and species going extinct. All of this fits the definition of an ecological disaster but it is precisely the human mind that can serve as hope for finding a way out and providing answers to challenges that today are perceived and formulated only superficially.

We are heading towards a complex and serious global crisis. We cannot even see for sure if our children will be able to live out their lives in a normal way. Humanity is in a race to find answers to the challenges. The race is about whether man is technologically and humanly capable or not of solving the significant problems that are emerging. The global catastrophe cannot be linked to a year since we will rather perceive it in growing discontent amidst gradually deteriorating global conditions that will take place over decades. According to the presently available data, this final outcome will come to pass. What gives some reason for hope is that it has been established that very often in the course of history an idea was expressed on the level of societies that instead of legitimate genocide people should respect each other. A fundamentally important piece of information must proliferate: another person is exactly the same as me. This is an incredibly simple thing but we still do not understand it, or do not want to understand it. If we wish to and are able to act, we can make sure that our children are also able to live enjoyable human lives. If another person is not seen as a person, then discontent in the digital sphere will spread explosively, food shortages will lead to wars, and social tensions will be a constant. The real problem is that before the global climate properly manifests, social tensions will have risen to such a degree that it will be impossible to live a dignified life. If none of the parties are able to rise above validating their perceived or actual interests, they will be disconnected from their passionate love of reality, and in such a situation it is foreseeable that-exploiting analogue and digital opportunitieswe will not have time to deal with the future using our creativity.
///László Acsády

We have a strong aversion to crises, which clearly stems from our wish to survive. It is an interesting phenomenon how differently the modern world experiences and manages crises compared to earlier periods. The modern world tries to alleviate negative consequences, rather than starting to rebuild after a collapse. Contributing to the practice of this approach is the insane tempo of technological development and global processes becoming the norm. But perhaps the stakes are higher now: today it would be harder to recover from total collapse so it is better to develop and implement more consolidated, intermediate solutions. In crises the developed world is constantly making attempts to correct the nadirs, either because of economic regulators or now because of the pandemic management, which has a positive effect on almost everyone's life. Inherent in this form of behaviour, the tendency to temper things, is that we know we can do it, so we do it.
///Gyula Fehér

A little knowledge creates a sense of security because we can feel sure about that small amount. If we just know that tomorrow we have to get up and we know what tomorrow and the day after will bring, that makes the individual secure and to a certain extent provides society with security too. There were very long periods in human history when this security existed. But somehow something always happens, a process begins, and this security cracks up, shifts into insecurity and brings
about major changes and turning points.

## ///Ernő Rubik

The feeling of danger is an important human experience. Things that are too easy and can be explained are not so exciting and we tend not to appreciate them. Struggle is necessary so that we can appreciate the results. However, it is not fortunate if we can only think in terms of struggle since there are countless opportunities and stages in human life. Among these, satisfaction, recognition and knowing when to stop are important and they are also a necessary condition for moving forward.

We may hate crises but with every crisis we gain something, and with every solved crisis we can be more prepared and stronger. It is a question of individual disposition how we are affected by crises. The extrovert moves on, while the introvert is stuck; however, both modes of behaviour carry with them enormous dangers. A combination of the two types of reactions would be the optimal one but this is not typical of the human character

In human relationships the outcome of interactions cannot be predicted, and the
crises that emerge from this can lead to development, or alternatively, to collapse.
However, looking at history, this is completely normal since in many cases unpredictability
is the value itself in the interaction between one human being and another.
///László Acsády

Humanity needs crises so that it can develop on the scale of the individual and that of civilisation too. Crises, whether they be wars, economic crises or epidemics, are important moments to practise the skill of self-reflection since in these moments there is a chance to rebuild; these moments create a particular mental state too, enabling us to understand what is really important in life. Human qualities related to cooperation, love and self-sacrifice are amplified in such moments. These qualities in themselves are insufficient to avoid wars and epidemics but they are enough for a fresh start, to avoid the finality of destruction and to foster the consecutive stages of development to be built on each other.
///Ürge-Vorsatz Diána
_Maladype Színház

## MACBETH/ NATOMIA





THEY LOST THEIR IMPORTANCE? INFORMATION DENSITY_DOES IT KILL TIME? TIME













































 INTELLECTUAL MANAGEMENT OF VIRTUALITY_ARE WE AT THE BEGINNING OF THE PROCESS? THE HUMAN MIND_CAN IT KEEP UP WITH DIGITALISATION? DIGITAL GENERATION_THE WEAPON
LOCAL? LOCAL AND GLOBAL_GLOCAL? NATURE, MAN, SOCIETY_CAN THEY BE INTERPRETED OLD
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It is said that entropy is the ultimate outcome with all forms of diversity eventually ending up in uniformity. Put in this way, it sounds rather sad but since this is taking place in hugely protracted intervals, we are not really affected by it. For us it's hypothetical that it will happen once in the future but it will be something that won't impact our personal or social existence but humanity per se. What happens to us depends on us, if we don't count interstellar disasters, which there is always a chance of that happening, since all improbable things have a probability. If something hits Earth, it will be blown to smithereens, and unfortunately surviving on such smithereens is hardly possible. For me the social entropy in which we will be all the same and everything will be done by robots (which is already possible in the digital world) is inconceivable.
However, the existence of the digital world, which closely affects the physical world, for example robotics, means that people have the ability to do everything and in this sense we have become omnipotent. The question is to what end we will use our omnipotence. It's a huge question and one that will decide the future of the world. My belief and contention regarding artificial intelligence is that it will be exactly like us but what it will be like depends on us. It will be determined by whether we will be able to be different
i.e. able to eliminate what is bad in us on an individual and even social level and let what is good in us dominate. If that were to happen, I don't see a problem, if the opposite then we must be aware that artificial intelligence has the capability to direct the negative side into dimensions where we won't be able to compete, which means that we will create an entity that will destroy us. Earlier on we discussed the responsibility of physicists in connection with the atomic bomb; now we can talk about the responsibility of IT and the responsibility of the researchers and developers of digital technology. I think they have the same, if not greater, responsibility than those involved in research related to the nuclear bomb back at the time. The current threat is much harder to pinpoint since the nuclear bomb was basically just a bomb, while IT is a threat that cannot be identified and it has a spontaneous aspect. This unforeseeable nature of IT commands us to be extraordinarily responsible, and it's worrying that humanity is not ready for this.



The big question is when the moment comes when our physical dimension-our bodies and brains - will become a hindrance to technology. In the short term digitalisation is unchangeable: it's part of our lives and we digitalise whatever we can. Eventually, however, we'll learn how to simulate sensations and feelings which, at the moment, we can only acquire through wine, chocolate, sex or having power. It will be interesting to ask the question why all this needs to be done in an analogue way if these experiences can also be acquired digitally, through our brains. This will be the turning point for humanity because although now we are saying that certain things motivate us and we are genetically built to enable these motivations to work, if these triggers can one day be reproduced chemically, at impulse level, the next big question will be how to go on from there. If brain research produces the results that it very much looks like it's bound to produce, it will interfere in our lives on such a scale that it will realistically become unquestionable if we can survive it.

## ///László Barabási-Albert

Implanting chips under the skin can have countless benefits that serve our comfort but what is really interesting is the health microchip, which could even save lives. We already have smart watches storing our health data but a chip that we cannot lose and circumvent has the potential to revolutionise and simplify the healthcare system. This problem raises ethical and human rights issues at the moment, so even if it was available, it would be very difficult to make it socially accepted. Another approach
to microchips is to implant scanners into the brain to help mobility, which already exists. This was made possible by the fact that the neural programme that controls movement can be decoded with relatively simple artificial intelligence; in contrast, the representation of thought and engrams is fundamentally different.



We had thought that by the 21st century human life expectancy could be coded to reach 120/150 years. Well, we didn't manage; no breakthrough took place in biology. It seems to be far more difficult than we had thought. We successfully got to the point at which people have 70/80 active years in their natural lifespan, but there is a sudden decline after that. As long as it doesn't change, we won't have any drastic change in our lives. We could say that if no fundamental change took place in this regard between 1921 and 2021, why would anything change in the next 100 years? The world will obviously change: for example, we won't hold our phones in our hands, but they will register the signals in our brains; but these will be small changes. Unless we aggressively interfere with genetics, it will be difficult to achieve change. The big question is when humanity will reach the point when it realises that carbon-based technology and our own composition, our bodies, are not optimal, and when it realises that the goals of humanity can be achieved by silicone-based or other technologies, which could last even as long as 150 years. But when that point comes, there will be no need for the human spirit to live on.
///László Barabási-Albert

Innovation is slower than we had thought or at least it's not manifest in things that we had anticipated it would be. If we look back at the sci-fi illustrations of the sixties, we see happy people living life with a smile in clean and well-organised environments. Well, our lives could not be further from this. We might have the same feeling of absence if we think about illnesses that decimated the human population still being untreatable.

We have the smart phones that can be seen in the aforementioned illustrations, technology is all around and slightly sociopathic billionaires shoot themselves out to the edge of the stratosphere but mankind has not really been able to deal with the returning losses that have been directly affecting civilisation for centuries. With the resources available to modern societies we should be in a better place by now, if we made real efforts to optimise our processes to enable US, i.e. human civilisation, to get as close to a utopia in the positive sense of the word that we had imagined we would achieve through technological development. We should strike a healthier balance between priorities and decide what we are working towards, what areas societies should focus on to truly advance, and what areas are only creating noise.


## Unstoppable progress is bound to lead to the time of brain implants, when people

 no longer write but use brain-to-brain communication. At the moment our interface with the world is rather poor because we have to translate everything into texts, and write it onto some surface, where the text can then be interpreted again. We'll surpass thistechnologically since our greatest ineffectivity is that we verbalise everything and control things through that. From there on the next step will be that we'll stop going out to restaurants since applications sent to our brains will enable us to experience the sensations and tastes we were previously only capable of through physical presence. The other big paradigm shift will be when work in the classical sense of the word will no longer be necessary. So what will humanity do with all its time when the basic needs are met and basic activities are done by robots? That time is not far off.
///László Barabási-Albert

I much prefer to use the terms 'activity aimed at a goal' or 'useful activity' rather than 'work.' What is useful depends on judgement, on what we deem as useful.
In a traditional sense work is what I do to get remuneration with which I can sustain myself and my surroundings with. It's certain that the volume of this type of work will eventually decrease, while its price will increase. The value of work is dependent on its success in two senses: the extent to which it meets its goal, and its efficiency. We are at the stage where eight hours of work are needed but decreasing it to six seems more and more realistic. However, if that happens, what if the six hours are reduced to four and four hours to two, because this is possible in theory and in practice too. The way I look at work is-and this is the point where I'm on the verge of a utopiathat it springs from an inner urge. I do it because I have a need to do something that makes me feel good when I'm doing it and it produces a result that is also good. This is a human quality and although people can unlearn it and be taught it, it's deeply seated in us. If the concept of work starts going in this direction, then enhanced by digitalisation and artificial intelligence, the proportion of meaningful work could increase and the mental state of humankind could exponentially improve.

## ///Ernő Rubik



We know that what we know is not everything there is. This is coupled with the fact that fears are increasing in tandem with the accelerating pace of today's world. The notion that the universe is a given from which we can always take what is the best for us, is bound to drive development but also our fears. We know that natural processes have their own rhythm and cycles, which cannot be ignored by the processes generated by humanity. If we do, we will have no chance to deal with our fears. Civilisation has existed since we entered a stable climatic period in the history of the earth.
This is a 'climate slot' in which man can progress well and it's a fairly narrow one. Scientific research now maintains that the circumstances for development are optimal in geographical areas with an average temperature of 13 degrees: this is the 'climate slot' in which civilisations are truly capable of developing and flourishing. This says
a great deal about whether our fears about the future are legitimate or not. ///Diána Ürge-Vorsatz

I believe in our indestructability and that we can survive our own mistakes as long as we are within our own frameworks. In this context I'm not talking about an interstellar catastrophe, an attack by aliens or especially not about kinds of artificial intelligence not made by us. But we survive our own mistakes; this is what history shows. It shows those strengths and virtues that will allow us to stay around. At the same time, it can be seen that humanity is extremely unpredictable. We do not know our future, nor what we want, because we want everything and its opposite right now. There is a selfishness about us which it seems that we cannot keep in check regardless of centuries and time. In the meantime, our mistakes come at a great cost and we always pay for them since history has confirmed that the consequences of our mistakes can never be avoided.

## They can be mitigated but never avoided.

///Ernő Rubik



There are limits to human adaptability and one of those limits is a body temperature of 36 degrees. In order to stay alive we have to give off heat and that is only possible if the external environment is cooler. If the external temperature is higher, we have to evaporate heat to stay alive. It's quite conceivable that humanity as a species will be capable of adapting to 38/40 degrees as well but the evolutionary ability of biological systems can only take place as a slow process. We can observe similar problems in regard to the environment, since rising temperatures are radically affecting humanity's sources of food. We have to give up some crops and integrate new ones. But there is also an on-going transformation in our working culture since in certain cases manual work may become impossible. In summary, it can be fairly said that we are poor at reading nature and selfish in regard to it. More humility is called for because the earth would do very fine without us, and indeed it would be far better off without us than with us. There's no doubt that nature would regenerate and an ecological system could form even on a planet 6/7 degrees warmer, which humanity would no longer be a part of.

## ///Diána Ürge-Vorsatz

Conceptually a system is always a closed whole and doesn't change by itself. It changes when it's affected externally and reacts to this effect. I can only imagine and understand societies in this way. For now we are able to see so many forms of culture that their effect upon one another is unavoidable, thus the relationships societies have with one another is constantly changing. There's no shortage of interactions. However, differences in cultural content shape different forms of behaviour and in many cases different rules of coexistence to the advantage or disadvantage of a given society. If the whole of humanity becomes a homogenous culture, this will not represent a solution but rather create new problems and open a new chapter. Perhaps then the arrival of 'little green men' will be needed to give us an impulse that would bring about further change.



Changing attitudes to the climate and climate awareness will no longer be sufficient. A complete systemic overhaul is unavoidable. Technological progress solves countless things but the basic problem remains. This basic problem is the compulsion for growth and the omnipotence of consumption: the message that 'we always have to grow.' However, this will be difficult to facilitate with finite possibilities for expansion and finite resources; we can, therefore, see that the basic message is flawed. A change in the system is needed in which the primary functioning of societies is not about consumption but the acquisition of a complex approach, where we do not measure the value of life by the possession of physical objects but by our state of health, the cohesion of communities as well as in the realms of education and culture. It will be difficult because we are selfish but the circumstances of our lives will leave us no choice. We should be brave enough to say that we do not always have to grow and that climate change can be tackled only by reforming our social and economic systems on a global scale. Promoting our positive approaches to the climate will by itself not be sufficient because it leaves the basic problem unaddressed. Simply put, we can say that the value of life is not expressed in GDP but instead in the context of a 'better life.' An overhauled economic model is necessary where an absolute interest of the economy is a complex model of 'human happiness,' in which the economy benefits if climate protection, the relationship between parents and children, the willingness to volunteer and remaining in good health move into the focus of communal attitudes, also ensuring the rise of GDP. ///Diána Ürge-Vorsatz

The current state of the earth can only lead to migration. It's a biological fact that humanity cannot survive amidst extreme climatic conditions and will, therefore, seek sanctuary in other places on the planet. The current tendencies indicate a radicalisation of the situation, even though there are intentions and movements to place a brake on and reverse the negative processes. In the Sahara there are now small areas where humanity is biologically incapable of surviving but 19 percent of all dry land will be in such a state by 2070, which means that the circumstances for life of 3.5 billion people will become unfeasible. We can also think about areas by water, rivers and coastal areas, where most of humanity's wealth is concentrated. it is forecast that as a result of rising temperatures sea levels will rise In these places by about a metre by the end of the 21st century. This could be the overture for countries to sink and for the destruction
of the wealth accumulated by humanity. With this in mind it would be worth
considering the chance, possibilities and perspectives for migration in time.
///Diána Ürge-Vorsatz



Humanity might be coming close to realising something, which is the only feasible reality for me: that we shouldn't conquer nature but live together with it since nature is not good or evil but simply our earthly environment with all its dissonances. We are part of something and if someone kills what they are a part of, they kill themselves too. Human efficiency has been exponentially changing, which gives even greater significance to the decisions we make factoring in the local and global characteristics of the world. If I have good abilities or if I have great power, my decisions must be especially well-considered. If my bad decision or action only affects a few people, or my immediate environment, that has a far different gravity than a decision that impacts or determines the lives of whole nations, countries or even the entire human race. The weight and control mechanism of these decisions should be completely different than decisions like whether I should get up in the morning or not? Human fallibility and humanity's perpetual desire to progress might bring about the change where we would end up in an interplanetary state and it wouldn't be our reverence for nature that would dominate but in the hope of taking things to the next level we would raise the stakes and seek our destiny somewhere else. However, we will encounter nature everywhere else. Nature is not the Globe, nature is the Universe and the diversity of the Universe is universal. If there is anything mankind can be admired for it's these aspects that are truly admirable: that such tiny beings in this vast universe even have the ability to think and talk about this whole thing, and are not restricted to the narrow little world where only individuals get to play a role. It alone is admirable that we are able to think about the universe and after the great discovery that the sun doesn't wake up and go to bed we realised that the Earth revolves, and we got to the point that we don't even know where the world ends. In any case, we know that knowledge is not the kind of project that can be completed; all we can endeavour to do with the time we're given in our lives is to try to get as close to its end as possible.

## ///Ernő Rubik



There is a fundamental difference between hypothesising travelling in the solar system or to a planet where there's already life. The challenge is tremendous in both cases but for now let's stick to Mars. At the moment most people are tied to Earth in the sense that we live by concepts like "being in the room" and "being out of the room," so it doesn't even occur to us to try interplanetary travel. Of course there are tendencies that can tear us away from the importance of "in" and "out." The online world is practically taking us in this direction since we are slowly transitioning into another world in artificial light and without changing our physical location. In this process a being can emerge that will be happy
on Mars since he/she/it will only be "inside" there. The question is if the meaning
of life can be retained in the middle of a still void, where the only effort is aimed at self-preservation. What would happen to creativity, the essence of humankind, if there were no other goals but to try and survive under a glass dome? Living on Mars might seem like an escape route to some people but an answer must be found far sooner to the question of what will happen to the nine billion people living here so that humanity would even have the chance to contemplate the idea of an interplanetary move.
///László Acsády



The consumer generation of the 20th century had already set its eyes on the Moon and Mars, but we are still here. The digital generation won't go to Mars either, but will instead find a solution for what the older generation did not. This idea of moving doesn't seem
to be a real alternative now. It might be possible to find a technological solution for interplanetary travelling but we wouldn't have the means to sustain life out there because we still cannot generate sufficient oxygen and make sufficient amounts of food necessary for the human body. If this idea once becomes reality, the whole world and mankind in it will be different; such a move cannot be anticipated based on today's processes. By the time humanity reaches a point of seeing existence on Mars as feasible, different problems will arise as a result of artificial intelligence compared to what we can see now. The question is to what extent humanity is able to or wants to remain the dominant decision-making and controlling race or would it rather hand over intelligence to beings,
or objects, that will make decisions over its fate. If the latter happens, we'll
no longer be needed and everyone can happily take off to Mars.

## ///Diána Ürge-Vorsatz

The real challenge is not whether humanity can get to Mars but if it is able to survive in a world that it feels is overcrowded. The scenery and the technology have been changing for millennia, while human nature and a significant part of moral dilemmas have remained the same. Almost every single line in Saint Augustine's texts is relevant to 21st-century man, which might suggest that humanity should not seek to replace everything by faceless technology as it is bound to lead to dystopia, an irreversible failure for humanity. ///Gyula Fehér



Earth is our home and it's still not the time to give up on it. The extent to which it is seen as a value certainly depends on the different thinking of generations but the state of humanity becoming interplanetary should not be treated as synonymous with trendy thinking. The idea of interplanetary existence can be contemplated by mobilising human knowledge but these same mental resources can be used to build Planet Earth The chance of humanity's survival is greater if we stay. It can be stated that based on the numerical size of humanity, it would not be able to go on globally. We would need to invest extraordinary energies to break out of Earth's gravity, which would boil the Earth and we would die in the great experiment. It might be the case that the economic power of a narrow economic elite would make it possible for them
to exist interplanetary but this scenario is not realistic for all of humankind, which it might not mind at this point. Increasing energy consumption to extremes can only increase entropy, which would go contrary to the needs of human nature since we feel good when we feel there is order in our living conditions.

## ///Diána Ürge-Vorsatz



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am an optimist, a believer in survival, in the ability to adapt, in the ability to change all amidst good and bad at the same time. However, I am not a believer when it comes to genetic mutations and manipulations. It is possible to manipulate how many hands and legs we have but I do not believe it is possible to manipulate a person's thoughts and personality in advance. I believe in the future, I think that the future will not be worse than the past or the present, but that it will be better. I cannot say in what way it will be better, but I am certain that it will be fundamentally different. I believe in the continuation of human existence, which is lent credence by the fact that it would have been difficult in the 18th century to imagine what we two would be thinking about together here,
in the twenty first century. And yet, it happened.
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We've arrived at the last stop, and it's quite possible that we know and understand nothing. The path digitalised social development has taken is to maximise our own perceived, or actual happiness and interests. The notion of the individual above all is a mistaken one. Every piece of applied research demonstrates that if everybody just focuses on their own interests, this will not result in the aggregate interest of the community, and such a community cannot function. No such technology exists that would resolve this contradiction. Our relationship with nature has also reached the last stop, just as our desire for constant growth is unsustainable. We think that the faster we develop, the faster we progress, but this direction and the speed at which it's all going will only lead us to the abyss. Yet, help and support in human history sometimes comes in the guise of catastrophes, which make humanity think and re-evaluate its preferences We are today at that point when a global catastrophe may indeed be necessary
to really make us think, and then make the right decisions.

## ///Diána Ürge-Vorsatz

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Individualism as a phenomenon is not damaging in itself, only the extent of it may be The individual-centric notion is one of freedom and property, i.e. values that people need. A healthy existence needs individualism. The individual-centric notion is acceptable as long as it doesn't harm communal existence. In Japan, a communal awareness is far stronger than individualism and it can be observed that a significant proportion of young Japanese are mentally crippled by communal expectations and the pressure to live up to appropriate models. At the same time, there is a level of individualism that is not worth implementing even for the sake of well-considered selfishness: hoping that we will still find some kind of escape route despite our actions ruining our more immediate and wider environment does not seem like a good strategy for life, and as far as the community is concerned, it is extremely damaging. The pandemic that appeared in the 21st century has demonstrated that moments for decision come in everybody's lives when short-term, selfish perspectives have to be foregone so that our own lives or those of our descendants can later be made more tolerable. In any case, the cycle of difficulties is not unknown since puritanism versus the pursuit of wealth has gone on for thousands of years, but it is only now, at the beginning of the 21st century, that we will suffer some form of punishment for our greed.

## ///Fehér Gyula

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The future is not detached and separate from us since it depends upon what we do We now need to create the conditions that will allow us to even talk about 2121. The shared responsibility of the generations alive now is to choose a future where survival is ensured by closer communities and a respect for diversity. If this succeeds, there will be more green, less noise, cooler days and stronger communities.
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Avoiding wasteful excess, and the principle of the most from the least should be guiding human existence, yet we live in a world where we spend more on what is useless than what would be useful. If we look at our real needs and the real opportunities, only the above principle is, or should be feasible. Minimalism is not just an indicator of utility but also its emotional context. I believe that what is good in its context is also visibly so. For example, exercise is an extraordinarily useful course of action, good for those who do it, and good for those or what it is aimed at, and at the same time it's minimalist to extremes. Only as much from everything that is strictly necessary-this expedient minimalism could be adapted to every form of human activity. Minimalism should be the guiding principle of human existence but this is scarcely realised because we are strongly inclined to do the opposite. It should be seen that minimalism is the shortest route, consuming the least energy; only as much from everything that is strictly necessarybut there should be enough of everything. Of course, we know that practising minimalism is difficult and comes with a great deal of work
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We do not have to give up everything but we need to reconsider everything.
The majority of human activities need to be listed and alternative solutions found where possible. There are large systems like mobility by land, air and water where there is a need for a change in our approach. There are also changes at a local level, which are easy to introduce. A good starting point could be reconsidering our travelling habits. What we see now is that the richest 10 percent contribute to the warming up of the climate with their land mobility and the richest one percent by air mobility. These numbers together with the load data of average users represent a brutal burden. We can confidently assert that our intellectual mobility is not connected to the number
of hours we fly, and thus a reduction in mobility does not also mean a proportionate deterioration in our quality of life. The other huge burden in our towns, our countries and our world is caused by people arriving in places. It is a known fact that in certain parts of the world restrictions are already being introduced to manage the presence of crowds. We have reached the point when personal presence has become a grotesque series of events, which no longer have anything to do with the quality of life. Airlines that operate almost free flights do not factor in to their pricing the consequences of environmental damage because nobody expects this of them. In the meantime, we reduce the chances of life surviving on the earth inversely in proportion to every single trip. We cannot believe that the mobility of eight billion people could be an alternative to achieving a sustainable world. A reasonable decrease could mean a real shift towards local values, which could be supplemented by the mobile technology we have available. A change in approach does not mean we have to give up on learning about the world and our presence in it; we just have to recognise what the 21st century interwoven with a local and global digitalised world has to offer. Of course we should be under no illusions, human mediocrity, selfishness, the structures of power and global economic values represent a matrix in which the intention to change our approach is only one of many factors.

Fear is useful and seated deeply in our nervous system. It is an important biological weapon against the environment, without which we would all have quickly been wiped out. Our fear of the unknown is driven by whether or not we are capable of controlling the processes around us-which ones we can and which ones we cannot. An interesting correlation is that it appears to be clear that we are able to control everything in relation to the material world, while this is far more difficult when it comes to human relations Another person is in themselves such a complicated dimension that we are not able to predict, model, guess or even influence how they will behave in a relationship or in a crisis. We never know in advance how another person or a crowd, or even a neighbour, will behave. In human relations the lack of our 'omniscience' about the other person is what can lead to fear because it's impossible to model their reactions
///László Acsády

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Trials and tribulations have positive effects. If people feel that they in danger, the senses are sharpened, hearing and vision are better, muscles are taut and the circulation of the blood speeds up sending more blood to the brain. We have been prepared by evolution to be physiologically and mentally be able to better cope with situations that are inherently dangerous when there is a risk. We are capable of outperforming ourselves, beyond our abilities. The extent of an intellectual challenge depends on how difficult the given task is. A problem that seems insurmountable is far more interesting than one that can be resolved with a trivial solution. Creativity itself is all about not accepting trivial solutions since they are a given even without our intervention; the intellectual challenge is to surpass these
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STRATEGIES STRATEGIES<br>STRATEGIES<br>STRAEM<br>STRATECIE<br>STRATECIES the positive effects have been stronger. So far humanity has been able to keep its darkest instincts in check and the majority have used technology to bring about positive change. On a daily basis, people do not worry about changes because the time scales that accompany various facets of development vary markedly. We can thus talk about processes where embedding some changes takes place on a more extended timeline. According to the dynamics of the innovation curve, novelties are only accepted by two to three percent; then, by the time they reach the masses, thanks to the efforts of the innovators, people get used to them

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Technological development always carries uncertainties. If we think about the story
of flight, fear of technology in the early period is clear to see, but society's condemnation of the atom bomb is also worthy of note. Technological development can both enrich and endanger humanity. The decisive factor is a given technology's level of development and the intension behind its application. It's an interesting contradiction that the chance of success for climate research is closely linked to the use of available technologies, while these same technologies revved up mobility, which has further exacerbated the earth's chances of survival. During the development phases of technologies we can never know in advance if more problems will be raised in the process or more will be solved. It provides a point of reference when technological developments are in harmony with natural systems, traditions and cultural values.
///Diána Ürge-Vorsatz

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Technological development does not mean an exponential shift in the struggle against climate change. There are several reasons for this but it's easy to see that we don't have the time available to us that would be required by the creation of advanced technology and its integration into everyday processes. We need to half harmful emissions in less than ten years and we have to bring those values down to zero in less than thirty years. If this does not happen, if there is no human participation in this, then we will be faced with an ecological catastrophe. There is no technology that could be developed so quickly and integrated within the time available to us. Placing our trust in technology just means shifting the responsibility since there is no single piece of technology dedicated to solving our problems; there are only processes of development but the introduction of new technologies and their wide-scale application always induce new negative spirals too. In many cases we convert existing problems into new challenges; it is changing economic models and our way of thinking that can bring greater benefits than waiting for technologies.
///Diána Ürge-Vorsatz

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One of the attributes of intelligence is adaptability. Humanity is highly adept at this This huge mass of people moves through history capable of recovering from its mistakes again and again. The question is what humanity will do with the opportunities it has since highly advanced technology does not necessarily mean well-functioning societies. Technology is merely a tool: it will not make decisions, solve problems or tell us how to organise ourselves. We have already seen world wars in which very intelligent people only treated others as the subjects of technology and science; the ruins were always cleared away by people who were also capable of thinking in a humane way. The vision of man as a human droid is the wrong path to go down on. If we wish to remain as a species and a society, we can't afford to replace human beings with autonomous identities by technology.
///Gyula Fehér
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The approach taken to challenges is fundamentally different from one country to another Upbringing, school and socialisation programme people in a completely different way We vary in regard to our personal responses to challenges in life and in regard to what fators change the fates of our communities. Wherever change takes place,
there is a 'calling.' A transcendental one or one that stems from personal conviction
Those who engineer definite change are following a calling, subjecting everything else to it, acting in accordance with it and acting courageously.
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The willingness of humanity to take on responsibility is not increasing but rather being pushed into the background. We don't like to take responsibility and we don't like to recognise responsibilities. If we look at a word search programme and check how many times this concept comes up on social media platforms, we would be surprised indeed. Surprised not only at the number of hits but also at the lack of familiarity with the concept. We like to live without responsibilities and obligations; we much prefer to explore the world of opportunities and profits, which is apparently an easier one. However, in reality taking on responsibility is

## part of the minimum of being human whether we like it or not.

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Responsibility is being aware about the consequences. We are responsible for what we do even if we're not held accountable for it. We have to feel responsible ourselves and this is not a matter of the responsibilities conferred upon us. Every person is responsible for themselves, and for their environment too. We are responsible for what we say and we are responsible for what we do Of course we know that we are fallible but we are also aware of it if we are causing damage, hurting people or harming anything. Responsibility is a burden, the weight of which varies. The degree of it is different when thinking about ourselves, and different when we practice it in a wider circle, or even at a societal level.

## ///Ernő Rubik

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What must be mastered in a researcher's career is a passionate adherence to reality. This of course does not rule out the requirement of quality research that is beyond the interpretation of raw data. When we discover a phenomenon and we don't see what we expected from our hypothesis, we must accept it and there is nothing lef to do but to document it with figures and with the utmost accuracy. It's important
to note that everybody -in the world outside the research laboratory too-has
the fundamental responsibility not to adjust their family, political and societal reality to their expectations but rather to intensively seek the objective reality in their environment. In our digital era it's incredibly easy for people to wander into a dream world, for which they can readily find partners and with whom they can dream on in their 'reality.' It may not be possible to deduce this passionate adherence to reality from the digital world, nor to find its roots there, but we have to give it a try.
///László Acsády
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There are people who believe that what they know is all there is to know, and that is a dangerous conviction. Without doubt, stating that "we don't know everything" contains an element of uncertainty. However, "everything" is not a matter of quantity The question is whether or not we know what is important. In our world of today, when we are swimming in a sea of accumulated data and inundated with information we are in danger of drowning in it but it's possible to be happily making the best of it If we are able to find the information that we really need, we gain certainty of something However, it's my conviction that a question mark should light up with every statement since in the flood of information around us there is a huge amount of false information, either created intentionally or simply being wrong. Since both are conceivable, there needs to be a level of doubt in us since checking things based on these doubts, i.e. control, must be an extremely important element of our existence. So, doubts are crucially important when we're speaking about the future, which is obviously less known to us than the past-and has grey spots too-and how much more this is true for the present.

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Manipulation by social media is gravely misunderstood by many people, which is a very convenient misunderstanding because it helps them to maintain a clear conscience. The majority of people can be manipulated not because so many falsities can be invented with advanced technology that they are no longer able to distinguish
these from reality no matter how much they might like to, but because through manipulation they get things that they would like to see as being true. Everybody can read but understanding a text and critical thinking is on a lower level in societies than literacy. Technology has opened up a new dimension by now making it possible to profile users and target them in sophisticated ways, which can create self-reinforcing processes. Technology is actually dangerous in this sense because it knows so much about us, even our thoughts that are not on a conscious level. These are mostly aggregated data but based on them it's possible to influence users by presenting them with targeted ideas, content and images. Of course this is regulated: there are various data protection guidelines but at the end of the day the only way to keep all this in check is if we teach ourselves and the generations to come that the world is not binary, and is not simply about the battle between good and evil. Sometimes we need to question our own impressions too and if what we see is really the truth. There is a Latin saying Cui prodest, meaning who benefits? It would often be worth asking ourselves who benefits from what we are seeing or feeling. If we do not wish to live in a dystopia within a few decades, we have to master these skills very quickly since we are already
paying the price for our time and routines having been turned into products.

## ///Gyula Fehér

- Ma Amarab

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The concept of power and the concept of happiness are quite hard to define. I don't know which is more difficult but I do know that the one for happiness is virtually impossible I regard power as an ability, the ability to do what I want. It means being able to influence another person so that I can achieve what I want. We can have the power and ability to be effective but we cannot forget that in a system everything is connected to everything else. If we intervene in something, every component of it changes. For me courage is an unambiguously positive concept, while recklessness is unambiguously negative. If somebody is reckless, they are being brave without knowing what they are doing and heedless of the risks involved; actually, they don't even know what interests their actions are serving. A brave person weighs up the risks and tries to reduce the negative, while maximising the positive consequences. At the same time, we need to have courage to act at all. We need to be brave just to step out of the gates of our houses onto the street which is why I regard conscious action as extremely important, when people take into account the pros and cons, and this is coupled with another important element: the action must have an objective. If this is done, I don't know if there is anything else needed for happiness because this in itself is the state of happiness, which is, nevertheless, transitory at best. Happiness is in the process of existence and not a momentary state. The fact of continuous, efficient action is happiness, and this is the only possible basis for happiness that can run through a person's entire life. It's an interesting question whether or not we can plan the future, our own futures or indeed the future of the generations to come. Everything that we do has consequences and these consequences affect future generations. This is a responsibility and a fact of existence that cannot be avoided.

## ///Ernő Rubik

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There is no form of education and no educational programme without manipulation.
There is no objective science, nor is there objective art. Every researcher, artist and teacher transfers knowledge through their own principles, wanting to see their values and approach justified. All of this is fine as long as such transfer is sincere and knowledge-based. Problems begin when manipulation shifts into exclusivity, judgement and violence. A diverse network of relations between generations in university hierarchies can be built on an openness to dialogue and the freedom of opinions but only with a value-based approach being the common ground. Apparently, the roles and participants in the 21st-century university scene have started to change with the tendency towards partnership between teachers and students strengthening. Besides knowledge transfer, underpinning this shift are the parallel phenomena of knowledge sharing and its culture.

Knowledge transfer started out from the ancient method of declarations made from the＇pulpit＇and gradually took on a new direction，whereby students and teachers are equal partners creatively and jointly exploring subjects，while learning from one another in the process．Of course the teaching party has a more extensive pool of knowledge but the teacher and the student walk the path of discovery together． There is substantial data suggesting that this is a significantly more efficient method of knowledge transfer．Today this knowledge transfer is a digital interaction made up of fast，changing and more or less short stages；it is a process not necessarily following a conventional train of thought，hence it is more difficult to describe and monitor．
The amount of knowledge is exponentially growing and teachers can help to arrange all this along a thread and present it to students as an integral unit．Teachers still play a major role in this relationship because they know how the present knowledge is built on past findings．Their integrating role is invaluable for students．

## ／／／László Acsády

The digital changes of recent decades hit the six－hundred－year－old university structure like an avalanche；moreover，formal education is subject to the challenges of a wide range of alternative methods．Specific segments of knowledge can be obtained from other sources too；the value of formal degrees has decreased on the market and this trend will further intensify．In parallel with this，the business sphere has started to regard universities as its playground despite the fact that producing employees needed by businesses is not the sole responsibility of universities as they also develop students＇ personalities，provide them with basic knowledge and allow them time to think． I anticipate that specific knowledge will be increasingly more accessible，while ＇generalists＇moving between several disciplines，i．e．in the sphere of cross－disciplinarity， will be valued more．Science will be a catalyst in this process，stimulating interaction between creative areas and collective thinking．However，there are some aspects that online education cannot address satisfactorily yet：collaboration between people， mapping out team dynamics and identifying informal hierarchies are only feasible in tactile relationships．Every sign points toward the 21st－century university model shifting into an online／offline mode of operation．
／／／Gyula Fehér

With the rise of the average life expectancy puberty has been extended in the past century，so a large proportion of university students－some even in their thirties and forties－live in a state of intellectual puberty．Universities have，therefore，tried to adap to this phenomenon by updating and modernising how they operate to suit the changed age－related characteristics of the students．Today we can see that university workshops enjoy greater appreciation even though there were times when it looked like they would be sidelined by digitalisation．Many people started to say that expensive university infrastructures will no longer be necessary since soon everybody will study online．

This was a rash statement based on digitalisation gaining ground．Indeed，the function of universities is to facilitate an understanding of the available information，both digital and non－digital，and thus far this has only been possible within a collective framework and not on an individual basis．The complex process of how information becomes knowledge can only be realised through interaction，communication and motivation and universities are the best platform for this．No better model has been found so far．
／／／László Barabási－Albert

The truth is that new challenges require a new kind of knowledge．The knowledge that the educational system taught us and transferred to us in the past and the way in which it was transferred can no longer be used；all of that has expired．The skill－based approach as a form of education requires a new technique，approach and system． We must be synced with our age because only a relevant form of education can ensure that people do not simply perform well in the educational institutions but become useful and intelligent people in real life．This also means that no money spent on education can ever be too much．Programmes tailored to students＇personalities are necessary． Lexical knowledge is not harmful but unfortunately does not develop skills required for thinking．When it comes to a war，I am not interested in who won and in what alliance；I am interested in what I have not heard before：the why．Why was there
a war at all and why did this side win and that side lose?
／／／Ernő Rubik

As technology developed routine knowledge became atomised and accessible to everybody. This can be useful in one kind of problem-solving but cannot substitute the necessity of collective learning. Knowledge is always transferred via communities and is extremely personal. Sometimes we confuse the transfer of knowledge with sharing information. The role of universities has changed in the sense that they are less and less institutions that provide routine knowledge. Instead, they increasingly set themselves objectives, including making students understand the essence of innovation, teaching them how to handle and share information and how to co-operate and build project teams. Today the emphasis is not on transferring factual knowledge but on acquiring the toolkit necessary for it. This fits in with a 21st-century phenomenon: that we can no longer do anything on our own. We can only adapt to this change if we acquire the necessary competences and suitable behaviour patterns.

## ///László Barabási-Albert

We live in a society where only knowledge counts. Strength has lost its essence since a robot can deal a bigger blow, and we have lost our superiority to robots too. The only thing left is a knowledge-based society, the power of knowledge in a restructured world where humans have their own opportunities. In the 21st century it is easy to see that those who had the greatest impact on society did not come from wealthy backgrounds and by now have become the world's richest people. Families and communities that approached this century from the stance of money did not come up with anything innovative: they merely managed their money. American billionaires have realised that if they leave their wealth to their children, all that will happen is that the next four generations will simply manage their money. In the longer term this is bound to lead to gradual dissipation; therefore, those with money tend to increasingly redistribute the wealth they acquired among the active players of society. Top universities have been more valued recently because the dominance of knowledge has strengthened in society. After the emergence of the internet, a notion developed in the world that there is no longer any need for places like Harvard, Princeton, ELTE or any other universities because all the information had been made universally accessible. However, the exact opposite has happened: the importance of these elite institutions has increased. People realised that while information is accessible to all, the knowledge of what to do with it is not. Information is only a tool facilitating the next step and is meaningless for those who do
not know the method of how to process it with the necessary efficiency.
///László Barabási-Albert

What we have had so far has lasted long enough and it is time for change． We，however，must see that by the 21st century our lifestyle，lives，objectives and challenges have changed to such a degree that a new approach is needed．A far more flexible system is needed in education and here I am not primarily referring to the battle between online and offline education．We must leave behind the approach－and this is essential in the 21st century－whereby the emphasis is on the acquisition of the existing level of knowledge．What I am talking about is the skill of knowledge acquisition， the development of the skill of recognition and the ability of intellectual flexibility． These are the things that can work in a rapidly changing digital environment． A lot of university workshops have already been promoting these ideas for a while but not much has been done，and the paradigm shift is very slow internationally too The pandemic in the 21st century has forced us to realise at least that our approach is untenable and the era ahead of us is likely to introduce a hybrid online－offline system based on mobility in academia too．

## ／／／Ernő Rubik

Switching from the analogue era to the digital era introduced revolutionary opportunities for humankind．Our work and lives are inconceivable without this．The collection
circulation and distribution of data and information on the internet are the benefits of the 21st century．The digitally highly trained man of the future will be able to be significantly more efficient and inventive in using digital interfaces compared to those untrained and inexperienced in this area．Digitalism has also introduced new impulses in the sense that it has multiplied the creativity rata in artistic and scientific areas and has led to a boost in the quality and dimension of accessible information．Today we are routinely experimenting and doing projects that have taken our activities into an already new era． ／／／László Acsády

Knowledge is a huge set of information，and different forms of action make up another set．In order to find our way in them we must break them down into orientation units and particular forms of activities and explore these narrow areas with intense concentration However，if this were the only kind of knowledge that existed，the results of these activities would not meet．I believe that the diversity of knowledge and activities can only truly develop through interaction，which is why it is important to have areas that come into interaction and sometimes overlap；those who are competent in such areas can act as mediators between different disciplines．I regard this pattern of action as extremely important as it creates the most inspiring creative and research situations Of course all this is also a matter of personality：some people spend a lifetime sitting in the corner of their study devoting themselves to solving a very specialised issue， while others are more geared to crossing borders and penetrating walls
to embrace the greatness of knowledge in other fields．
／／／Ernő Rubik

Obtaining any kind of knowledge takes a huge amount of work but our capacity is finite． One person cannot deal with everything all at once；they must devote themselves to certain issues and concentrate their efforts，which is the reason for disciplinarity． The problem is caused by the fact that institutions make certain disciplines exclusively their own and build walls．But if the institutional system starts building artificial walls， it is bound to obstruct the path to development．Positive changes have also taken place in recent years and if there is a genuine need for cross－disciplinary collaboration it is now possible to do it．Yet，there is constant tension because disciplinary thinking works differently from inter－and cross－disciplinarity．In order to take things
to the next level，however，all three are very necessary．
／／／László Barabási－Albert
_ Samu Gryllus
_ Yvette Bozsik
_ Ádám Albert
_Tamás Bene

## Samu Gryllus

## IN THE 21ST CENTURY

We, who were born in the last century, are personally experiencing the change experiencing the change that has created an utterly new situation in the areas
of community organising, of community organising,
information acquisition and information acquisition and
the administration of our the administration of our public affairs as well as in regard to permanence and volatility, geographical distances and cultural differences. The ever-more easily accessible internet can facilitate equal access to information and knowledge; global processes can bebétter regulated and better planned thanks to technological development and this brings benefits to and this brings benetits to people on the whole. The more targeted use of public property, which is enable by the development of networking, can provide an alternative to the previous necessity of private ownership and can also lead to building stronger and more conscious communities.

## Why shoutant

we hope that the achievements of this century will create the prototypes

## Bene Tamás

## WHY

For some time now, I have had the feeling that the experiences and knoweage have gained during my stuales-or that I have embraced-are in the process of transformation. A kind of reassessment is taking place in me, which helps me to develop a professional perspective with which I can identify. The concepts highlighted below are pertinent to my architectural thinking.

They are not about the architecture of the future but read in a personal register, they might relate to it. They are not even an attempt to capture the essence of architecture; they are merely reflections on current trends.

## DRIFT

I experience architecture or the approach to architecture, as if I were spending my second childhood, everything becomes subject to revision again: on another plane, in the medium of conceptual knowledge. I am not referring here to the aesthetic and intellectual context

## of conscious com-

 munity-centred
## people and artists?

We have everything within reach and we can at least hope that soon enough it will all be available. for everybody. What is this 'all'? Primiarily the tools required for access. Access to what? Perhaps too many things. The formidable mass and diverse formats of information - which, according to the - Which, according to the American musician rrank zappa, is neither knoweage, nor wisaom or truth in it, we can discover nuin it, we can discover numerous products, images,
sounds, customs and ideas sounds, customs and ia of past eras, or at least
some form of imprints some form of imprints of these.

## We can simul-

taneously 'have' everything that

## we can know.

This potential points far beyond the knowledge that was available to peothat in previous historical periods and faraway culperiods and tures, since it connects the tures, since it connects the
means of all these areas means of all these areas in comparable formats. This a kind of saturated
presence in which the 21st century came into being and fertile soil holding the promise of prosperity.

## UNIVERSITY

"A university is not a school but another kind of,
of architecture or to ques tions of legitimacy, but to Why certain things in our environment are the way they are, why they evoke the most diverse perceptions, and to what extent they are intelligible to us. I could compare this to the perspective of generative linguistics, which possesses the knowledge of the language, but is not interested in the language itself onlv in its development hur people who use it. I'm interested in stories that are terested in stories that are perceived and experienced through the bullt enviro ment, that represent in time and space the ways we have been in the world I do not mean to examine specific, local conditions, but merely to emphasisé the importance of observation and experience, and the importance of letting these experiences pass through us as a filter at the moment of perception, and then there will be things that are preserved and things that are lost.

We live in a wide variety of situations, and we are not static beings either, but obiective situations are also verv broad: a are al so very broad: a a crowded and dynamic a crowded and aynami
urban space, a church urban space, a church
and a cemetery, a conand a cemetery, a con-
struction site and a ruin. struction site and a ruin,
a pre-delivery building or a pre-delivery building or
an empty lot etc. We exist an empty lot, etc. We exist in a constant flow of these positions/ situations, as we change and shift places and as our environment evolves, by us and independently of us. The perception of this rich spatia
rather unique institution of education," wrote educational scholar Odön Weszely in his inaugural speech as university rector in 1926, almost one hundred years ago. The ideal of the universitas - the proclamation of the universal truth of science the notion of the institution created through the utterance of the universe-is intertwined with the fresh energy of free and intellectually au tonomous voung people conomous young people seeking new paths. Young people who are dedicatdo the speciareas and well-versed in their
histories and tools, young histories and tools, young
people who acquire the people who acquire the majority of their knowledge within the walls of the institution. Progressiveness and seeking What is radically new are natural needs of this community eager to act It is this dual nature that sustained the universi ties of past centuries and encouraged them to pro gress. In Weszelv's age the arts were not part of the academic curriculum Fantasizing about the orhsizing about the ooth-century future, le wrén asio painting such as music, painting acting, etc. can be dis cussed academically and they have a place at universities, but training musicians, painters and actors cannot be the duty of universities." Still, one hundred years later, being aware of the reatity of the 21st-century and the future trends ahead we can state that besides the "academic discussion of the arts, the practi-
and spiritual diversity and their subtle blending rep resents my second, and perhaps last, childhood.

## We can look at the world as the place where the things we perceive happen a scene that represents the past. where the present takes place, and where the future is created.

With this insight, there is no real excitement in thinking a building purely in terms of its own reality, its own spatiality. If we turn the focus of our thoughts about the environment to this scenekeeping ourselves in no way detached from itthen spaces, objects and materials offer us a much more nuanced reading of themselves. In such contexts, along completely different lines of interest. new previously overlookéd values come to the fore. developing a different architectural way of thinking
believe that economic reality is making architec ture superficial and suc cess-oriented, leading to tierce competition between the players of the industry. This kind of architectural approach is discriminatory or more precisely, it makes archi-
cal project- and mentor-ing-based

## learning by doing

## approach unquestionably

 has a place and can be successtul. Moreover, if we consider the present t seems that the universitas and its curriculum virtually at any time have become accessible even bevond the walls of universities. Even now, in the first decades of the 21st century, we can see that century we can see that aniver sities are ho conger nod mortar Thoir duty at and morent time is at the present time is to reinterpret everything that the notion of university means And it is our responsibility that the processes catalysed by developments should be turned to the advantage of our universities and the stuaent body as well as possible.
## CONTEMPORARY

The necessity to define contemporariness springs from the constant presence of the documented past. In the more closed musical cultures of earlier decades, any overlap with the past would have been an anachronism resulting from day-to-day activities or perhaps seen as exotic. According to Péter Eötvös in contrast with contemoorary music trends, there are several branches of art, such as film, theatre or literature, that can borrow elements from the styles, aesthetics, lanquage usage and moral norms of earli-
tects incapable of em bracing what is necessary for them to be able to see architectural work as a value,-creating activity. I don't think that architecture itself defines its. own conditions, possibilities and future, nor does it arive them forwara.

## The responsibility

 of architecture is how it deals with innovation with new possibilities, and how it articulates them. It is in this turmoil, in the changing roles and harmonies that are embedded in the scene, that should be explored and investigated.EVERYDAYNESS
Communication through mages has taken on massive proportions and this is also true for the communication of contemporary architecture. It is through images that architects and clients are drawn to certain successtul projects they may never have come across before

This is a well-known phenomenon, which has many positive aspects, but
er periods with the aim of presenting something to the contemporary age. In the introduction of Kandinsky's On the Spiritual in Art, the spirit of new art, that of the encounter with the now and the unknown. said the following about the development of art in the 20th century, which was the future then, 110 years ago: "An effort to revive art-principles of the past, at best, can only result in works of art resemsling a still-born child." But bling a still-born child. But can eyes ana ears unat enbe called contemporary?

## Caniseeorhear anything according to the spirit of an age other than the one l'm living in?

What can we do, and should we, do anything, if in today's saturation resulting from the intertwined presence of ages and cultures we see that and culures we see that belonging to individual bystonging io indiviaual systems is becoming irfrom the substance? When from the substance? When any old contiguration car manifest in the new languages of new tools, but When the new does not even aspire to breathe 'old life' into the rubble of the past. I believe that consistency, reflection, our personal traditions, our precedents and their connections and meanings can only be sought atter, while our present, the rules of our contémporary communities inadvertent-
there are concerns about the overwhelming, visual based communication of the media, which carries the risk of losing focus Architecture treated as an artifact, seen as a ster!le aesthetic, creates a mis leading and false image in the minds of people, architects and non-architects alike. Such representations of architecture follow a similar model to ideal ised representations of the body, which risk generating the impression'I want ha like him want to to be like him I want to lar.' There mav be nothina wron with tho lator but wrong with the latcer, bu this tendency is a bit like making a photocopy of a picture, then another copy of the copy, and so on. Eventually you get very far away from the origina mage, and thus from its legitimate reality, because the image is simplistic clarificatorv, preferentiat loud, and devoid of all the details that are important elements of our environ= ment-the actual scene So the image is verv incomplete, and with our attraction or even ad diction o it we lose our abil to mintorested in the totality of the real.

## Building a house takes a great deal

 of intellectual and physical energy; building is nothing less than "the violent transformation of nature into culture through labour"y set the boundaries of our search, deviating from Which (the key to progress) can only be conceived from our personal needs

## MUSIC

"If this word: 'music' is sacred and reserved for eighteenth- and nine-teenth-century instruments, we can substitute a more meaningful term: organisation of sound," wrote John Cage in 1937 in The Future a Music. Credo - urk with a similar strua wore wo the present witing wure to the present writing in presenting his vision o the future behind us, he
clearly felt that the genre definition of a part of the scientific community was apparently incompatible with what we can deduce from his musical statement made fifteen years later in 1952 (4'33'', which was, at the same time, necessarily liberating for the future of music, since it welcomed all the sounds of the world without hierarchy as potential raw erarchy, as potential raw materials for music. The many visions contained in the credo proved to be true not onvyor the seventy years that followed
spite the fact that
no one ultimatelv had to chanae the wora music into organised sound,
a term which, given the evolution of the art form would soon have become obsolete. For the creation

Hannes Böhringer: Hard Bench). All this energy and effort is not visible in the photographs documenting the newly completed building.

On a new building, there are always tensions that arise from the fact that, at the moment of delivery, the life that will make the' finished structure a real work of architecture has not yet been allowed to pass through the bulding

The temporal proximity of the act of construction is still perceptible, the smell of the building materials still lingers, and there is no imprint or aura of use yet to be experienced, only the movements of construction and the materialised and spatialised concept of thought that had been the guiding thread of the house's design. It is at this point that the question arises as to whether the house can be integrated into life, or whether it will sufter. a withering decline in which the values it was intended to bring will soon disappear. However, if this integration is successtut then over time the original narrative will continue to enrich itself and grow into a clearer, more lavered a clearer, more layerea idencit, which will star co detach itself from its creators and become the identity of the place it has become and the people who inhabit it
of music, musical talent and activity go far beyond the organisation of sound ing reality, even today, in the work of almost all artists, regardless of mu sical genre. Here we need not only think of genres of so-called classical music, such as visual music, which has been present since the 1960 s , or the theatricalised chamber music theatre, which goes beyond the performance patterns of classical music, or the emergence of the tools of these genres in mainstream music and classical music culture. classical music culture, of a number of territories of a number of territories that involve the work. of an artist in the organisa ion and publication of entities that are not at all, or not only, sound, but often also images slogans and various behavioural patterns. This is true even though composers of the 21st century devote at least as much attention as their predecessors to the various phenomend and meanings of sounds and their relationships, but their activities necessarily cover a musical field with a wider toolkit

## EDUCATION

For an artist with a basio professional knowledge, who has therefore passed the first stage of his studies,

Turning towards the everyday is a kind of convergence towards the scene, which also implies distancing from the images.

## The gaze in this direction no longer

 seeks its inspirations in images, or perhaps not so intentionally, and thus does not have a preconceptual origin, but captures gradually evolving, real content, the perception of which shapes the perspective proportionally and organically.The aesthetics of the phenomenon we call spontaneous architecture emerges in the same process. It can be observed in architects and non-architects alike

Think of a simple holiday home or factory building home or factory bullaing that has been in use for a long time! Over time, new needs arising from use are constantly being added to the building, for example by adding a' canopy, a walkway or an extension with a different structure, which have been created in difterent living situations, perhaps under different material conditions. If these needs
education are the time he can spend on solving the problems that

## interest him most;

the social opportunities, the legitimi-

## sation of his artistic

existence for the outside world; and

## the orofessional

community that
an institution as a
whole represents.

Today's arts education, including music education is having particular difficulty coming to terms with a fundamental self-contradiction. Teaching is often contined to an older person showing to a younger one what and how others do what thev do. While at the same time, an essential part of learning consists of finding out-not independently of the fore repa for wo bursolves going-how we ourselv ike to and can create something as members of a community. In this process, the global and contemporaneous presence of aesthetic preferences from different cultures and eras makes our situation even more acute, and therefore we need the help of all our teachers and colleagues in one way or another.
one of my dear masters Anthony Braxton, used to say to US:
and sensibly, the result is often a working, honest and satisfying addition that is a real, structural part of the scene. On the other hand, when it comes to imagining and creating one's dream house-dazed by so many desires and preconceptions-it is from such inarticulate and often speculative thinking that fairytale castles' are born.

The same process can be observed with architects with the difference that in our case it is shaped by both learned and applied knowledge but the essence the end result. is the same.

The perception and understanding of the everyday can lend fresh air and seriousness to the architect's thoughts.

It frees us from the memento-like compulsion to create, which can result in false and redundant houses, or houses that have a professional value but whose degree of design makes them self-confining compositions.

## I am a professional <br> student

by which he meant that he too, despite the decades of age difference between him and his students, was in a state of continuous learning. Differences in knowledge are often confined to certain areas, while the world of the professional student opens up new ar eas and auestions to also be explored in the arts every day. This is why, for example, music educátion in the 21'st century and on particular the téaching of musical instruments. cannot be confined to the playing of the sound of ar instrument when current practice requires artists to have a conscious use of technology, music and performance skills that go beyond the technical and human aspects of playing an instrument
am thinking here not only of the phenomenon of post-instrumenta genres, but also of the challenges that even the historical performers of European composed music of past ages have to face. For all this institutionalised educatio stitutionalised education in the 21st century mu include, in adaition to reflection on the various traditions, community building, as well as an openness to aesthetc, technical and social change, and to inclusion. only in this way can it remain a valid field of earning.

Every part of them is overdesigned and finished, and may be regarded as structures with a similar degree of intellectual load as a monument. The al load as a monument. The identity-building ambition of
a more modest building stock. a more modest building stock. sought in other values, would bring enormous savings and the wisdom of a more socially permeating attitude of vision and proportion, which would be an important part of the mechanism of taste formation.

In this I see a kind of real organicism that enables us to shape our built environment in a continuous and responsible way

## INTELLECTUAL CONTEXT

When we go to a carpentry workshop, we perceive all sorts of things that form an image in our minds: a variety of things are made here. We see all kinds of machines and tools that are used to work the wood, this organic shape this 'grown' structure The transformation can be done in different can be done in different ampination which is combinatiod determined by the nature and complexity of the stereometric form to be achieved.

In such a, workshop, three 'energies' are typically experienced and are responsible for the atmosphere of the space. The first of these is based on the presence of the wood and its sensory reception: sight, smell, touch and the spatial positioning

Over the past century, all academic art disciplines have expanded. They have oorrowed trom the tools of other disciplines, and have ointly occupied the space created by technologicat or social change. In 1970 Rosalind E. Krauss coined the term extended field to describe the overlapping relationships between andscape architecture and sculpture. For the most part the expanding toolbox hás been able to remain an integral part of the practice of a particular artistic discipline, even if the emergence of new elements has often blurred the boundaries between the emergence of artistic disciplines.

## The blurring, or <br> even unification. of boundaries has become inevitable in many cases due to the widespread use of the digital

 medium.The extended field that has emerged in the last century, in the case of music, involves the use of compositional processes beyond sound, or the visual elements human aestures and visual content that may arise or be derived from it. At the same time it is true of the history of
of the material as well os the work that results from its movement and processing. The second is the presence of technology, which builds on a deep kinowledge of wood as an organic material: the machine that connects the human boay to the material. The machine does not do the work by itselt, so all its physical dimensions were desianed so that the various adiustments and feeding of materials can be done by a human being

The carpenter holds the material in his hands and applies forces according to the machine's instructions to achieve the intended shape. And when working with hand tools he works with the static materia held by a table-clamp.

This makes a freer bodiy relationship possible which also has its own egularilies: these can be observed in the design of the tools.

The third energy can be perceived on an intellectual level: in the object to be produced and its autonomous aesthetic values as well as in the desian of the object and its ability to relate to technology. These objects-in-progress carry all the aspects, functions and vitality of the work shops. Through work and expertise, they bring a spiritual presence to the material. In the case of a workshop where the creation of an object does not take place through aiverse assembly operations, but through the processing of raw materials, there is
the visual arts, theatre and dance over the last century that their musicalisation has led to the emergence of independent creative processes in their artistic practice, partly using musical means of expression. In most cases, these expanded toolboxes have also become part of the institutionalised education of a particular discipline of art. Although the first steps towards the discovery of a new field often take place within the walls of institutions, the walls of institutions, the and conservative practices of these institutions mean of these institutions mean that innovations can on
emerge with some deemerge with some de-
lay. Innovations can only lay. Innovations can only become an integral part of educational practice if they eventually become. mainstream and accessible to all students in the institution

## JENABLE

The technological progress of the 21st century also gives us unparalleled opportunities for education and community building and community building. At the same time, the century that is largely still ahead of us is already posing unprecedented physical and moral challenges for humanity as a whole.
Art itself is an unparalleled tool which by seizing the opportunities offered by the new century, can help our communities, in both the broader and narrower sense, to cope with the anticipated changes in our living conditions.
a kind of apotheosis of materials, which is the result of all the aspects discussed above, since all the demands and regular ities can be derived from the material itself. But this position does not really belong to the material rather to the combination of scientific and practical knowledge-and the humility of value-adding work- that the various crafts have accumulated around the raw material. Those who practise their craft with love and understanding develop a differentiated and deep relationship with the materials they use.

## I used the example of the carpenter's workshop to illustrate how such a relationship can define a sensitive relationship with a space and/or an activity/craft.

These aspects are what l consider to be the fundamental value-carrying contents, even in the con text of a building. Those that have been generated in the context of matter and intention, which in this conjunction alone can be sufficient to create value. However, it is more of an empirical experience that can enrich the designer's higher self as an internal navigational tool.

MULTI-
The architectural focus is typically shaped by something more tangible and understandable on the primary plane.

Crossing boundaries between artistic disciplines, expanding their toolboxes. exploring new areas and extenaing their own creative techniques do not usually mean that these arts actually work together i.e. multidisciplinarity.

A fundamental requirement of the latter is the autonomy of the different artistic disciplines, which in some cases eve'n forms a multipolar unity in the composition born of the contrasts between their forms of expression. Any collaboration that aims at some unified common expression can necessarly meet only at the level of the smallest common denominator of the artistic disciplines, according to Hugo Ball, who was contemplating this at the dawn of the last century.

Of course, in the last century it depended on the flexibility of the self-definition (or public obinion) of an artistic discibline whether the expansion of its territory could remain within the houndaries of the genre or whether the overall one-way expansion, as a kind of cultural migration, necessarily opened up new interdisciplinary areas between artistic disciplines, where, for example, the visual arts could be based on sound which had previously been used for musical purposes. or even on performativity.

## CARING

## We can think of our environment as a kind of garden. where living and inanimate things interact in everchanging relationships.

Our task is to create a balance within this system, and we must be able to accept that there are young/new and elderly/ old players in this world which can only be harmonious in this way

A constant and unjustified protest is nothing but a denial of time, like a de caying and abandoned environment worn out by function and left without renovation or renewal. Just like plants, the built Just like plants, the b environment and the
mostly inanimate mate mostly inanimate materials of a house have different life cycles, so they require specitic care and different approaches.

Caring/nurturing means accepting time, coexisting with time.

Social conventions the practice of encountering the arts in everyday spaces, now seem to blur all distinctions

## -or it is alsobe-

 comina oossible for technology itself to become a common factor' of the tools of the artistic fields, since digitalisation, the transformation of individual events into data, is the new tool to which each artistic discipline can connect in its
## own way,

and from which a general practice of 21st-century multidisciplinarity can be born.

## COMMUNITIES

The time ahead is a time for communities, and the for communities, and the
cooperation of communi cooperation of communi
ties is the key to its sucties is the key to its suc-
cess. Cooperation betweer cess. Cooperation betw
different professional circles, institutions, cit ies, nations and ultimately humanity as a whole will have to be crucial in the period ahead, simply because the problems of communities and the individuals who constitute them are coming closer together than ever before

A designer sidentity feeds on where they look. Today, we need designers Who tiurn their gaze and interest not only towards elitist works, but can also transfer the energy and transper the energy and situations and hallonges situations and challenges of our environment. In this way, the work we do could appear in more democratic, understand able and more human situations: What exists is the intention of what it will become

## Zoltán Balázs

## A NEW THEATRE IS WANTED!

"Acting, directing, stage concept design and drama have had their own revolutions during the development of recent decades, but the sum of all this, referred to as theatre has not." This was the response given to the partial achievements of research aimed at promoting the renewal of the theatre by Antal Németh who exerted significant influence on his period both as an artist and a scholar in his volume of studies titled New Thea studies tiled tre wanted (1988). In his academic articles arawing is with relentless honesty

Of course, comparing or contrasting personal and communal preferences, aesthetic ideological, biological differences is not an easy task. Presumably, the division along the lines of us and them is an inevitable part of the existence of communities, which is not, however, threatened by the develópment of broad public consensus and it is precisely such differences defined in relation to one another that refine the self-defini tion of the community. from now on, the eras of 'rom now on the eras or us too shoula briage our differences. This is no ditferent for the arts and for the institutions representing the different artistic disciplines: they must act as hubs in the interlocking web of 21st century communities, embracing and supporting communities of artists working on the same sub-disciptines and problems, linking in multi-cross- and interdiscipli nary ways with institutions and artists from different artistic disciplines gener ations locations countries and and continenis, supportin the development or the emerge.

## 10COLLABORAIE

In human life we cannot find a moment in which we are not in some way dependent on other living beings, in which we are ourselves and on which others have no influence. Cooperation is part of our most fundamental actions in one way or another.
hat Nemeth who is committed to the comprehensive reform of the theatre, makes the representatives of conservative theatre face the rigid, artificial and stilted maniféstations of [Hungarian] theatre, harking back to medieval times in its datedness, stating that in his opinions these are the main obstacles to the realisation of total theatre. It is debatable Whether the dramatic arts really need to be purged by robust 'theatre inguis itors' such as Németh or the French Antonin Artaud we all who oppose change to tho stare a af theatro on the whol of theatre on the whole requires actions. Besides actions to be prepared and implemented in collaboration with the intellectual allies urging innovation, it is also essential to uproot the erroneous patterns embedded in outdated pedagogy, techniques and artistic practices as well as to address other intellectual and professional deficiencies.

The method-based recommendations based on the principle of FIVE GATES were developed thanks to their makers reverence and passion for THEATRE. The elemental desire to find - as

However the quality of our coopération needs conscious development especially in the century which is expected to bring the greatest changes in the living conditions of humanity so far. There car be no doubt about the effectiveness of joint action. At the same time, it is safe to say that the collective action of artistic communities naturally requires a certain degree of autonomy in the creative process, whether in terms of the members of the community or the aesthetio and genre lavers of the andoration cooperation. This can be based on common agreewhich' is the basis of our cooperation. I have heard a saying in Taiwan:

## to stay the same, we have to keeo changina'.

Our cooperation must also carry the potential for change.

## Yvette Bozsik

the 21st century
where you can't see the stars from the satellites

Where the worldview is terrifying where freedom is vanishing
where everything is being dulled

## artists at the

present time-the creative state again in which God or another higher power sustains the universe. The desire to give free rein to the act of continuous creation, in which evolution plays a natural part

## THE SHORTEST WAY

In the universe of the THEATRE, however, the all-consuming yearning after pure atoms of creativity scattered around in clouds of dust and gas cannot be the creative energy for any form of life. This much-desired process can exclusively be ignited by real creative intent and special powers ntent and special powers of creativity. But how can these extraordinary energies be found and placed in the service of truly important theatre scenarios? The same question can be formulated differently, like the legendary Russian theatre director Georgy Aleksandrovich Tovstonogov put it in the opening line of his study volume titled Circle of Thoughts (1975):
"How can we find the shortest way

## the 21st century

- where clowns can't find their place


## where everybody whispers

-where love is missing

## _where everything is blocked ou

_ where conformity is the spirit of the age

## _the 21st century,

where the created world is
not important
where people live virtually
where people don't want to grow up
_where being young is harc

## the 21st century,

_where nobody reads Béla Hamvas
_where nobody watches Jacques Tat
where nobody listens to Tschaikovsky

## the 21st century

where introversion is what helps
where nothing opens outward
Where letting go is important
the 21st century
where we should not live up to expectations

## to the hearts and minds of our contemporaries?"

I am aware that there is no single answer for this crucial question spanning several periods of theatre history, therefore, myselt am not looking tor he Holy Grail of exclusive answers. However, when t comes to this question a comesithis auestion our evervday lives in the theatre we like so man others before others before us, must try orina answers to netp find the answer that best find the answer that bes helps our cause, just like from time to time we have to choose the most feasi ble from among answers seeking to explain the origin stories of various ancient civilisations in the hope of getting an answer to the remaining mysteries of human existence.

It is a human frailty that we keep carrying the unnecessary burden of fear up until the point that we understand the essence of the given mystery.

The moment we come o terms with the driv ing principle behina it he tloodgates of our anderstanding open up and through the ability of spiritual vision we start seeing thus far unexploited possibilities.

## the 21 st century,

where everything is there in fairy-tales where you should see
behind the beyond
where life is composed of
fairy-tale codes
Where you have to be daring to soar

## the 21st century,

where our bodies age but not our minds
where we revisit the pictures
from our childhood
where wo build from helplessness
where we must think more of ourselves

## the 21st century,

where we are afraid of time passing Where we spend the most time
with ourselves
Where generations cannot be discarded -where staying awake has good reason

## the 21st century.

Where we must speak about ourselves -where we must appear to be creative where our souls dance
Where what we've done leaves a mark

## PASSAGES AND VECTORS

The methodological patterns and practical processes used in the FIVE GATES research programme lay the foundations for a new system of ideal relations based on concrete experiences, in which-depending on the network-like arrangement of conceptual clustersfive levels of our artistic ideas are modelled The main purpose of the GATES, which embody the conditions of artistic novelty, is to preserve and novelty is to preserve and renew the human-cen tred worldview of the theatre using, a limited set of tools. The 'passages' serving as gateways to understanding the high-er-order reality of cosmic events - stripped bare by the human mind - will lead us to the foundations of a new mode of manifestation through multiple variations of the two symbols defining our creative thinking. image and concept. Thus, by re-contextualising the already textualising the arread well-known ractors that mane hom the oppor tunity will open up to US to cleanse our artistic wil from all chance-events through actively operating a set of symbols based on our own perceptions. In order to understand the interactions between the vectors of the FIVE GATES and Its possible applications that will result based on its internal rules, it is important to get acquainted with the coefficients and statistical

## the 21st century.

_where we should not walk through the broad gate
_Where the simpler way is blessed -where crystal children bring change _Where Mars is not an alternative _where chickens should stay
where we must leave the matrix

## Ádám Albert

## HYPHAL

An educational institution is by definition a dynamically changing place and always fulfils a double task. On the one hand, it preserves and archives: it preserves knowledge the relevance of which might be questionable in the given period either in part of in full. On the other hand, it revisits and develops this knowledge continuously renewing its own educa-
dimensions of the organic and mechanical laws of typed human relations. At the same time, it is worth examining the intellectual and technical backgrounds of the reality of the theatre based on the new truths generated by the concept. But foremost we must set the directions for the ambitions aimed at developing and enriching theatre reforms along with the specifications of rea uirements for which we alreadv have data built on arready have data built on information that is usefu to us. ve must become edge and-adiusted to the edge and-adjusted to the accurately detined practical objectives-it is necessary to highlight some key concepts and assign new content to them.
It must transpire from the information collected during the survey and analysis activities what dogmas determine the manifestations in the theatrical culture that respect tradition.

## How do the man-

 nerisms of styles from previous eras affect the creative tendencies of the present age? What fundamental differences characterise the naive and professional cultivators of the theatre and are there any people nowadays who embody the scholar-tional model and structure. It is our job to develop methods, and it is important to preserve older disciplines, based on and through which we build our methodology. We need an entirely new approach to the body and space.

## STRUCTURE

We are driven by the urge to preserve. A library is able to store knowledge recording the world of actions and ideas in texts and images.
Digital technology is a system of hyperlinks reproducing, the library structure but providing a broader and more complex access, operating as a reference system independent of time and place. Knowledge, competences and processes stored in the educational system are linked to masters and are
artist archetype doggedly dedicated to studying the complexities of the theatre?

What consequences does it have when the routinely learnt and exhausted pat terns of behaviour-both from the side of the artists and the audiences-obstruct the near-life effects of novel contentual and formal connections? Can the "theatre of quarantees" - as Anatoly Vasilyev calls the director's theacalls the airector s thea enjoyment in addition to enjoyment in addition to performing its editorial and organisational role? Can members of a modern
society of actors express society of actors express individual featurestuas and moral values during their artistic development? And can language - the "ev-er-changing imaginary space" to borrow Jacaues Lacan's phrase-be the autonomous manifestation of a performance that otherwise has a complex structure due to its total art character?

## THE PRECIOUS THREAD

Based on the questions and the resulting answers the unique patterns taking shape in the special coGATES system or F authentic picture about the current state of the
craft-based. Safeguarding this is important; embedding it into new structures and modes of access is inadmissible. Personal knowledge today means human gestures transposed into the movements of robot arms and fed into ICT systems.

## SYMBOLIC PATTERNS <br> PARALLEL PERCEPTIONS

The first and foremost element of the creative process is making observations and then recording them. We create and use models using the outcomes of observation-based imaging and con-cept-based imaging. The models and work processes using observation-based design provide the vocabulary of the language that digital systems are built on.
public life of our theatre The area at the cross section of the horizontal and vertical axes of positive and negative propositions contain information accumulated in various areas of our theatre art. Hence, starting out from the information basis of the facts at our disposal we can come to some important conclusions. The data acquired during the sampling allow us to reorganise our knowledge about the theatre and then, according to clearly defined artistic goals, also rearrange our previous structures and categories. Finally, thanks to these realisations, we to the se realisations, we can create the opportu-
nity to rethink our shared nity to rethink our shared
responsibilities in the spirit responsibilities in the s
of modern knowledge. of modern knowledge.
When developing our new categories, however, we should not for a sinǵle moment forget about our creative mission, which is decisive from the practical aspect of the theatre namely the highest-level objective of 'finding the shortest way' and also. about the danger that is continually present when we are seeking our own we are seeking our own Mnouchkine describes with these words:
"I am terrified of everything that can tear the precious thread stretching between the actors and the audience." No matter how pos-

Thus, the two analog and digital systems are indivisible and form a kind of ecosyștem: one cannot exist without the other. Concept-based design, i.e the system of geometrical systems, also.provides the basis and reference field for different types of digital equipment.

## OCTOPUS (ROBOT ARNS)

Digitalisation shapes our everyday lives, our way of thinking about visual culture and our basic activities. Analog platforms are not necessarily the most practical solution for imaging, image manipulation and image storage. In our academic imaging courses we can best support the development of the students by calling situations and structures what
itive a desire drives the progressive reformers in each generation of artists, the THEATRE must not lose its organic connection with the audience since its temperament is shaped by the intent of the public to play.

Directorial ambitions aimed at renewing the work of the artists must, therefore, never cease to seek the sensitively complex spiritual-material connection built between the performers and audience. The flexibility of this strong connection based on moral, psychological and societal content depends to a great extent on the anthropological imperfection of the way in Which MAN can be interpreted by an actor. Thussimilarly to the figures we can see in Polish painter Wtadystaw Hasior's paintings - it is through signs, mimics and obiectification that basic human nature that basic human nature
reconstructed from human reconstructed from human rubble can best capture the finest details of the essence of the human condition.

## The creative pro-

 fessional or artist working within the FIVE GATESthey are. If the subject of a course is living organic structure, then we examine just that, or if we work based on photographs, then we study the photos and we make sure not to confuse the two.
Transferring analog and digital knowledge are equally important for the generation Z. If we separate the distinct structures and then entwine them with sensitivity, these types of knowledge will be built over each other and complement each other.

## IDENTITY

Can digitalisation only be treated as an obvious necesșity? How does digitalisation transform our society, artistic identity, and culture as a ștructure? The way in which digitalisation affects
age-specific theatre methodology system can find their way back to the everyday reality of the audience through being the organic bearers of the creative processes.

The research and develop-
ment activity aimed at un-
derstanding the essence of the THEATRE through of the tentials requires. its potentials requires
proper planning, sophis proper planning, sophis ticated technology and a tirm crem from committed theatre professionals.

Above all, however the condition which can be defined in the most modern way is that an art-ist-like the diversely qualified ideal of the l'uomo universale - is able to say what he or she represents in the given performance.

This verbally expressible development-conscious and constructive approach taken by an actor makes it possible to arouse the need in the mempers of
people's identity and self-image is of key importance to artistic adaptation. To what extent will robotisation be helpful, supporting the work of an artist and making it more diverse? Is there a point when digitalisation obstructs the fulfilment of an artist's identity? Is it possible that the influence of digitalisation will lead to self-contradiction and act against fulfilment? Projecting real identity into digital space (Facebook, Instagram) impacts the real self-image of an individual and will eventually be counterproductive in its influence on personality.
The development and preservation of an autonomous self/ image is one of the most crucial duties of an educator.
the audience to actively participate in the joint act of creation, to engage With the inner world of the performance, and to also take part in reinterpreting the functions and features of the theatre in a creative fashion.

## PRECINCTS OF EXPLORATION

As an inadmissible professional quarantee to the success of our ambitions success of our ambition aimed at exploring the
autonomy of the theatre autonomy of the theatre
we must develop a mawe must develop a ma-
trix-like system in which trix-like system in which
the known and unknown the known and unknown factors need a regular hy-
pothesis testing. pothesis testing. I formulated the ideas supporting My FIVE GATES age-specific concept subjected to this conscious concept of construction. The presentation of the proposed system provides a detailed discussion of the five types of different constructions. whose strategic and rational use will. helo rejuvenate the previously stranded innovation processes, while profesprocesses, whice pisk taking and the work invested can and the work invested can all be combined
In my concept the fundament of the representation of classical and contemporary pieces on stage is provided by the five-partite conceptual arrangement of human dramas and events hidden at the cross-section of childhood, adulthood, old age, weekdays and testive days. precincts of exploration

Creativity is a possible answer to continuous change. Creativity is not appreciated in the traditional educational structure, where all the questions and answers are already provided in advancé. There is a tension between divergent and convergent ways of thinking. Schools demand the correct answer, while creativity requires alternatives to a single answer, and this creates confusion within the traditional framework of education. Divergent thinking is the cognitive basis of creativity, and progressive education requires an open and discursive mental and physical space. If we want real education, real questions must be asked: questions that we do not know
with their own physical and intellectual identities structure the issues per taining to the examined themes in five forms they are GATES modelling the spatial, temporal and plot dimensions of the methodical and professional ideas of mine.

## The FIVE GATES zone can be accessed through

 intellectual and psychological passages that are able to turn the billowing energy of the dual energetic projection of soul and self-awareness in favour of creative stability.Therefore, approaching the creative spaces that have their own architecture will only ensure direct engagement for the tourists of the theatre venturing to the region of the FIVE GATES region carefully prepared under carefuly prepared conditions.

## TO WONDER AGAIN

The greatest enemy of the modernisation of theatre art is the hypocrisy and

## the answers to in

 advance.
## STEHEN <br> BLEIBEN

Motionlessness, eye movement and time provide an essential/ inescapable framework, which should later' be followed by a shift. It is important that learning and cognitive processes have a phase that allows space for immersion, when time is not seen as a luxury but as an obvious need, when there is no hurry and haste. The attitude mastered in such a phase, the slowness, helps us to develop a sustainable and circumspect work method and as such the building of solid foundations. Examination at a structural level requires time, as it provides feed'back about itself.
mental confusion that typically pervade artistic manifestations.

We can only throw off this double shackle with clear thoughts encouraging complex creative processes and a wide-ranging spiritual activity. However freedom does not simply come through being outside the old laws: we must make our own new laws. make our own new raw m order lo successtury implement the scheaule it is inevitable to directly intervene in the theatre organisation based on the new laws, as a result of which the theatre of the present can be given a new form.

The theatre-specific nature of the concrete elements of the innovative ideas to be realised within the framework of the FIVE GATES concept creates the unique set of symbols that is deserved by the new tools of expression in the theatre of the future.

> The essence of the concept is consolidated by a breaking away from overflowing directorial ideas, spectacular effects and unnecessary scenic bravura, as well as by a more modern way

## GRAND TOUR

Experience, openness and mobility in real space.Experience, openness and mobility in virtual space. Both paths are essential to follow and are crucially important forms of the unknown and not pre-coded method of information acquisition. Artistic observation does not limit itself: it is total, whether it is mapping out a structure embedded in physical space or gestures on a digital interface.
of acting in the spirit of precision and conciseness.

However, the greatest strenigth of the FIVE GATES concept, which allows for a more moderate creative approach and a more concentrated life on the stage, is that during the organically emerging 'humanisation process' it minan fessionals to feel a sense of wonder


MASTERPLAN
2151
LABORATORY

"If you always do what you always did, you will always get what you always got..."
maroel breuer
MARCEL B
Where are we goine?
How?/WHY?

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## INSPIRATION

The following study can be best compared to the sketches and accounts made by explorers on unchartered territory for those who will no doubt venture further yet benefit from guidance. In the absence of accurate maps, at least directions, points of reference to the world we know.

Diagrams, insights, snapshots of familiar situations but in what might be an unusual context will launch a narrative that is taken on a journey by free associations according to the logic of words and images.

This is a travel note that makes recommendations instead of instructions about the emerging opportunities of art education in the 21st century replete with an intellectual value crisis. Its aim is to act as a compass for the pursuit of an internationally unique 'goal,' which is not only applicable to Budapest but also provides ammunition for writing the new chapter of a centuries old story of 'Universitas.'

When venturing into new lands, what we need most is not recklessness but rather curiosity and imagination. A firm if not detailed vision that enables us to leave our mental comfort zone to make an evolutionary leap. One can only jump from solid ground.

[^2]immersing
perception
focus
understanding practice

[^3]
## ELEPHANT

"Some time ago there was a king, here in this very town of Savatthi, who presented an elephant to a group of blind people and asked them to tell him what sort of a creature it was. Never having seen an elephant, their way of finding out about it was to go up to it and touch it. One of them touched the elephant's trunk and said, 'An elephant is like a snake.' Another touched the elephant's head and said, 'An elephant is like a waterjar.' One touched the elephant's ear and said, 'An elephant is like a basket.' Another touched one of the elephant's legs and said, 'An elephant is like a pillar.' One touched the elephant's body and said, 'An elephant is like a store-room.' Another touched the elephant's tail, and said, 'An elephant is like a piece of rope.' And finally one of them touched the tuft of hair at the end of the elephant's tail and said, 'An elephant is like a broom for sweeping.' And when they heard each other saying such different things about the elephant, they all started arguing, each saying that their own view of the elephant was the only correct one and that all of the others were wrong..." ${ }^{2}$


[^4]
## HUMAN

There have been significantly more people executed because of what they thought than what they actually did

If our pains, desires, and visions are merely by-products of our body, how is it possible that these, rather than our tangible actions, are the drivers of humanity? We feel that we are capable of observing ourselves from somewhere outside of the realm we call physical reality. Paradoxically, the most puzzling conundrum for science is the means of observation itself: human consciousness. It seems as if the rational toolkit is just not enough to decipher rationality. Whether we approach it from the perspective of matter or the soul, we find a hard-to-define human factor behind all flaws and immortal masterpieces alike. The analytical mind strives for clarity. An intuitive artist seeks to discover reality not by the elimination of mystery but rather by experiencing it. The former studies the tangible by intellectual means, the latter the immaterial through the channels of bodily perception.

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## ANTONY GORMLEY

"Art is not about understanding, it's about experience."3
"Art is the means by which we communicate what it feels like to be alive."4
"I think scale is about, in a way, the apprehension of proportion, and all the proportions that mean things to us as human beings are related to the body."5
"Art has to change things, and if it was immediately acceptable it would not be doing its job." ${ }^{\text {" }}$

## CAPE FAREWELL

The Cape Farewell expeditions aim to bring together education, science and the arts in the Arctic through adventures and the experience of environmental awareness One of the projects was created by Antony Gormley and Peter Clegg, a composition of three elements: the block, the chamber and the shelter all related to the dimensions of the human body.
the block indicates (whether we take it as a double carbon unit or not) a relationship between the individual body and planetary body-mass; a substantial equivalent for one material body, the luminous void chamber is a vertical space that indicates consciousness and the shelter establishes the necessity of a collective body Together they constitute a continuum of places that the human needs to dwell in the physical space of the body, the imaginative space of consciousness and the collective space of fellowship. The first is material measure, the second dedicated to the imagination (and therefore physically unused) and the third useful and used. These three places are all MADE and do not seek to describe the body but indicate its place using the Euclidian geometry of architecture in an un-inscribed arctic environment." ${ }^{7}$


## HAPTIC LEARNING

Growing up in the visual culture of the 20th century, it is not surprising that of all our senses, vision and the resulting pictorial representation is considered of superio importance. To understand human nature however, another part of our body has a similar key role. If we get acquainted with the world through our eyes then we get to really know it with our hands. (It is no coincidence that the word 'grasp' has both physical and intellectual meanings.) The eye receives, the hand gives shape The former is passive and the latter plays an active role in our interactive relationship with the physical world. Our thoughts leave a mark on the material by the work of our hands, but at the same time through them the world responds to the person who shapes it. Even in the abstract realm of words the lead role is played by our fingers, considering the evolution of writing from runes through typewriters all the way to touchscreen technology. Gaston Bachelard talks about the 'imagination of the hand' which enables it to free us from the captivity of matter, not by denying it but by understanding the inner nature of matter. ${ }^{8}$

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## TRADITION OF INNOVATION

The innovative approach to tradition transcends respect for tradition for their own sake, with the aim to conserve. From past cultures only viable and future-proof components survived that are miraculously resistant to obsolescence. These pure crystalline forms preserve long-term values such as innovation, expediency, ergonomics, but also the ability to take a firm stance in moral and aesthetic dilemmas as well as the qualities preserved in certain rituals of behaviour. The most successful inventions that survived centuries were revolutionary innovations in their own time. They built on and at the same time reach beyond the tradition that provided the base for leaping forward.
"Without tradition, we would have nothing."9
"It is not our ancestors we should follow but what our ancestors followed."10

[^5]
## HERITAGE

In itself, all the efforts of a human lifetime are not sufficient
to produce a single nail.

## CULTURE

The system of uniquely shaped wooden sticks of an ancient Japanese toy, Cidori, can be expanded without metal screws or connecting parts. Load tests have shown that even the structure of a child's toy can be successfully adapted to a building scale. The Kasugai museum proves that it is possible to create complex systems from small elementary parts, even built by hand.
"We worked on the project-says architect Kengo Kuma-in the hope that the era of machine-made architectures would be over, and human beings would build them again by themselves." ${ }^{11}$

Kuma's architectural practice used a similar human-scale and low-tech strategy when designing the 2020 Olympic Stadium in Tokyo, the elegance of which lies in its modesty and tectonic efficiency. It soberingly demonstrates the superiority of the ingenuity of craftsmen over mere technological tour-de-force in an age in which saving resources necessarily becomes a fundamental cultural principle.


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## TIMING

The correct thickness of the eggshell is a matter of life and death: too thick and the chick is unable to crack it in time but should it be too thin, the protection is prematurely removed. In culture, tradition plays the role of the eggshell, being not hindrance, but a condition for the birth of innovative thought. It provides the comfort zone one can eventually leave...

From the perspective of both the creative and the learning environment, it is crucial to synchronize individual development with the time window available. This is the ambition of any successful educational programme.
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## PERSONALITY

In ancient Roman theatres, masks with voice amplifiers were called 'personas,' which comes from the words per (through) and sonare (to be heard). Individuality can never be appreciated in isolation, only among others, in the presence of an inclusive community. Identity means more than independence. Neurologists have observed that permanent memory loss is often associated with loss of identity. Personality presupposes the ability to be independent and responsible. Personal relationships are based on trust between the individual and the community.
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## IMPROVISATION

"According to an anecdote, at the request of a strange client, the famous painter undertook the commission to paint a cockerel. A few months later, when the customer appeared to take the picture, Hokusai could only say: 'It's not ready yet. The patient customer approached him from time to time but Hokusai's answer was always the same: 'I'm not done yet.' Finally, after 10 years when the client enquired again, Hokusai said, 'Now it is done.' He put out an empty canvas and painted the rooster in a few seconds. The customer looked at the picture dubiously. 'Why did have to wait 10 years for this if it only took a few seconds to paint it?' -he asked. And then Hokusai opened the door of his studio, revealing hundreds of cockerel paintings in there. 'I can paint it anytime now'-he said."12

The conventional definition of the word improvisation: 'Performance without prior preparation' is incorrect, or at least inaccurate. It does not mention the years of earning, practicing and training required to learn the skill to improvise. Especially in the field of the performing arts, there is a long tradition of developing and
eaching improvisational skills. Certain genres (especially jazz) rely fundamentally on this complex ability, and although it has a lower emphasis in so-called classical music pedagogy, it is key in most creative fields. Learning a mother tongue is a good example of a learning methodology based on improvisation, in which there s no success without mistakes. A minimum of 10,000 hours of practice required to acquire confidence is known as a universal rule of thumb. Seemingly paradoxically, repetition plays a key role in the creation of the unrepeatable

[^6]
## PINA BAUSCH

"I'm not so interested in how they move as in what moves them." ${ }^{13}$
"To understand what I am saying, you have to believe that dance is something other than technique. We forget where the movements come from. They are born from life, When you create a new work, the point of departure must be contemporary lifenot existing forms of dance."14
"There are situations of course that leave you utterly speechless. All you can do is hint at things. Words, too, can't do more than just evoke things. That's where dance comes in again." ${ }^{11}$
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## EMPATHY

"The idea of projecting one's self in the process of emphatic imagination evokes another crucial question: how does the mental projection take place in collective work, such as team work in a large design office? In fact, all architectural projects today are bound to be some kind of collaboration. In my view, it requires the sensitivity and fused identity of a well rehearsed musical ensemble to succeed in the demanding and seemingly impossible task of collective imagination. It also requires a shared atmosphere and a charismatic conductor. However, team work rarely achieves the intensity and integrity of a work conceived by a single creator. Group work tends to strengthen the rational, stylistic, and conscious aspects of design as a result of the need for communication."16

The empirical observation that we go through physiological changes while witnessing other people's experiences, is explained by the latest brain research by the functioning of so-called mirror neurons. The strange interaction between body and mind explains why piano accompanists themselves often suffer from a sore throat during a rehearsa with a singer even without opening their mouths.

xviI.

## TABERNACLE

Tabernacle is an installation built around a centuries-old chestnut tree, as an artistic as well as a structural experiment. The question was this: Is it possible to create a space around the old tree without touching it only by using structurally negligible, finger-thin wooden wands for the construction? None of the few hundred tall legs would stand up alone, but together they form a rigid structure in which the load is equally distributed between the members. The dynamic space between the old trunk and the structure lends a new quality to both.

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## SOCIALBUBBLE

The concept of 'common sense' can be understood as the wisdom of the community, which is experienced at the individual level. This is perhaps the least recognizable achievement of civilization, from which various frameworks of reference of practically unquestioned truths have been distilled over millennia. Although the most basic elements of these are sometimes written (moral laws, constitution, natural law), the vast majority are rooted in the collective unconscious of the human psyche. It is no coincidence that after the family, micro-communities of up to 150 people constitute the ethological basis of a tribal sense of belonging. This cohesion, which is based on personal relationships and can therefore organically create larger social groups, necessarily builds on individual achievements and ambitions, contrary to the ideology of artificially generated group identities.

How can we help to create real communities? Primarily by providing a creative space where free movement can be enjoyed between defined corner points, thus encouraging uniqueness." Relating to one group or another is an on-going process made up of uncertain, fragile, controversial, and ever-shifting ties. Is this not odd? If we simply follow the newspapers' cues, the central intuition of sociology should be that at any given moment actors are made to fit into a group-often in more than one. And yet, when you read social theorists, it seems that the main, the crucial, the most urgent question should be which grouping is preferable to start a social enquiry. Should we take social aggregates to be made of 'individuals,' of 'organizations,' of 'classes,' of 'roles,' of 'life trajectories,' of 'discursive fields,' of 'selfish genes,' of 'forms of life,' of 'social networks'? They never seem to tire in designating one entity as real, solid, proven, or entrenched while others are criticized as being artificial, imaginary transitional, illusory, abstract, impersonal, or meaningless. Should we focus on the micro-level of interactions, or should we consider the macro-level as more relevant? Is it better to view markets, organizations, or networks as the essential ingredients of our collective life? ${ }^{\text {"17 }}$
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## FLOW EXPERIENCE

In his key work Flow: The Psychology of Optimal Experience Csíkszentmihályi outlines his theory that people are happiest when they are in a state of flow, "It is when we act freely, for the sake of the action itself rather than for ulterior motives, that we learn to become more than what we were. When we choose a goal and invest ourselves in it to the limits of concentration, whatever we do will be enjoyable. And once we have tasted this joy, we will redouble our efforts to taste it again. This is the way the self grows." ${ }^{18}$
"The ego falls away. Time flies. Every action, movement, and thought follows inevitably from the previous one, like playing jazz. Your whole being is involved, and you're using your skills to the utmost..." ${ }^{19}$
"To achieve a flow state, a balance must be struck between the challenge of the task and the skill of the performer. If the task is too easy or too difficult, flow cannot occur. Both skill level and challenge level must be matched and high; if skill and challenge are low and matched, then apathy results." ${ }^{20}$

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## WERNER HERZO G

"Civilization is like a thin layer of ice upon a deep ocean of chaos and darkness." ${ }^{21}$
"Facts do not convey truth. That's a mistake. Facts create norms, but truth creates illumination." ${ }^{22}$
"It is not only my dreams, my belief is that all these dreams are yours as well. The only distinction between me and you is that I can articulate them. And that is what poetry or painting or literature or filmmaking is all about... and it is my duty because this might be the inner chronicle of what we are. We have to articulate ourselves, otherwise we would be cows in the field." ${ }^{23}$

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## RISK TAKING

In his autobiographical film Portrait Werner Herzog, Herzog said that he concentrated in Fitzcarraldo on the physical effort of transporting the ship, partly inspired by the engineering feats of ancient standing stones. The film production was an incredible ordeal, and famously involved moving a 320-ton steamship over a hill. This was filmed without the use of special effects. Herzog believed that no one had ever performed a similar feat in history, and likely never will again, calling himself "Conquistador of the Useless."

However, the essence of risk-taking does not merely consist of accepting physical danger, but rather of the dedication that rates the promise of discovery higher than the safety of calculable success. Achieving this naturally calls for innovative methods and a toolkit, but above all the sacrifice of a disproportionately large amount of energy on the altar of unguaranteed results. Creating significant work can only be accomplished with long-term ambitions in mind where failures are accepted as necessary steps towards the goal.

## CENTRE AND PERIPHERY



It is empirical knowledge that the center of our universe is where we are.
We occupy multiple environments simultaneously, which define our place in the world along different relationships (geographical, cultural, ideological, economic, etc.). In the dynamically changing force field between the centre and the periphery, we navigate as active players without a clear view of the relationship between part/ whole, quantity/quality. We are fleeing from the stigma of provincialism, while we see on the examples of Haydn, Bartók, Ibsen or Alvar Aalto, how economic peripheries could also be cultural source regions. Culture is not equivalent to civilization.

The short ironic dialogue imagined by B. Alan Wallace confronts the self-conscious Western worldview with its egocentricism:

- Is there intelligent life elsewhere in the universe?
- Yes... Asia. ${ }^{24}$



## IDENTITY

Rapid globalization merges our distinct cultural auras, but this is mostly manifested at superficial levels. Social reflexes, mindsets and cultural mother tongues remain perceptible, pointing towards diversity despite increasing uniformity. Similarly to an ecosystem: the viability of the common habitat is best served by the strength of individuals. Healthy competition, a shared value system which is embodied in spatial structures (university event venues, home spaces), or off-line and on-line visibility, all reinforce strong identities that contribute to the success of both the individual and the community.

[^7]
## DIVERSITY

At an international level, the changing role of higher education, involving new, specific areas in its field of vision can be clearly observed. It sees itself not as a passive observer of change, but as an active shaper of them. Geopolitical shifts in the centre of gravity (including the growing presence of Asia, not only as a recipient) are radically reordering the long-standing status quo in higher education. In addition, the traditional discipline-based structure is gradually being replaced by a conceptbased approach, which is also reflected in the widening spectrum of MA programmes

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## WEIGHTLESSNESS

Rights and opportunities do not give direction, duties and responsibilities do.
"It's wrong to think about freedom as the ability to implement your whim. Sustainable freedom is about responsibility. It's about determining which load you're going to pick up and carry..." ${ }^{25}$


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## ANALOG-DIGITAL

Australian architect Glenn Murcutt insists on drawing by hand in his practice, not for ideological, but purely for professional reasons. He understandably doubts that the fairly young computer technology would have any chance of competing with the sophisticated relationship that has developed between the brain and the hand over millions of years-at least as far as artistic expression is concerned. When you create a drawing, in addition to conscious and rational decisions, there are countless unnoticed decisions that control our movements, which is rooted in haptic memory. We tend to call this intuition.

The digital world's contribution to the paradigm shift of civilization is not limited to the field of technology. In addition to parametric design tools, 3D printing or computer-controlled medical interventions, Augmented Reality (AR) and Artificial Intelligence (AI) are extending our senses and the physical capacity of our bodies This creates new mental and moral situations that now present humanity with unavoidable questions. It is noteworthy that complex medical diagnostic tasks are therefore easier to replace than those of nurses and care workers. The contingency of the human factor seems to be difficult to define for the rational mind.

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MARCEL BREUER
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WHERE ARE WE GOING?
HOW? / WHY?
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RICHARD P. FEYNMAN
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THE FERRY AS CONDUCTOR
THE FERRY AS REALITY
THE FERRY AS A BRAND
THE FERRY AS A WORLD MODEL

Inhalation and exhalation mutually depend on one another. A similar relationship connects tension and relaxation, or intense creative work necessarily followed by recharging. Whether in the physiological, mental, cultural or professional sense, we can only grow organically in a healthy environment, the importance of which usually reaches our consciousness only when it is lacking. A condition of reaching such a fertile state is balancing the natural and artificial qualities around us.
"I've learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel."26

[^8]
## ARVO PÄRT

"I had to get rid of everything unnecessary... in order to save myself." ${ }^{27}$
"The silence must be longer. This music is about the silence. The sounds are there to surround the silence." ${ }^{28}$
"In art everything is possible, but everything is not necessary."20

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## SPACEMAKING

It is no coincidence that the pinnacles of cultural achievements are typically born in urban environments. These complex systems of human civilization composed of intel lectual, physical and energy networks provide the ideal terrain for common efforts. What makes certain cities spectacularly more appealing than others?

The magic of Venice, Florence or Rome cannot be explained solely by their age and the treasures accumulated by a rich history. Their undoubtedly impressive wealth is not primarily a cause, but a consequence. To understand their attractiveness, you simply have to be there. Even in a morphological sense, it is not the buildings themselves (as separate objects) that are most memorable, but rather the web of squares and alleys running between them that make lasting impressions.

The recipe for placemaking lies in the organic process of gradual evolution, a series of in situ experiments in which mere spaces are transformed into places with atmosphere. The difference depends on the degree of engagement: the former provokes passivity, while the latter encourages active participation, dialogue and the shaping of the environment. Without empathy, externally driven developments necessarily produce non-places: spaces that are made for everyone but do not have anything to say to anyone.

[^9]
xxxv.

TIMELESSNESS
FIRMITAS, UTILITAS, VENUSTAS This is how Vitruvius summed up the expectations of a good building more than two thousand years ago

Solidity, Utility, and Beauty may sound banal at the beginning of the 21st century, but as we delve deeper into these concepts, the universal values of resilience come to the fore. They show a strong correlation between the physical and mental aspects of security against obsolescence. Structural and spatial reserves are not independent of cultural, functional versatility, which focuses on creating multi-use structures instead of costly transformations and specific solutions. Timeless aesthetic qualities naturally derive from a creative attitude with a sense of perspective.

## LEARNING LANDSCAPE

A characteristic example of innovative, conceptually clean space creation is the Rolex Learning Center at the University of Lausanne, which has created a new spatial typology
"We designed the building as a single space and put it almost in the center of the site for easy access from the surrounding facilities. All of the programmes are installed in this big room [...], which is undulating gently, making it a kind of topographical environment. These waves create a large amount of openness under the building, inviting people to walk under and approach the entrance hall located at the center of the building. This landscape with valleys, slopes and humps, as well as different-sized light gardens, generates spaces with diverse characteristics. The hill-like places have good views and are used as study spaces and for the restaurant. Clusters of small light wells generate a quiet atmosphere with a human scale for offices. Each space is nicely divided but remains continuous at the same time, and is connected to the campus outside. With these strategies, we endeavored to create an open structure for people."31

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## MARCEL BREUER

"Modern architecture is not a style, it's an attitude." ${ }^{32}$
"I am as much interested in the smallest detail as in the whole structure." ${ }^{33}$


## DOMANS

The concept of 'creative domains' is used by Mihály Csíkszentmihályi in his work Creativity to distinguish creative processes of a disciplinary nature. According to his observations, these categories, which can be interpreted in the cultural space, help to understand the psychological background of creation. "The knowledge carried by symbols is organized into discrete domains of geometry, music, religion, legal systems and so on. Each domain is made up of its own symbolic elements and rules, mostly with its own marking system. In many ways, each domain represents a tiny, closed world in which the individual can direct his thoughts and actions clearly and with full attention. Perhaps the best proof of human creativity is the existence of domains. The mathematical analysis and the existence of Gregorian music both show that we are also able to experience orderly patterns that biological evolution has not programmed into our genes." ${ }^{34}$


## Where Are We colnc?

At the crossroads of art and science we find an opportunity for orientation and to seek direction, while the responsibility that comes with it is also revealed. With technological singularity in the perspective, being aware of lasting frameworks of reference is of particular importance. There is no doubt that, technologically speaking, the horizons of human potential will be radically broadened in the foreseeable future. This, however, in itself does not say anything about the quality of choices and their consequences.

The difficulty of the challenge lies precisely in the fact that there is less and less consensus on what we think is right. The invention of gunpowder is arguably of revolutionary importance for civilization, and it would be pointless to open a debate about its correctness retrospectively. On the other hand, innovative efforts in terraforming Mars, genetic engineering, or Artificial Intelligence rightly raise moral and theoretical questions.
"Can we survive technology?"35

## HOW? / WHY?

Upon the birth of Artificial Intelligence (AI) John McCarthy defined it as "the science and constructing of intelligent machines" ${ }^{36}$ Since then, after the evolutionary leap of recent decades the situation has become rather more complex. It was a great breakthrough when in 1997 Garry Kasparov was defeated by Deep Blue, a machine designed for a single specific task using a known database. This was called the 'narrow Al' generation. For some time now we've been talking about 'Artificial General Intelligence,' perhaps the most spectacular accolade of which is the AlphaGo of DeepMind against the unbeatable master of the oriental game 'Go' in 2015. This time Fan Hui played against complex algorithms that are capable of self-learning and their operation is a mystery even to their programmers. (The number of possible moves in an average Go game is about $10^{360}$, compared to "only" $10^{123}$ in chess.) With 'machine learning' the genie has, so to speak, been let out of the bottle. Therefore, Al while answering our questions, also raises new ones, and not only in the field of technology and IT, but in the field of ethics too. Instead of revealing secrets, it deepens them The question for the scientific mind is: how? Artists are more concerned about: why?

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The idea of the training centre, derived from local conditions, is not only valid in the given context, since we see it as a model that acts as catalyst, a precursor to similar institutions in various geographical and educational environments. It represents an attitude instead of specific solutions, which, by virtue of its universal values, can be considered globally valid.

The centre established in the intellectual space between the five art universities of Budapest creates new correlations that go beyond the range of each institute. In the intellectual field emerging between them, the interdependence of not only the individual artistic disciplines, but also the creative domains of arts and science can be understood. This is not an institutional merger (integration), but a collaborative synergy that creates a new quality based on existing values.

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XLIX.

TERRA INCOGNITA THE FERRY

Genre boundary crossings in the context of disciplines of art and science
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\section*{CO-EFFECT} THE FERRY

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THE FERRY
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\section*{FEEDBACK THE FERRY}

Catalyzing effect of feedback between training levels.
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\section*{Lative space}

\section*{G○RDOR MATTA-CLARK}
"He worked mostly with ephemeral interventions on buildings through cuts and extractions on floors, walls and other structures, somehow showing the possibilities of deconstructing reality by transforming our consciousness and the way we perceive our world. \({ }^{37}\)
"When thinking about the power of representation as a means of architectural thinking. the way that Matta-Clark transformed real buildings into scale models \(1: 1\) by cutting their abandoned structures is at least, provocative, because he was reverting the process of our lineal way of thinking. As Louise Désy and Gwendolyn Owens point out, he was clearly interested in the built environment with all its complexity and contradictions, not just in the buildings that he could artfully cut apart. These contradictions can also be understood as a kind of architectural dissidence, when practising what he called 'Anarchitecture."38


\section*{CHOREOGRAPHY OF THE BODY THEFERRY}

Through our movements we create a connection between the material reality and the world of ideas. Vittorio Gallese, researching the nervous system in relation to artistic creativity and perception, aptly points out the importance of the motor functions of our body even in abstract creative experiences:
"Through movement, the available elements in space can be connected. Objects can be carved out of their background and perceived as such. Through movement, representations and meaning can be formed and articulated. We can provide an empirical backup to this theoretical statement by looking at the function of the brain. [...] Embodied simulation can shed light on human symbolic expression, both from the point of few of its making and of its experience. In so doing, it reveals the intersubjective nature of any creative act, leaving behind any idea of a solipsistic, cogitating mind. More relevant than cogito-and here phenomenology got it exactly right-more relevant than I think is I can (this has to be so as is quoted). The physical object, the outcome of symbolic expression, becomes the mediator of an intersubjective relationship between creator and beholder. Embodied simulation generates the peculiar quality of the body seen as a significant part of aesthetic experience. \({ }^{39}\)


\section*{CHOREOGRAPHYOF COMMUNITY THEFERRY}

How can we help to create groups and real communities that are united by cohesion? Primarily by providing a creative space where free movement can take place between planned corner points, which is controlled not by entropy, but by creative energies. Diversity in itself is not a guarantee for the productive functioning of a community. in order to create uniqueness from individual efforts, conditions fit for collaboration are required. In addition to physical conditions, professional, social and cultural
coherence that do not limit, but motivate.
In an inspiring community, there is a balance between independence and belonging, the desire to innovate and the prestige of experience, privacy and publicity.

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\section*{CHOREOCRAPMY○FTMEPLACE THE FERRY}
'Home' is not only an idea. Although it is associated with people and abstract values it has very much to do with the reality of the place. The recent pandemic has simultaneously demonstrated the feasibility of digital on-line education on a functional level and also the significance of the environment we inhabit especially as a facilitator of face-to-face encounters. The value-generating power of location is more than a fundamental axiom of the property markets. The complex quality of the 'place' interpreted in a global, national and urban context will be a key factor in the future of higher education as well.

\section*{CHOREOCRAPMYOFCOMSTRUCTMN THE FERRY}

Similarly to dance, all creative processes are based on a choreography of specific rules. So is construction.

The Design \& Make programme of the London-based AA (Architecural Association) on its special forest campus in rural Hooke Park has been continuously constructed as a series of student projects. Every year since 1983, the ensemble has been enriched with a new experimental structure, thus expanding the knowledge base of innovative wood architecture
High precision point-cloud scanners and computer-controlled chainsaws are as much part of the toolkit as analog and traditional tools, creating unique opportunities for international student teams striving to practice sustainable building methods.

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\section*{CMOREOCRAPMYOF NNPRMATVON THEFERRM}

Functioning is based on information. There is no complex system that can come to life and function permanently as a result of mere coincidences. All functions of a living cell are determined by the specific sequence of amino acids that stretch between the spirals of DNA, in a way similar to the digital code of a computer programme. Just as the essence of a poem lies not in the letters themselves, but in their order, neither does the quality or quantity of bricks distinguish between a bicycle warehouse and Florence Cathedral. The meaning is manifested in the material, but it does not derive from there.

In the age of Big Data, it is not the creation of vast amounts of information, nor even access to it, but the selection and evaluation of relevant content that is becoming increasingly challenging. The question is primarily non-quantitative in nature, so it is natural that the role of the intuitive thinking of the individual is becoming more and more prominent in science and technology too.
"Business schools are done. What's exciting is all happening in art schools."40

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\section*{CHOREOGRAPHY OFEDUCATION THEFERRY}

Universities must be ready for a cognitive awakening, connecting art and science to enjoy their simultaneous presence. This creates a synergy that appears as a new dimension, the timeliness of which depends on the possibilities recognized and the current questions articulated. The FERRY is an educational and research programme based on the existing structure to create new content that can provide dependable answers 600 years after the birth of Universitas.
"The 'Idea of a University' was a village with its priests. The 'Idea of the Modern University' was a town... 'The idea of the Multiversity' is a city of infinite variety.. The university sector continues on a journey from inward 'village,' through 'ivory tower' and the glorious isolation of the elite, towards the joint aims of broader access and raising achievement. This has meant huge growth in the sector, opening up higher education while to some degree maintaining an idea of a retreat from normal life to reflect and grow through learning and research. Universities, as complex institutions, increasingly play a crucial role in their local, national and international environments in terms of economic and cultural, as well as educational, leadership. This is the task for a masterplan: to plan for this change."4

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\section*{CHOREOGRAPHY OFTHE21ST CENTURY THE FERRY}

The cross-genre creativity of the Bauhaus is related to the universal abilities of the Renaissance polymath, which was a sign of a radical change of attitude in their own time. Today we are engaged in a similar (if not more significant) paradigm shift. The relationship between sculpture and painting for Michelangelo or that of photography and film form Moholy-Nagy, is manifested in the connection between bionics and AI. The rules of the genres cultivated in the more or less defined playing fields of science and art continue to apply, and are but necessary conditions for advancing within a meaningful framework of reference. The necessity of widening disciplinary boundaries and their cross-fertilizing benefits are indisputable, and the authenticity of the new content created depends on their relevance within the reference system. Giordano Bruno (1548-1600) was sent to the stake on charges of heresy, while Johannes Kepler (1571-1630) holding similar views was regarded as a respected scientist only a few decades later. To facilitate individual achievements to combine and develop into new intellectual achievement by reaching a critical mass, institutional platforms are called for. This structure provides the grammatical system for ideas to develop into languages that others can understand.

\section*{PROGRAMME \\ OF THE EDUCATION GENTRE \\ THE FERPY}

The programme proposes the introduction of a new structure. The spirit outlined in the Masterplan forces a radical shift within the framework of existing institutions. THE FERRY offers a new model that provides the possibility of both a cognitive and physical paradigm shift. The diversified programmes of the MA training portfolio with a high degree of freedom are based on the professional foundations of BA training. Instead of a disciplinary division, the programmes are organized around conceptual categories, creating a fusion between various disciplines or arts and science. In addition to the existing structure, a new training profile will be created that will focus on responding to the challenges of the 21st century.

The FERRY recommends launching the following conceptual
MA programmes simultaneously:
ILLUSIONS + SONIC + COMPOSITIONS MA
POSITION + CONDUCTION MA
IMAGINATION + HERITAGE MA
SECURITY + CONTROL MA
HYBRID + BIOTOMY MA
EVOLUTION + ENTROPY MA
ACT + SYSTEM MA
UTOPY + RULES MA
ESCAPE + IMMERSION + DISTANCE MA
- LIQUID + CONSTANT MA

RATIONALITY + INTUITION MA
CONTINUITY + ZERO MA
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## MISSION

OF THE EDUCATION CENTRE

## THE FERRY

The programme proposes the introduction of a new structure with the following objectives:
_ CREATING A NEW PLATFORM
_ REMAINING AUTONOMY OF FOUNDING INSTITUTIONS
_ DISTINCTION BETWEEN BA AND MA
_ FEEDBACK TO PARENT INSTITUTION (DLA, PHD
POSSIBILITY OF GRADUAL RESTRUCTURING

INSPIRING, INCLUSIVE LOCATION
GENERATION OPPORTUNITIES
_ HORIZONTAL STRUCTURING
_ COLLABORATIVE, COOPERATIVE SITUATIONS
_ MOTIVATIONAL POWER OF QUALITY

- SITUATION AS A CATALYST
_ INTER- AND CROSS-DISCIPLINARY
COMPETITION ADVANTAGE
INTERNATIONALLY INNOVATIVE
ATTRACTION TO INTERNATIONAL STUDENTS
_ STRENGTHENING OFFLINE AND ONLINE PRESENCE

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_RESPONSIBILITY
_TAKING RISKS
_INSPIRATION
_IMPROVISATION
_EMPATHY
_Innovation
_HERITAGE
_community
_TIME WINDOW
_EQUILIBRIUM
_ANALOG-digital
_FLOW
_SPACEMAKING
_RELATIVE SPACE
_LEARNing Landscape
_SUSTAINABILITY
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## RICHARD P.FEYMMAN

"I would rather have questions that can't be answered than answers that can't be questioned."42
"Fall in love with some activity, and do it! Nobody ever figures out what life is all about, and it doesn't matter. Explore the world. Nearly everything is really interesting if you go into it deeply enough. Work as hard and as much as you want to on the things you like to do the best. Don't think about what you want to be, but what you want to do Keep up some kind of a minimum with other things so that society doesn't stop you from doing anything at all."43
"The highest forms of understanding we can achieve are laughter and human compassion."44

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## THEFERRY

AS A CREATIVE CENTER
A double nave system with a base connected to the Danube bank in Budapest and a mobile, quick response unit on the river provides the space requirements of the current programme. The two elements are in a complementary relationship both in a spatial and functional sense.

The base pontoon connected to the river bank houses the accommodation which require intensive service, while the related mobile unit with its flexible project spaces enables an extended range of operation.

The diverse educational space types (specialized, generic, informal) form groups that enable the FERRY to respond quickly to present international currents,
to establish project-based off-line and online contacts even with remote partners.

[^10]THE FERRY

## AS CONDUCTOR

The dual structure of the FERRY (base and mobile unit) can be considered a physical embodiment of virtual networks:

- creates the possibility of analog experiences, counterbalancing the dominance of digital space
- adds attraction to the pressure of leaving the comfort zone
- displays constant and variable qualities in a dynamic relationship
- establishes the potential of the international implementation of the model

Its physical appearance is influenced by the topographical constraints of the place, but also, as a result of mobility, by independence, connectivity and the potential of international presence. Thus, the Danube as Europe's geocultural backbone becomes an active conductor itself in a complex global network.

INSPIRATION
CYCLE
ELEPHANT
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ANTONY GORMLEY
CAPE FAREWELL
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tradition of innovation
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PERSONALITY
IMPROVISATION
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EMPATHY
TABERNACLE
SOCIAL BUBBLE
FLOW EXPERIENCE
WERNER HERZOG
RISK TAKING
CENTRE AND PERIPHERY IDENTITY
DIVERSITY
RELATIVE SPACE
WEIGHTLESSNESS
ANALOG-DIGITAL
EQUILIBRIUM
ARVO PART
SPACEMAKING
STRATIFICATION
TIMELESSNESS
SUSTAINABILITY
LEARNING LANDSCAPE
MARCEL BREUER
DOMAINS
WHERE ARE WE GOING?
HOW? / WHY?
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THE FERRY
CONNECTION
TRANSIT
INTERMEDIATE SPACE
CROSSINGS
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CO-EFFECT
interaction
FEEDBACK
GORDON MATTA-CLARK


THE FERRY
AS A BRAND
Due to its natural characteristics and position, the FERRY contributes effectively to the country picture and the international visibility of the parent institutions.

It creates a 21st century brand with a range far beyond its physical range of mobility and can ultimately be interpreted as a manifestation of a world formula.
"The universe is made of stories, not of atoms."45

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## THE FERRY

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$\underset{\text { Eleph }}{\text { III. }}$
Elephant skin, detail
photo_Wolfgang Hasselmann / Unsplash
IV.

Egyptian relief, Tomb of Ramose, Thebes,
Valley of the Nobles
photo_Gábor Tiderenczl
V.

Le Corbusier: Notre-Dame du Haut, Ronchamp photo_Akos Juhász
VI.
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photo_Bruno Vincent / Getty Images
VII.

Antony Gormley, Peter Clegg: Block, Standing Room and Shelter, Cape Farewell, 2005
photo_Peter Clegg
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Relief from the Intermediate Kingdom of Egypt, Berlin, detail photo_Akos Juhász
${ }_{\text {IX. }}^{\text {Barm, Borospataka, Gyimesek, detai }}$
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Wrought iron nail
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${ }^{\mathrm{X} I}$.
Kengo Kuma \& Associates: SunnyHills, Minami-Aoyama photo_Rafbalboa / Wikimedia
XIII.
St Vitus Cathedral, Prague, ceiling
photo_irontrybex / Getty Images
XIII.
${ }^{\text {Eggshell }}$ photo_ Akos Juhász
XIV.

Black shirt
phooto_Âkos Juhász
XV.
Study, 2014
photo_Akos Juhász

Pina Bausch
photo Gerhard F. Ludwig / ullstein bild via Getty Images
XVII.

Lights, La Biennale di Venezia, 2016
photo_Akos Juhász
xVIII.

Tabernacle, installation, Studio in the Woods, 2017 photo_Akos Juhász
xIX.

Lundgara \& Tranberg Arohitects: Tietgen Dormitory Copenhagen
photo_arquinauta.com
xx.

Johann Sebastian Bach: Cello Suite No. 3 in C maior 1717-1723, detail of sheet music
photo_Âkos Juhász
Corn Walk, installation, Hello Wood, 2014
photo_Akos Juhász
xXII.

Werner Herzog
photo_Bil Zelman / Contour by Getty Images
Model of Aires Mateus in the interpretation of the author, I . photo_ Akos Juhász
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Opeion, La Biennale di Venezia, 2014
photo_ Akos Juhász
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photo Aldino Hartan Putra / Unsplash
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Ken Grix: Cat's Cradle, Bath Brewery
photo_ Ákos Juhász
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Andy Goldswo
Sculpture Park
fotó_ Jonty Wilde
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Model of Aires Mateus in the interpretation of the author. II. phoot_ Ákos Juhász
xXIX.

Albrecht Dürer: Melencolia, 1514, National Gallery of Victoria
detail
photo Wikimedia
Xeter Zumthor: Kolumba Museum, Cologne, wall detail
photo_ Akos Juhász
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Japanese stone garden, detail
photo_ Akos Juhász
xXXII.
photo_Calle Hesslefors / ullstein bild via Getty Images
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|I Campo, Siena
photo_ Akos Juhász
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Aerial view of field at Grézac, France
photo_ Cliché J. Dassié / Wikimedia
xxxv.
detail I.
photo_Ákos Juhás
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Roofs of Siena
photo_Ákos Juhász
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Sanaa Architects: Rolex Learning Centre, Lausanne
photo_ Bernard Vogel / Wikimedia
XXXVVII.
Marcel Brever photo_Robert F. Gatie, Maroel Brever Digital Archive Syracuse University
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Peter Zumthor: Bruder Klaus Field Chapel, Mechernich
photo_Akos Juhász
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Route 574 . Snceffellsnes Peninsula, Iceland photo_Akos Juhász
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Dom Hans van der Laan: Saint Benedict Abbey, Vaals detail II.
photo Ákos Juhász
XLII.

Hokusai: Under the Wave off Kanagawa, 1829-1833, Metropolitan Museum of Art, detail
photo_ Wikimedia
XLIII-LII.
graphio design_Dóra Balla
LIII.

Gordon Matta-Clark: Hair, 1972, detail photo_Carol Goodden
LIV.

Antony Gormley: Another Place
photo_Tony Hisgett / Wikimedia
LV.

Conductive silver material, detail
photo_Dr. Hugh Manning / Wikimedia
Vea Totem, installation, Hello Wood, 2015 photo_Akos Juhász
LVII.

Piers Taylor Charley Brentnall. Big Shed. Hooke Park
photo_Piers Taylor
, vir.
Egyptian hieroglyphic writing, detail
photo_Ákos Juhász
LIX.
Feiden Clegg Bradley Studios: Faculty of Arts, University of Warwick, stairs
photo_Ákos Juhász
LX.

Tomás Saraceno: Stillness in Motion, Cloud Cities,
San Francisco, 2017
photo_Studio Tomás Saraceno
LXI.
Egg I.

Eglustration_Akos Juhász
LxII.
illustration_Âkos Juhász
LXIII.
Egg III.
illustration_Akos Juhász
XIIV.
Richard Phillips Feynman, 1965
photo_ Photot2 / Universal Images Group via Getty Images
xV.

THE FERRY, Budapest I
graphic design_Ákos Juhász
LxVI.

THE FERRY, Budapest II.
graphic design_Âkos Juhász
XVIII.

Diagram of THE FERRY
graphic design_Dóra Balld
XVIII.
graphic design_Akos Juhász
LXIX.

Nine cities
graphic design_Akos Juhász


## E LA NAVE VA

_Gábor Kopek

## TURNS OF CENTURIES <br> _ László Acsády_László Barabási-Albert <br> Gyula Fehér_Ernó Rubik_Diána Urge-Vorsatz

SEIN UND DESIGN

THE TECHNOLOGIES OF ASCENT AND THE
WEIGHT OF SPECULATION IN THE 21ST CENTURY

CRISIS

## TIME TRAVEL

László Acsády_László Barabási-Albert
Guu - László Acsády László Barabási-Albert
-Gyula Fehér_Ernő Rubik_Diána Urge-Vorsatz

## hostage

Samu Gryllus

## NEW GENERATION

László Acsády László Barabási-Albert
Gyula Fehér_Ernő Rubik_Diána Ürge-Vorsatz

## OIDIPUS

Yvette Bozsik Company

## BEING DIGITAL

László Acsády László Barabási-Albert

- Gyula Fehér_Ernó Rubik_Diána Urge-Vorsatz


## GLOBAL OR LOCAL?

- László Acsády_Lász̄ló Barabási-Albert

Gyula Fehér Ernó Rubik Diána Urge-Vorsatz
IRON OXIDE
_Adám Albert

## EXTREME VALUES

- László Acsády László Barabási-Albert
-Gyula Fehér_Ernó Rubik_Diána Ürge-Vorsatz



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