

Digital Twin Manifesto

A digital twin functions for the benefit of the complete human entity it represents a part of.

One digital twin is only connected to one physical person and vice versa.

Every Digital Twin shall represent a neutrally balanced data selection containing a combination of all collectible perspectives, believes, or opinions.

A Digital Twin secures our privacy, but leaves traces if there is a legitimate reason in order to allow a transparent and fair jurisdiction for all.

No Digital Twin can operate independently, but it can enrich a human's performance as an assistant.

Every Digital Twin is initially equal in design and performance and therefore none is superior. Differences can only develop from the influence of nurture.

The service of a Digital Twin must be offered by a non profit organisation in order to allow everyone equal access to a Digital Twin.

PURPOSE

A digital twin functions for the benefit of the complete human entity it represents a part of.

Everywhere we interact we leave traces, traces that in the past were hard to follow. Footsteps in the sand are gone with the wind but the marks we create in modern society are far less obvious to us while they remain visible to others for much longer. We are going around in the digital environment, supplying parties with information that we are not aware of ourselves. We can debate about the danger of these parties collecting our data. Some might be less anxious about their power to improve their service and advertisement. It can be considered beneficial to be presented a personalised world. However, the actual dangers of these traces are far beyond our expectation. If companies preserve their knowledge about us, we are not so likely to get harmed. Once our non-erasable actions reach our social environment, they can create a destructive backlash. In the past there was the ability to escape communal degradation, start over again, escape our past. We could build up a new life in a new social culture. Nowadays, with our merging social cultures due to globalization and technology that empowers us to translate cultural differences, our main savior is a private history. Being able to learn and develop from your acts is a major human principle and we deserve a nature principle that restructures our steps in the sand behind us.

In order to do so we initiate to bundle our digital identity. In this manifesto we propose the Digital Twin as a tool for us humans to take ownership of what we put out there. We present ourselves with many different faces online. Every other platform serves another task, ranging from social to more practical needs. In fact this online environment adds a whole new practice to our lives. We are taking care of our online image. Our dad may feel more attracted to drive the boulevard in a Ferrari but our generation might question the importance if it's not on snapchat. "Pics or it didn't happen" right? Where do we actually live? Are we merely performing acts in the physical world to create content for the digital? If this is an expansion or relocation we can't say but there is definitely a shift of our central perspective.

A similar shift is occurring in our memory and knowledge. Education is adapting towards self directed learning, performing research, and judging knowledge rather than simply internalising it. We have continuous access to knowledge supply so there is no need to

remember it. There is only a need to recall how we found or stored the information. The brain is following this trend and receives much less training in memory. We are externalising our memory to the digital realm as well. We use our navigation memory to relocate pictures and post of the past.

So if very personal and previously internalised acts are translated to the digital, why do we confide them to a vast field of different services? What used to be a strong part of our internal identity, is now shattered all over the web. It is therefore that our Digital Twin allows us to continue to evolve a more digital identity but simultaneously it provides a digital body to contain our tasks. A Digital Twin is in that way a digital limb, part of our body schema and body image allowing us to take full possession of our identity.

CONNECTION

One digital twin is only connected to one physical person.

The human being is a very adaptive creature. We find ourselves in many situations adapting to different behavioural frameworks. At work, we access a different language usage than we do with our friends because some terminology might not be appropriate for both situations. Then think of how we commute differently among friends, one has a very different idea of who you are than another. In the digital environment we expanded this habit. We have different socials for different faces and different relatives. Different from the physical, these platforms might be separate, but they all present the same identity. Others can still recognise us by a set of unique characteristics on our profiles.

For our Digital Twin this is the same. The DT represents us in the digital world, so it must have different appearances and different behaviour. However, because the digital twin is acting according to our values and initiatives the results will be recognised as ours. Imagine a friend interacting with our digital assistant to make an appointment; he or she will experience our response time, our other interfering appointments, and the unique behaviour of our DT according to our settings. Because our Digital Twin is functioning for the benefit of the complete human entity it represents a part of, it cannot express characteristics other than the human has decided upon. Consequently, there can be as many Twins we like but to the outside world they all represent a different interaction with the same identity, us.

In an attempt to bring together, the shattered self we have created in the digital, we propose this holistic Digital Twin. But from a more concrete perspective, the Digital Twin is combining the different services we use. It comprehends our behaviour in the digital to one central point of interaction. Here we find an overview of our data, activity, and the collection of data by all our sensors. The Twin can be accessed by many interfaces like our phone, computer, or future interactions like Alexa or Google Glass offer; but all direct us to an application where we have all functionalities together. Within the Digital Twin the user can access all the different representations of the self. It is therefore that, just as the outside world, the user will experience one Digital Twin.

EDUCATION

Every Digital Twin shall represent a neutrally balanced data selection containing a combination of all collectible perspectives, believes, or opinions.

The first line of this manifesto states how the human is centred in this human and digital twin relationship. We state that the digital twin is an extension of the self into the digital presence. So, there is no sense of autonomy for the DT, neither can it be considered a separate entity. The key concept of this manifest is that the digital twin is solely a tool. Humans take a central position in the decision-making process.

History shows us that it is only since the increase of connectivity and globalism that our opinions became this flexible. Men used to be born and inherit a set of values and opinions from the family. Political preferences were related to differences in religion and ideologies. In western European countries like the Netherlands and Belgium this was called pillarization. Work and leisure activities or preference for literature and media were often marked by pillarization. Although circumstances changed, people showed lifelong loyalty in their democratic votes.

On the contrary, we have become more influenceable than ever before. There is no more delay between the act and media response. Within seconds after an event, the first reactions will follow. Just minutes and the established media will add a more profound perspective. Leaders make great use of this new mechanic. Where the debate in politics used to be about representing the party's ideology, it has become more important to outperform the opponent and generate viral media. On the other hand, the public is exposed to vast amounts of information. Instead of relying on an internal set of values and ideologies that our past generations developed in their upbringing, we are more prone to linger towards an impression or collective opinion. In that sense we have externalised our opinion.

Our goal with the Digital Twin is to internalise this control again. That means not only the control over data, but also active decision making. We are responsible for our acts; hence we are responsible for the acts of our digital twin. But if we have externalised our data filtering to the Digital Twin, how can we take responsibility for the choices we make

upon that data? If we determine the actions of our DT but we base our decisions on the feed they present to us, who controls whom? That is why the Digital Twin must always function as a balanced filter. It is then up to the human to create an opinion and act upon that.

Can a Digital Twin then check our perspectives? Sure, yes it can. Why not receive feedback on the personal state of opinion. The DT can frame your perspective in comparison to others, this enhances self-awareness. This does not make the DT autonomous because it is only functioning as a mirror. The Digital Twin is already monitoring our behaviour and health according to sensory input. Monitoring our perspective could be a new way of feedback improving self-awareness.

SECURITY

A Digital Twin secures our privacy but leaves traces if there is a legitimate reason, to allow a transparent and fair jurisdiction for all.

As we stressed in the introduction, the possession of data is a central idea of the Digital Twin. It is very difficult to contain and save all our information because we can encrypt the information. Encrypted information is not invisible but just cannot be read. The Digital Twin then controls who can read what information about you. It can provide other DTs with the right key to interpret the data. This is like a place where many languages are spoken in the same area. One can understand what is being said if he or she understands the language. However, the stream of information is open and visible to everyone. A different example is the Thor network. This is an internet system where everyone is encrypted, hence no one can be recognized. We do not intend to make people invisible. The goal is to have access to privacy and safeguard our information.

We may say we have nothing to hide because we have clean consciences, but many people would not allow you access to their passwords. Even if it were only just to have a look. This is because it is an invasion to our privacy. We need to trust people before we share sensitive information with them. The Digital Twin functions as a filter to protect our data. While the user is online, the DT monitors the privacy and when it exceeds preset limits it will notify. Although we cannot keep companies from asking for our information, we can at least make it our decision.

Another aspect of privacy entails privacy towards government. What is a person if a threat to the safety of society? Although our privacy is important, there must be exceptions for the general good. But if the government is able to intrude our personal data they can use it to monitor our behaviour in advance. An example of such a mass surveillance system is the Social Credit System, currently being introduced in China. But from research we know that in these circumstances, when one was aware of being watched, behaviour changes drastically. In order to secure our dignity, autonomy, and freedom; we need to maintain our privacy.

Our Digital Twin frees us from the notion that what we say or do might be forever in our records. In order to surveill our digital self, the government needs a digital search warrant. Secondly, their search will leave traces that can exactly reconstruct their actions. Both parties have proof of the incident. The suspect can ask for the legitimacy of the motivation. If the government is unable to justify their actions, they can be sued too. In this way, the Digital Twin provides privacy by creating transparency in a process that becomes fair to both.

WORK

No Digital Twin can operate independently, but it can enrich a human's performance as an assistant.

A Digital Twin its main purpose is to support its human counterpart. Being a digital extension of a human being, it can definitely perform certain tasks autonomously, but it cannot initiate action. While performing these tasks it is operating for the benefit of the total human it represents a part of. The DT empowers the human to achieve more complex tasks or more tasks at the same time, it can however not function independently.

The Digital Twin can process information, monitor sensory data collection, process memory, or perform organisational/administrative tasks. For others there might be value in the data that a DT contains. Today, companies use this data to optimise their service or to offer you targeted advertisement. Systems like Weople already offer the option to sell your data. Our Digital Twin allows us to take possession of our data in a similar way. In that way we are controlling what is value about us.

On the other hand, the DT has adapted in behaviour towards its physical counterpart. That is where the Digital Twin becomes more than just a set of code and data. It is the way that both human and DT have uniquely adapted their behaviour to function as one, that creates the value. This unification of the Digital Twin also rules out that they can be valuable to other humans.

We don't want DT's to be stolen to create value for people. Maybe people might be murdered or DT sales on the black market. We don't want people doing nothing while money is coming in. Money is an exchange value, so it should be exchanged with services or products. In order to keep our economy healthy, we will just join our Digital Twin to work.

EQUALITY

Every Digital Twin is initially equal in design and performance and therefore none is superior. Differences can only develop from the influence of nurture.

The human being is a wonderful creature. We create, commute, and structure. Language gave us a tool to name and sequentially describe our surroundings. From this on we have extensively been developing a comprehensive model for our nature. This understanding allowed us to create more powerful tools that again enhanced our models. The western principle of defining is the main force behind our exponential growth.

Differentiation has become deeply embedded in our culture. From our upbringing throughout our school career we are progressing through a system that divides us based on tests and scores. Also, on the playground distinguishing features are emphasised. Some are prettier, some have red hair, some have good motor control, some wear different clothes, etc. Luckily, we are gifted with differences, some more desired than others, but our variation makes our diverse society.

Differences should never be used to differentiate based upon power. Everyone deserves an equal treatment. Power can be used to make more power resulting in huge imbalances. Similarly, money enables people to invest such that they can earn more money. People who have access to a more powerful Digital Twin could use their advantage to outperform others. To secure equal opportunities the Digital Twin must be initially equal in design and performance. Over time, the DT will adapt and become personalised, but this is solely due to the humans training. Updates are available for all Digital Twins and provide everyone with a similar improvement.

INDUSTRY

The service of a Digital Twin must be offered by a non profit organisation in order to allow everyone access to an equally powerful Digital Twin.

Fundamental to our manifest is that the human is centered in this symbiotic relationship. Our Digital Twin can be seen as a digital limb or digital organ functioning as a part of the complete human being. Another recurring aspect is the polarizing effect of our behaviour. Opinions echo in our environment and become stronger and stronger because they attract confirmation similar to how power empowers its own amplification. The last aspect of importance this manifest will elaborate upon is money. However we judge the concept of money in our current society, we must admit it comes with very peculiar motivations or desires that might be harmful to our Digital Twin ideology.

The creation of the Digital Twin demand people to work and work deserves a return value. But ideally the Digital Twin should be created for the general good, empowering its user rather than its maker. Open source allows users to creates part of a system in collaboration. Production is decentralised and the Digital Twin could be created transparently. However, the system must be legitimate and conform to an acknowledged internal structure.

If a company is responsible for the development of the Digital Twin, the company either has a monopoly. Many people depend on the honesty of the company. How can we be certain the intention is towards the people instead of a personal interest driven by desires? Opening a market for companies could generate a buyer central competition. Undoubtedly the companies will strive to create a DT that fits our desires but also there will be different versions available. Secondly, their competition for sale can put personal interest above that of the user.

Another solution might be to make the Digital Twin a governmental responsibility. But also the government is biased due to its internal interests. Authorities need money and wish to control the population. At last there is the desire to win elections and stay elected. Our Digital Twin contains highly personal information that could be of great

interests for the government. Although a central system for law and order is desirable the DT aims to empower the individual with internalised responsibility.

According to us, the best system to create and maintain the Digital Twin is a nonprofit organization. The Digital Twin must be the responsibility of an institute that has only one interest, creating a good Digital Twin for the user and society.