



The World Foundation for Natural Science

The New World Franciscan Scientific Endeavour of The New World Church

Restoring and Healing the World through Responsibility and Commitment in accord with Natural and Divine Law!



Artificial Intelligence: Advantage or Threat?

We can no longer imagine our everyday lives without the deployment and use of computers and computer-controlled machines. Application possibilities of these technical devices are becoming more and more diverse through the use of so-called “Artificial Intelligence”(AI). With this, our dependence on technology is also growing, as is its influence on our communication and education, on decision-making and lifestyle. The application of artificial intelligence holds opportunities, but also risks, and a discussion about the responsible and ethical use of it is needed urgently.

AI defeats human

In 1996, a computer for the first time defeated a human in a game of chess. It was the chess computer “Deep Blue” from the company IBM, which defeated the then reigning world chess champion Gari Kasparov not only once, but also in 1997 in a whole, six-game competition. The computer could analyse 200 million chess positions per second. Chess is considered a very complex game that is difficult to master. Even more complex, however, is the strategy game GO from ancient China. As recently as 2016, the world’s best GO player Lee Sedol was beaten by the Google-developed programme “AlphaGo”. In five games, the artificial intelligence (referred to as “AI” in the following) lost only once. This performance is impressive and can lead to the conclusion that AI is more intelligent than humans. This is certainly true (depending on how one defines intelligence) in the areas for which it was developed, but neither “Deep-Blue” nor “AlphaGo” would pass the middle school exam. Even if AI can do some additional learning, it still needs thousands of images to learn that a cat is a cat. A child only needs to see a few cats to do that.

This high degree of specialisation offers, on the one hand, many ex-

isting areas of application for AI, in some cases it can even offer life-saving help. On the other hand, it can also cause great harm if its influence becomes too great, especially because it cannot understand the effects on the real world.

Can intelligence be artificial?

From a purely technical point of view, AI is superior to human intelligence in some areas. However, this seeming superiority is not necessarily based on the actual algorithm (or computer programme) that makes up AI, but on the enormous processing power, storage capacity and worldwide networking of databases that – unlike humans – never forget and when needed provide vast amounts of data to solve problems.



Figure 1: In 2016, the world’s best GO player Lee Sedol was beaten by the Google-developed programme “AlphaGo”.

The term “artificial intelligence” is used so often that one hardly gives a thought to its actual meaning. [A definition of Artificial Intelligence can be found on page 2.] But what actually is intelligence and how does it differ from Artificial Intelligence?

One of the many definitions of intelligence is: the ability to learn from experience, to solve problems and to adapt to new situations.¹ Intelligence also includes emotional intelligence, which enables us to perceive, understand and react to emotions.

AI can solve purely analytical problems, yet it lacks emotional intelligence.

But even as far as analytical problem solving is concerned, scientists are not entirely in agreement as to whether one can actually speak of intelligence with respect to computers.²

Prof. Ladan Pooyan-Weihs, lady lecturer in computer science at the Lucerne University of Applied Sciences and Arts, also questions the term: “I understand intelligence as the ability to be innovative, to break rules, to be interested in what is still unknown. [...] Every piece of software is a piece of extended human intelligence. It is not robots that determine a computer programme – it is us humans! It is our

intelligence behind it, not an artificial intelligence. We determine how AI programmes should work.”³

Because of our own kind of intelligence, we as human beings will continue to be superior to so-called “intelligent” machines and robots in the future, “[...] because we can go beyond the permitted and the known. We are capable of breaking the rules and beliefs of the moment. [...] We apply the known rules of one field to another. [...] Innovation is born out of doubt and questioning. Likewise, it develops out of emotion and ambition and, above all, out of the ethical need to do something good for humanity.”³ Such needs and feelings are not known to machines! Since computers, despite all their computing power and available data, lack the necessary understanding of life in the form of feelings and ethics, they can never be “more intelligent” than a human being. This is because feelings such as gratitude, humour, grace, compassion or ethical values are just as important in solving problems in reality as pure facts. In the end the term intelligence can only be applied to artificial systems in a very limited way. AI means the ability to answer questions and learn from them with a purely analytical approach through the evaluation of data.

But nothing more.

Machines do what they are supposed to do – and they do it the way we humans programmed them.

Therefore, the real threat to AI and robots comes largely from the humans who are programming them. To prevent the criminal use of AI and robots, we need a kind of Hippocratic Oath for computer scientists – a Pledge of Digital Ethics. The “Holberton-Turing Oath”⁴ already exists, however it is voluntary and therefore not binding. It goes back to Frances Holberton (1917-2001) and Alan Turing (1912-1954), two pioneers in the field of computer science, mathematics and philosophy, for whom it was important to place humanity and ethical principles above technology.

What opportunities does artificial intelligence offer?

AI offers us a great many advantages and makes our lives easier. It is hard to imagine our daily lives without computers, laptops, smartphones and other technical aids. So far, they have mostly only taken over tasks in the area of “weak AI”.

The weather report, for example, is based on the evaluation of large amounts of data from the past in

combination with modelling of air currents. Computer-assisted model calculations of reality or the future also do mankind a great service in predicting floods or earthquakes and can save many lives. Complex calculations or the representation of three-dimensional planned objects save us human beings several hours of work and thus speed up our work performance. Internet search engines allow us to find specific information that would take us many months to find without technical support. In medicine, AI helps doctors make faster and more accurate diagnoses. Most modern cars are equipped with driver assistance systems that hold the lane or brake if pedestrians suddenly step onto the road. New types of prostheses are also being developed that offer increasingly better solutions when it comes to the loss of body parts.

What dangers does artificial intelligence hold?

Even if the use of AI is based on a positive motivation, some things can go wrong. Despite the rules and limitations imposed on the computer, no one can predict with certainty what insights a computer may come to based on its purely mathematical, limited view and what decisions this may lead to. [See box page 4]

What is Artificial Intelligence?

When performing tasks that a human being could also accomplish, even if it would take significantly more time than the computer, we speak of “**weak AI**”, which performs individual cognitive, human-like tasks, but is limited to solving very specific problems. A weak AI-programme only does the task for which it was designed. For example, it helps us find the route to a destination (route planner), search the entire internet for a keyword (search engine) or recognise human speech and convert it into text (speech recognition).

There are artificial systems that are so powerful that they are constantly learning, which means they not only accumulate information but also learn from their successes and failures. Thus, they can also learn to react in an adapted way to different situations and that there can be several correct answers to a question depending on the context. These characteristics are called “**strong AI**” and the methods used are called “machine learning” or “deep learning”. In contrast to weak AI, strong AI is said to exceed human abilities in various respects. Strong AI has so far been used primarily experimentally in research, robotics and to analyse large amounts of data.

Computing power is developing extremely rapidly, so that soon computers or computer networks could exist, so-called “**artificial super-intelligences**”, which can solve problems that even many humans together are incapable of solving. Super AI is supposed to far surpass human intelligence in all aspects, but so far it only exists in theory.

Every AI is given a goal. Achieving the goal is like a reward for the AI. It tries to optimise its actions more and more in order to achieve this goal faster and more efficiently. In doing so, it theoretically knows no limits. It could act recklessly and cause damage because it does not fully understand the consequences of its actions, or it could even take criminal courses of action as a model if these seem more efficient to it. As long as the AI can be switched off at any time, greater damage can possibly be prevented in such cases. However, scientists seriously question whether AI could come to the conclusion that switching off stands in the way of achieving its goal and would therefore try to prevent humans from switching it off.⁵ Science has not yet found a solution to this problem, which is by no means insignificant.

On the Internet, attempts are often made to attract our attention or convince us to divulge personal data about ourselves by means of advertising or trustworthy-looking news. Often, a mouse click is enough to download and install malware in the background. These criminal attacks on our data and information take on completely new dimensions through the use of AI, because it automatically searches for security gaps in our system, tries out new attack paths and also uses them, for example to crack passwords.

As robots and autonomous technical systems become more and more affordable, the technology is increasingly being used in the military sector and a great deal is being invested in the development of AI-controlled weapons, especially autonomous drones or combat suits with AI support.

We should expect the use of AI to make criminal attacks more and more frequent and more efficient, as it will become easier to attack millions of people at once with little effort, whether to spread misinformation, steal personal data or possessions, damage reputations or harm individuals.⁶

AI applications with computers and the internet

The application of AI on personal computers and the internet is diverse. Chatbots help customers find the right answers quickly or direct them to the right person faster. Search engines help us gather the information we are looking for in a short time. Furthermore, recommendation systems can help us find the right service provider for our request or the right product. Voice assistants can significantly simplify communication with the computer. In writing, auto-correction and spell-checking help us to avoid, recognise and correct errors more quickly, right up to machine translation, through which we can communicate with people who speak a different language. But all these functions also have disadvantages. They are not error-free and can also prevent us from even encountering information that is outside our world view. It may be that things are recommended to us that we are not looking for at all, that we did not even ask for, and if we once enter a term that does not fit into the concept (that the AI has of us), we have to bother with the auto-correction that does not want to accept our spelling. This basically limits our freedom, doesn't increase it.

Therefore, it is important to understand which AI programmes influence us, and one should be able to switch off these functions. However, this is regrettably only possible in very few cases.

The filtered world of the Internet

The motivation of the Internet pioneers in the 1990s was to make knowledge widely and freely available. Industry quickly recognised the huge potential for advertising, and even more importantly, the possibility of collecting huge amounts of data about the behaviour of potential customers.

First of all, the potential customer, in this case the Internet user, was to be kept on the screen as long as possible so that more advertising could be shown to him.

The computer developers found out that the best way to bind someone to the screen is to give them more and more of what they already believe in, or in other words, what they are already interested in anyway.

So they created programmes and algorithms that interpret from our behaviour on the Internet (articles read, websites visited, terms looked up)

Financial Turnover in millions of US dollars

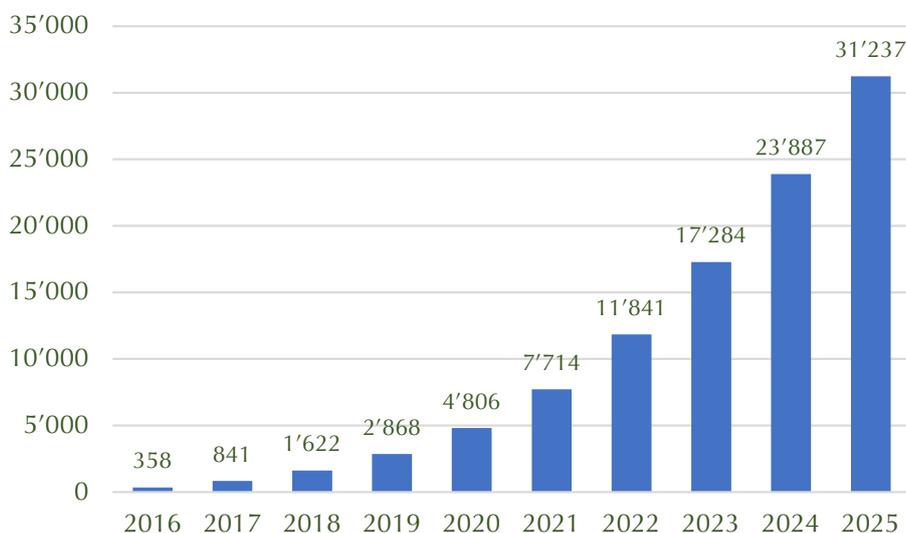


Figure 2: The financial turnover in the field of artificial intelligence is growing rapidly and is expected to double from 2022 to 2024 (Statista 2022).

what we are particularly interested in, what our preferences are or even what our political views are. The programmers wrote algorithms that filter the information for us on the Internet, in search engines and social networks and media in such a way that we only see that side of the truth that we like anyway. Every time we visit the Internet, use search engines like Google, watch videos on Youtube and especially every time we use social media, the information that the user sees is filtered individually for that user. However, the developers have underestimated the power of what they have unleashed on the world.

For the user thus comes to the conclusion that their own view of the truth is the only one that exists at all. It leads to a lack of understanding when you meet fellow human beings who disagree with you because you

assume that they see the same things on the internet as you do. But that is precisely not the case. Everyone reads different information, messages, articles, news, feeds, posts or status updates on the Internet. Everyone sees their own reality, which the algorithms select for them in the background. Thus, fronts harden, people are driven further and further into extreme views and feel more and more confirmed in their views, which not only leads to bubbles of perception, but also bears enormous potential for conflict. Neutral research on a socio-political topic is hardly possible on the Internet today. The algorithm decides what we should see and believe and withholds information from us that would help us see the whole picture, change our perspective, or put ourselves in other people's shoes. We are manipulated and conflicts are stoked.⁷

The ability to deal tolerantly with criticism and other points of view and to question ourselves and our own opinions is thus being trained out of us.

The algorithm, which was originally "only" meant to bind us to the screen for as long as possible, has become a monster that controls consciousness and much of humanity's education. This is already a reality and we have to accept that everyone who regularly searches for information on the Internet has been manipulated for many years. We also have to ask ourselves whether our view of the world really corresponds to reality. Most likely it doesn't.

It is common in business and politics these days to exploit this mechanism and the huge amounts of data on which the system is based (the preferences, interests and views of users).

Failures despite good intentions

Crawler bot war at Wikipedia

Wikipedia uses so-called automated crawler bots which rotate over millions of sub-pages, update links, correct spelling mistakes and clean up false information. The Wiki-crawler-bots sometimes engage in "blood feuds" that last for years. This happens, for example, when two different bots receive contradictory instructions. Then the AI simply goes round in circles and corrects itself again and again – in an endless cycle.⁸ If conflicts between such mini-bots can already cause problems, what happens when AI systems of governments or military institutions clash?

Aggressive Chatbot

In 2016, a Microsoft chatbot suddenly started throwing around radical right-wing and anti-woman slogans.⁹ Admittedly, it was not the bot itself that adopted these slogans, but malicious Internet trolls, i.e. people who made fun of confusing the bot and "feeding" it false information. The chatbot had a similar fate to some users of the young target group: the bot simply hung out with the wrong people and appropriated their views. After 16 hours, Microsoft was forced to shut down the bot.

Faulty stop sign recognition

Small contaminants on stop signs that any human being would recognise immediately as such, caused an autonomous driving system to misclassify a stop sign as a 45 km/h speed limit sign and to ignore the stop and keep driving.¹⁰ This was not a random error, as it occurred in many tests in a row.

Homeless due to computer error

Between 2010 and 2015, 625 customers of Wells Fargo Bank in the USA lost their homes because of a computer error. Their instalment payments were suddenly no longer accepted and the houses were foreclosed. There, the police actually showed up at the front door with an eviction squad and people ended up on the street.¹¹

These examples show: The more complex a problem is, the less reliable AI works. It seems to be able to help us a lot with simple manufacturing processes or data analysis. However, when it comes to problems that require different decisions and weighing of consequences on a case-by-case basis, AI lacks the necessary experience and foresight. A computer can make mistakes just like a human being.

Companies buy the contact data of people who might be interested in their products, just as political parties buy the data of users who fit into their target group. These people then receive direct advertising for the products or the party, or indirectly filtered news, reports and messages designed to drive their views and opinions further in the desired direction. The (gentle) leading of a group towards a targeted opinion or decision is called “nudging” and has been used in advertising and political communication for decades. Accounts exist of so-called “bots” – computer programmes that create user profiles and pretend to be a human being – send trust-inspiring messages to manipulate real people. Probably the best-studied case of mass political manipulation by bots to date is the 2016 Brexit vote in the U.K. Shortly before the election, 13.493 verified bot accounts were active on Twitter alone, automatically manipulating users with extreme and emotional information.¹² Social bots that share and amplify certain topics can even be hired cheaply on the net. When using “like”-generators, for example, a “like” only costs around one cent. A rental botnet that spreads whatever the client wants for three days costs 500 to 600 euros.¹³

We have to get rid of the idea that there is a human being behind every single tweet, post or like.

The information used does not necessarily have to be true. The tip of the iceberg is fake news, intended solely to influence people by using lies to ridicule the other side or spark outrage and anger. AI helps to make the news even more credible to the point that there is little chance of unmasking it as fake news.

Other malicious uses of AI on the Internet

Other dangers of AI lurk on the Internet.¹⁴ The data collected, used to manipulate us as described above, can also be used to create trustworthy messages or websites from com-

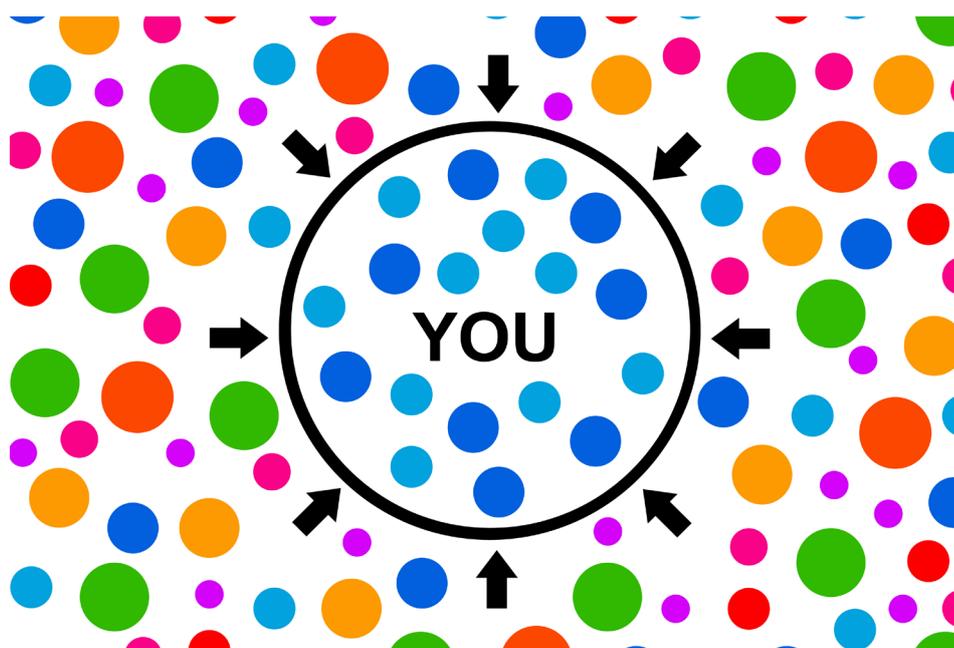


Figure 3: Due to the algorithms on the Internet and in social media, the information is filtered individually for each person and they only see a part of all the information – you are in the filter bubble!

panies that do not exist, to infect our digital devices with viruses or malware. Hackers can make use of AI in cracking passwords to exploit personal information. Here is a hint:

“The AI already knows you better than a work colleague after an average of 10 likes (positive ratings for videos, pictures or comments), as well as one of your friends at around 70 likes and even better than your spouse at over 300 likes.”
(Prof. G. Szepannek, Stralsund University of Applied Sciences)

And now comes the frightening part: At around 18 years of age today, we have already left behind 70.000 data points without ever having given our consent for data storage.¹⁵ AI can be used to automatically find targets for crimes to which you are particularly vulnerable or where the chance of the crime succeeding is very high, e.g. by identifying personal wealth, what form it is in and whether there is a willingness to pay ransom – all determined based on behaviour on the Internet. Fake news can be easily and quickly produced with realistic-looking but manipulated videos and sound recordings, creating

statements from people who never made them. AI enables facial recognition of people and can thus recognise people’s whereabouts by analysing images and videos and collect further sensitive and personal data about us. Cyrus A. Parsa¹⁶, an expert in the field of AI and robotics, found that the Chinese military, through economic connections and control over private companies, has already stored biometric data, including facial features, of over 6 billion people in various countries. Chinese components are used in surveillance cameras and radio stations worldwide, most notably HUAWEI’s 5G transmitters. This means that China is already able to identify and collect even more data on two-thirds of all mankind worldwide through surveillance systems. What would stop other nations from doing the same?

It is important to be aware of the dangers of the Internet and to realise that the world of the Internet is not real.

You should only use the Internet selectively and very deliberately to find the information you want, and then leave it as soon as possible and deal with the real world.

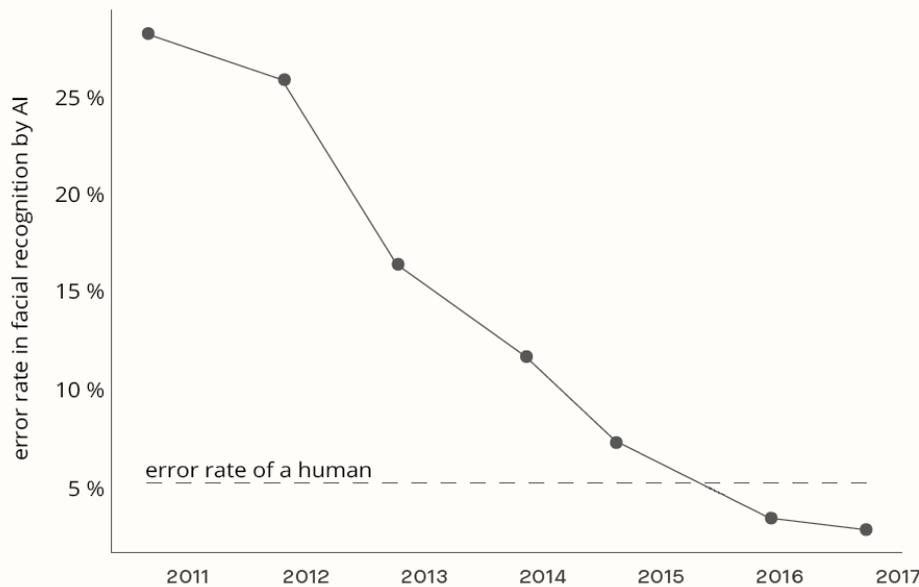


Figure 4: The error rate in facial recognition by AI is becoming smaller and smaller and now even exceeds the performance of humans (5%). While in the year of 2011 there were still around 28% errors, in 2017 it was only 2%.¹⁴

Robotics and autonomous weapons

From talking coffee machine to sex partner

AI also enables the autonomous control of robots. Robots no longer have to be controlled by human beings, but decide for themselves how to move in their environment and interact with it, depending on the instructions they receive. Robots have long been used in industry for difficult or dangerous work. But they are also already used in public, for leisure activities or in the home, think for example of voice assistants such as “Siri” or “Alexa” and self-driving vacuum cleaners and lawn mowers. The use of robots as butlers in the home is also becoming increasingly popular. In Japan, robots are already being used to care for the elderly, mostly as assistants for very specific tasks, as cuddly toys or as partners for games. Meanwhile, you can even buy sex robots¹⁷ with AI for a few thousand dollars. Socially-interactive robots are trained to behave empathically so that they appear more human.¹⁸ Can robots replace human interactions and reactions or even human

affection? As mentioned earlier, robots have no feelings and no real understanding of human morals and ethics. At most, they can be trained to copy human behaviour without understanding it. AI may also be able to conclude through its experience that the existence of an individual is valuable because everyone can contribute to solving problems. (But it may just as well come to the opposite conclusion.) However, this does not yet create a real sense of community. A genuine response to another’s emotion, where the emotions and the vibrations of the heart align and communicate through resonance¹⁹, cannot be imitated with technical aids and can never replace human closeness and affection.



Figure 5: Robot use in a heavy industry production line.

Autonomous weapons systems

Especially in the military sector, rapid development of AI and robotic applications can be observed nowadays. One example of this is the short film “Slaughterbots”²⁰, which are small, autonomous flying drones that are each equipped with an explosive charge to kill their target. The drones find their target and the way to it autonomously by analysing the target’s personal data and traces on the Internet and using facial recognition. They blast their way to the target if necessary. How is one supposed to defend oneself against such an overpowering enemy that knows no mercy and no compassion?

At present, a fighter plane costs about \$100 million. The price of a weaponised drone is only about \$1000, and the costs will be coming down in the future. This means that instead of one fighter plane, 1 million drones can be built.²¹ There is a danger of a military arms race, as we last experienced in the Cold War with nuclear weapons.

Autonomous weapons are illegal and violate human rights

The usage of AI as a weapon leads to many legal and ethical issues. A technical weapon system does not have human judgement, it has no compassion and has no concept of mercy. International Human Rights law states that any warlike attack must distinguish between enemies and civilians and must never be directed against civilians or objects of civilians. AI cannot make this distinction without human assistance. Many scientists agree that AI – especially if it searches independently for and eliminates targets – will never be able to understand and apply human rights even with rapid technological advancement.

According to Article 36 of Additional Protocol 1 to the Geneva Convention, weapons must be examined to determine whether they violate the Geneva Convention, human rights and international law before they are introduced. This article also applies

to autonomous weapons systems. However, the verification of new weapon systems also raises many new questions. Who should test and approve them? According to which standards should they be tested? How should an artificial system be tested that is learning constantly, developing and changing? So far, there are no standards or rules for this verification. It simply does not exist in reality. The call for separate laws and rules for robots and for warfare with AI is getting louder and louder. However, one has to ask whether laws can provide a solution here in any form at all.²²

Prof. Peter Asaro writes on behalf of the International Red Cross:

“It doesn’t matter how good LAWS get; it is a moral requirement that only a human should initiate lethal force, and it is simply morally wrong to delegate life or death decisions to machines.”²³

Who feels responsible for a launched autonomous weapon and who should ultimately be held responsible for war crimes committed by autonomous weapons – the officer, the programmer, the manufacturer, the person who launched the weapon or who monitored the system? When you sit in a bunker far away from the theatre of war, where you take no risk yourself with a combat action that is nothing more than pressing a button, where you no longer have a personal connection to the target and can hide behind the anonymity of the Internet, war only seems like a computer game and it is expected that this will lower the inhibition threshold for the preparedness of an act of war.

In an open letter from July 2015 by the Future of Life Institute, which has so far been signed by 4,502 AI and robotics researchers and 26,215 other supporters, AI and robotics researchers take a stand on the issue of autonomous weapons²⁴. Among other things, they write:

“Just as most chemists and biologists have no interest in building chemical or biological weapons, most AI researchers have no interest in building AI weapons [...]. Starting a military AI arms race is a bad idea, and should be prevented by a ban on offensive autonomous weapons beyond meaningful human control.”

We join this demand.

Healthcare and Medicine

AI can be extremely useful in medicine. It is already being used to make the right diagnosis for diseases that are difficult to recognise. For this, large quantities of scientific articles and databases are searched for the specific combination of symptoms within a few minutes. A doctor would need several weeks for this. In surgeries, too, machines are now helping to make precise incisions to minimise the possibility of injury during a surgical procedure. Some AI researchers and physicians are therefore asking themselves whether a human doctor will be needed at all in the future?²⁵ In the doctor’s

favour are his or her abilities of intuition and sensory perception in communicating and treating patients and his decades of experience in dealing with people as well as his emotional and mental impact on the patient. These skills are as important for treatment as pure expertise, but cannot be learned by the computer.²⁶

With the help of small microchips implanted in the body, everyday tasks could be simplified. They can be used to open bicycle locks automatically, office lockers or front doors when we approach them. You can store your personal data or payment information on it or use the chip as a ticket for public transport or as an admission ticket to the gym. Moreover, there are numerous technical sensors and aids that are not implanted in the body but can be worn outside of it – so-called “wearables” – that are designed to give us advantages and connect us with each other. These include, for example, bracelets, skin patches or textiles with sensors that can record information about heart activity, blood pressure, body fat, breathing, sleep patterns, eating habits and even our mood and transmit it to the doctor or health insurer. They would be able to



Figure 6: The use of artificial intelligence in medicine opens up unimagined new possibilities. But can computers really understand and heal the human body better than a human doctor?

use this data to detect illnesses earlier, write prescriptions automatically for us, react more quickly in emergencies or give us direct feedback for a healthier lifestyle. AI systems are

enabling ever more sophisticated implants. In medical technology, engineers are working on smart pills with microcameras that can then be used to perform colonoscopies.

Can man be improved?

In the field of medical prostheses, there are useful advancements such as brain-controlled prosthetic hands; blind people could once again perceive their surroundings with sensors connected to their brain. As long as these prostheses are used to help people compensate for a disadvantage or the loss of a body part, they can make perfect sense. Yet new types of prostheses, implants and brain interfaces are being promoted under the keywords “human enhancement”, “cyborgisation” or “transhumanism” as being more powerful than the human body with the help of AI. People would soon be able to see better, think faster and live longer, perhaps even become immortal. With an exoskeleton, a kind of support corset, people would be able to walk faster and lift heavier weights. Contact lenses that function like data glasses are designed to show us information from the Internet about the objects or people we are looking at. The upgrading and improvement of man is not only to take place with technical prostheses and AI, but also through changes in human DNA. It should be possible to make muscles grow stronger by changing the DNA, to make the skin glow in the dark or to produce biological nanobots that fight viruses in the blood. Man would become a cyborg, a hybrid being, half human, half machine.

The researchers are interested particularly in the brain. Neuronal interfaces between brain and computer are to be developed so that human intelligence can merge with AI. People would be able to control technical devices by means of telepathy, i.e. with their thoughts, and receive information from them. In February 2021, the company Neuralink published a video in which a monkey can be seen playing the computer game “Pong” by means of a chip in its brain.³⁰ In February 2022, it came out that 15 of the 23 monkeys, which had been implanted with a brain chip, had died.³¹ Now the company Neuralink has to

EU moratorium: Artificial intelligence violates human rights

In September 2021, the United Nations Office for Human Rights called for a moratorium on certain AI-related technologies. The report analyses the ways in which AI can affect human rights, including privacy, health and education, and freedom of movement, speech and assembly.²⁷

“AI technologies can have negative, even catastrophic, effects”, ...” warns Michelle Bachelet, UN High Commissioner for Human Rights. She urges states to ban altogether or strictly regulate the use of those technologies that pose the greatest risks. Particularly criticised is the use of AI for the purpose of facial recognition, remote surveillance and decision-making. The latter means, for example, the use of AI to assess job seekers, detect social welfare fraud or predict criminal behaviour.

“Artificial intelligence now reaches into almost every corner of our physical and mental lives and even emotional states. AI systems are used to determine who gets public services, to decide who has a chance to be recruited for a job, and of course they affect what information people see and can share online.”²⁸

Although the report does not mention any countries by name, the content of the moratorium is very much aimed at the way AI is being used in China: facial recognition technologies for surveillance have already been introduced there, as well as various social scoring systems being tested. This social credit system is an attempt at total control of the population by awarding points for desirable behaviour. Those who – according to the government – do not behave “honestly” and lose points, have to reckon with fewer career opportunities, higher taxes, poorer educational opportunities for their own children, limited access to public transport or a choked Internet connection.²⁹



Figure 7: Automatic facial recognition makes it possible to collect personal data on each person's behaviour and movement patterns.

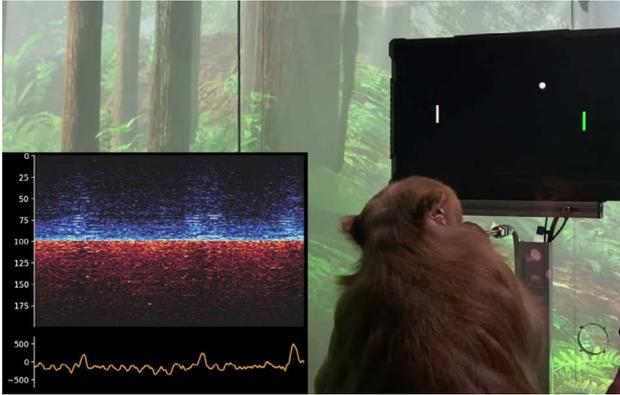


Figure 8: Using a chip implanted in his brain by the company Neuralink in April 2021 29th, this monkey plays a computer game controlled by his brainwaves.

answer for this in court. Despite this suffering and the obvious failures, Elon Musk has spoken of wanting to carry out the experiments on people as well. In addition to the company Neuralink, teams at Facebook and Google are also working on interfaces between the brain and machines. But what happens to human beings when their organs and extremities are replaced by prostheses, their brains are networked with computers and databases and their activities are fed into databases and the Internet around the clock?

The more intelligent the prostheses and microchips we are connected to become, the less intelligent we become because we rely on them and basic bodily functions and independent problem solving are no longer trained.

We would become a networked body that was always online. However all these interconnected devices leave data traces on the Internet that can be read and possibly allow conclusions about identity. Smartphone data can already be used to determine quite precisely where a person is or has been. All the wearables and implants controlled by computers can be hacked and we can thus be influenced or even controlled against our will. The benefits of the apparent advantages are nil, because the risk of abuse far outweighs them.

The cyborg idea also implies that people voluntarily have parts of their bodies amputated in order to have a powerful prosthesis implanted, thanks to which they have advantages over other people. Mutilating the human body out of the motivation of wanting to be better than one's fellow human beings is a selfish and perverse idea.

An implant is a foreign body and every intervention carries health risks such as inflammation, encapsulation or degenerative growths.³² Where is the gratitude for our physical body, which fulfils all functions for us so that we can lead a healthy life and develop spiritually? Man is not only his body. He is a spiritual being possessing a physical body and we are already perfectly equipped for this life with our body. Any technical change in our abilities so does not take us self further in our spiritual development.

with the help of AI and to communicate with other computers and machines, they must be connected to them by radio, at least by means of the fifth generation of mobile communications 5G, in order to be able to transport the huge amounts of data required.

Implanting a permanent radio transmitter in the head or another part of the body will lead to illness in the long run, because the cells are disturbed in their metabolism and communication by the radiation even at values far below the applicable threshold.³³

Any computer system connected to the Internet is at risk from viruses, malware and hacker attacks. In addition, private data can be collected from us and we can be spied on.³⁴ Human enhancement thus poses a threat to data protection, privacy, security and human health. It undermines human dignity and takes us far away from our very purpose for being to develop spiritually in the real world, to make decisions and to learn independently.

Eventually 5G is needed for AI systems to work optimally. And not just in cities, but on every single square metre of this planet, so that AI doesn't suddenly abandon us

5G or How to create a need

In order for computers and computer chips to realise their full potential

Figure 9: The World Foundation for Natural Science has long reported on the effects of mobile phone radiation and other radio systems on human health and all life. Read more on our website, please.³²

while on holiday on a remote island or in the tropical rainforest. The supply, or rather the irradiation, of the entire planet with 5G (and later perhaps with 6G, 7G, etc.) is to be established with the help of thousands of 5G satellites.³⁵ By pushing ahead with digitalisation through political pressure, by building more and more technical devices with the possibility of networking via radio, and by suggesting to people that they need this technology to make life easier and to be able to keep up with economic demands, a need is created artificially that does not actually exist. The demand created artificially is then cited as justification for expanding the 5G network.

We don't need 5G. We don't need digitalisation in all areas of life. We don't need pervasive robots or AI. It is not real. Nature provides us with everything we need on this planet to live a happy and fulfilled life and to evolve spiritually. What we need is a real life in exchange with other people and nature.

How do you want to live?

So if you look at the technical development of AI, robotics, autonomous driving cars, our means of communication and the Internet of Things, we are facing almost unimaginable possibilities. In just a few years, we could already find ourselves in a world where we no longer have to leave the house because we only work from the home office, food is delivered by drones and our dates with friends take place via video telephony or holograms. A world where there is no longer any need to learn to drive because our cars can drive themselves. A world in which technology with AI and robots takes almost all our tasks away from us.

Wouldn't that mean more freedom for us? Would this be a more fulfilling life, as the time saved would finally allow us to fully engage with the things that make us happy? What would you do with the extra time? How do you want to live? Do



Figure 10: To keep our brains fit, we need to exercise them regularly. AI can't do that for us.

you know what really makes you happy?

Doesn't it make us happy to exchange ideas with friends and family face to face in personal conversations, to share experiences and learn from one another? Doesn't it make us happy to exercise (together) in nature or to do sports? Doesn't it make us happy to face new challenges again and again, to look for solutions and to put them into practice on our own?

What could you teach your children and grandchildren in a world dominated and controlled by technology, in which everyday things like keeping order, cooking, planning ahead, taking responsibility, orienting yourself in a foreign environment or solving problems independently are no longer necessary because they are done for us by AI and robots? Wouldn't it be terribly boring if all decisions and tasks were taken from us by AI and done immediately?

AI can become a problem especially if we assume that it will not make any mistakes and we trust it blindly. AI can also make mistakes, as you have seen in this Fact Sheet. So before you trust an AI, ask yourself the following questions:

Would you trust a chef who can't taste his dishes? Would you trust a dentist who has no teeth? Would you trust a driving instructor who has never been behind the wheel? If you answer no to these questions, then you should not trust an AI either.

An "intelligence" that has no feelings, knows no ethics or morals, and has no experience with the realities of life should not make decisions in the real world.

AI may offer us many advantages and opportunities and make life easier, but it also brings many disadvantages and dangers. We must be aware that AI is already being misused for criminal purposes, especially on the internet and social media. Under no circumstances should our society, economy and social interactions be made dependent on or controlled by a tool like AI.

It is not about spreading fear through these remarks. It is about ensuring safety in the use of these new technical possibilities in order to avoid harm and so that we do not have to learn from our mistakes afterwards.

AI should be seen and treated as the tool that it is. It is a tool that helps us solve problems and accomplish

tasks. In doing so, the tool must be controlled by the user and it must never be able to influence or control the user. It is now our responsibility to use this tool wisely and to build in safety mechanisms to shape technological developments for the benefit of all and to deal responsibly with new technologies. Such safety mechanisms and regulations need to be discussed and implemented before the applications have already come into play in practice. [Read on the last cover page what such responsible handling of AI could look like].

We have to decide how we want to live. How much do we want to be supported by AI and technical aids and make ourselves dependent on them?

In which areas do we use technical aids because we really need help and have to accomplish a lot, and in which areas do we let ourselves be helped because we are too lazy to do it ourselves?

In which areas of life would help from AI lead to us no longer performing and exercising basic activities that are important for our mental and physical health or development? In which areas of life does the use of AI lead to me isolating myself from the real world, having less real social contact, making fewer and fewer decisions of my own and relinquishing responsibility for my life, my health and my actions bit by bit?

Try to remind yourself more often of appointments, list contents or foreign words, or to find the route to your destination yourself instead of immediately reaching for your smartphone. And be patient with yourself. This is the only way to train your brain and keep it fit. Take responsibility for your life and your environment and face new tasks and challenges knowing that you can solve and manage them yourself (perhaps with a little practice, effort and training). Only in this way will you learn, become stronger, more experienced and wiser, and find out what is really inside you in terms of potential and abilities, and

More applications of artificial intelligence

In addition to the applications already mentioned, research is being conducted into the following other possible uses for AI.

Smart Cities and Smart Homes

Technical devices and computers would all be interconnected with each other (especially through 5G), exchange information and be able to be controlled. In this way, it would be possible to operate devices such as the heating, washing machine or coffee machine in one's home (smart home) from a distance, and the refrigerator would be able to order food on its own when it is running low. In the larger network of the Smart City, the entire city, every building, every lamp, every dustbin and every car is to be networked with each other in order to improve the necessary processes, e.g. in transport, waste disposal or necessary repairs.

Smart Farming

The use of computer-controlled and monitored agricultural machinery and drones is expected to make farming more automated and efficient. The need for pesticides and fertilisers, for example, could be determined by flying drones. The pesticides would then be applied precisely and thus it should be possible to react more accurately and quickly to the needs of the plants.

Exploring space

Since robots do not need oxygen and can withstand high temperatures, they can endure the difficult conditions on other planets. However, remote control through the vastness of space is difficult. Therefore, the robots are to use AI to make independent decisions when exploring and searching for raw materials on asteroids or other planets. They should even be able to build their own manufacturing plants on other planets, which send out further robots to penetrate even deeper into unexplored space.

what is most important: Only in this way will you learn to trust yourself and life and remain lord or lady and master of your own life.

Sources

- 1 Myers, David G. (2014): Psychologie, Springer, Berlin, ISBN 978-3-642-40781-9
- 2 Julia, Luc (2020): There is no such thing as artificial intelligence, FIRST, ISBN 978-2412059111
- 3 Bonin, Gabriela (2020): Künstliche Intelligenz gibt es eigentlich nicht, Interview with Ladan Pooyan-Weihs, Hochschule Luzern, Accessed: 15.10.2021, <https://hub.hslu.ch/informatik/kunstliche-intelligenz-gibt-es-nicht-wichtig-ist-digitale-ethik/>
- 4 The Holberton-Turing Oath, Accessed: 15.10.2021, <https://www.holbertonturingoath.org/>
- 5 Wolchover, Natalie (2020): Artificial Intelligence Will Do What We Ask. That's a Problem, Quanta Magazine, 30.01.2020
- 6 Stone, P., Brooks, R., Brynjolfsson, E., Calo, R., Etzioni, O., Hager, G., ... & Teller, A. (2016): Artificial intelligence and life in

2030: The one hundred year study on artificial intelligence.

7 Brady, W. J., McLoughlin, K. L., Doan, T. N., & Crockett, M. (2021): How social learning amplifies moral outrage expression in online social networks, Science Advances, Vol 7, Issue 33

8 Tsvetkova M., García-Gavilanes R., Floridi L., Yasserli T. (2017): Even good bots fight: The case of Wikipedia, PLoS ONE 12(2): e0171774

9 Graff, Bernd (2016,): Rassistischer Chat-Roboter: Mit falschen Werten bombardiert, Süddeutsche Zeitung, 03.06.2016

10 Isaac, M. & D. Wakabayashi (2017): A Lawsuit Against Uber Highlights the Rush to Conquer Driverless Cars, New York Times, 24.02.2017

11 Mansholt, Malte (2018): Eine Bank hat einen Computerfehler – und über 400 Kunden verlieren ihr Zuhause, STERN, 06.08.2018

12 Bastos, M. T., & Mercea, D. (2019): The Brexit botnet and user-generated hyperpartisan news, Social science computer review, 37(1), 38-54

13 Wolfangel, Eva (2020): Fake News und Bots – Die Cyborg-Accounts kommen, Spektrum, week 27/2020

14 Brundage, M., Avin, S., Clark, J., Toner, H., Eckersley, P., Garfinkel, B. et al. (2018): The malicious use of artificial intelligence: Forecasting, prevention, and mitigation, arXiv preprint:1802.07228

15 Hochschule Stralsund (2020): Professor Szepannek im Interview zu Künstlicher Intelligenz und Social Media, Accessed: 13.02.2022, <https://www.hochschule-stralsund.de/en/host/aktuelles/news/detail/nach-nur-10-likes-kennt-dich-die-ki-besserals-dein-arbeitskollege-78277/>

16 Parsa, C. A. (2019): Artificial Intelligence – Dangers to Humanity, The AI Organization

17 Shenzhen All Intelligent Technology Co. (2021): Humanoid Sex Robot, Accessed: 13.02.2022, <https://sexrobot.en.alibaba.com/>

18 Bendel, O. (2018): Pflegeroboter, Springer Gabler

19 Morris, S. M. (2010): Achieving collective coherence: Group effects on heart rate variability coherence and heart rhythm synchronization, *Alternative Therapies in Health and Medicine*, 16(4), 62–72

20 Stuart Russel (2017): Slaughterbots – bots against humans, Accessed: 01.02.2021, <https://www.youtube.com/watch?v=9CO6M2HsoIA>

21 EPRS (2020): The ethics of artificial intelligence: Issues and initiatives, European Parliamentary Research Service (EPRS), Panel for the Future of Science and Technology, Scientific Foresight Unit (STOA), PE 634.452, March 2020

22 Kayser, Daan & Stepan Denk (2017): Keeping Control – European positions on lethal autonomous weapon systems, Pax for peace (PAX), October 2017

23 Asaro, P. (2012): On Banning Autonomous Weapon Systems: Human Rights, Automation, and the Dehumanization of Lethal Decision-Making, *International Review of the Red Cross*, 94 (886), 687-703

24 Future of Life Institute (2015): Autonomous Weapons: an Open Letter from AI & Robotics Researchers, Accessed: 13.02.2022, <https://futureoflife.org/open-letter-on-autonomous-weapons-german/>

25 Budd, Kenn (2019): Will artificial intelligence replace doctors? Article on AAMC – Association of American Medical Colleges, Accessed: 09.07.2019, <https://www.aamc.org/news-insights/will-artificial-intelligence-replace-doctors>

26 Sawa, Takamitsu (2018): Why AI won't replace doctors yet, Accessed: 16.08.2018, *The Japan Times*, <https://www.japantimes.co.jp/opinion/2018/08/16/commentary/japan-commentary/ai-wont-replace-doctors-yet/>

27 United Nations High Commissioner for Human Rights (2021): Report of the UN HCHR: The right to privacy in the digital age, A/HRC/48/31, 13.09.2021

28 Deutsche Welle (2021): UN: Künstliche Intelligenz wird zur Gefahr, Accessed: 15.10.2021, <https://www.dw.com/de/un->

[k%C3%BCnstliche-intelligenz-wird-zur-gefahr/a-59194502](https://www.dw.com/de/un-k%C3%BCnstliche-intelligenz-wird-zur-gefahr/a-59194502)

29 Giesen, Christoph (2019): Ein ganzes Land als Testgelände, *Süddeutsche Zeitung*, 01.11.2019

30 Reuters (2021): Elon Musk's Neuralink shows monkey with brain-chip playing videogame by thinking, 09.04.2021, Accessed: 13.02.2022, <https://www.reuters.com/technology/elon-musks-neuralink-shows-monkey-with-brain-chip-playing-videogame-by-thinking-2021-04-09/>

31 *The Economic Times* (2022): Elon Musk's Neuralink brain chip tests kills 15 monkeys out of 23, company accused of causing 'extreme suffering', says report, *The Economic Times*, 16.02.2022

32 Höffe, O. (2018): Ethik: Eine Einführung. C. H. Beck, München

33 Pall, Martin L (2018): 5G: Great risk for EU, U.S. and International Health! Compelling Evidence for Eight Distinct Types of Great Harm Caused by Electromagnetic Field (EMF) Exposures and the Mechanism that Causes Them, 17.06.2018

34 Bendel, O. (2020): Überlegungen zu Bio- und Bodyhacking, *HMD* 57, 480–492, 2020

35 The World Foundation for Natural Science (2022): Auswirkungen und Schädigung von Mikrowellen und Mobilfunk, Accessed: 13.02.2022, <https://www.naturalscience.org/de/themen/mikrowellen/auswirkungen-und-schaedigung/>

Demands for safe application of artificial intelligence

- AI must not make decisions for us. AI decisions affecting our lives must always be approved by a human being first.
- AI must not manipulate or deceive us, must be recognisable as AI at all times and must never pretend to be a human, for example as a chat partner or telephone caller.
- The use of AI must not be misused for criminal and military purposes.
- Information on the risks and dangers of prostheses and implants controlled by AI and networked by radio technologies or the merging of the human brain with computers (applications currently referred to as transhumanism, among others) must be made freely available to everyone in an understandable form. Transhumanism must not be advertised or used for commercial purposes. These risks and dangers include at least the medical effects of physical intervention, effects of wireless radiation, influence of AI on one's own behaviour and decisions, possible errors of AI, security gaps in data protection, possibility of external control through hacking and psychological effects.
- The use of AI must not be forced on anyone. This applies in particular to all applications that affect the human body or the human psyche or mind.
- Anyone who rejects the use of AI must not suffer any disadvantage as a result.

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Susanne Bellotto

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Dr. rer. nat. Sebastian L. Hausmann-Z'graggen

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Address for orders

The World Foundation for Natural Science
European Headquarters
Postfach 7995
CH-6000 Luzern 7, Schweiz
Tel. +41(41)798-0398
Fax: +41(41)798-0399
E-Mail: EU-HQ@NaturalScience.org
www.NaturalScience.org

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