

Caroline Nevejan

ESSAY

Shaping Trust



“Like the rainbow
in which it features,
indigo – like trust – has
always formed an arc
across societies in
every direction and
continues to do so today.”

inspired by Jenny Balfour-Paul

Shaping Trust

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Introduction 7

1. Major Rapid Changes 10

- 1.1 Climate change, the growing world population and digitalisation 12
- 1.2 Living in Communities of People and Systems 18

2. Being Present in Merging Online and Offline Realities 22

- 2.1 Being Present 25
- 2.2 Interaction Between Person and System 27
- 2.3 Anywhere-Anytime-Real Time 24/7 29
- 2.4 New Experience: Measurable Humanity 32

3. Trust 34

- 3.1 Trust in Society 36
- 3.2 Vulnerability, Reliability and Human Dignity 38
- 3.3 Bearing Witness 40

Contents

4. YUTPA	44
4.1 The YUTPA Realm	46
4.2 The YUTPA Factors	50
4.2.1 Time	51
Duration of Involvement	
Sharing Rhythms	
Mutually Doing Your Best for Each Other	
Moments of Meaningfulness	
4.2.2 Place	54
Bodily Sensation	
Emotional Space	
Impact of the Environment	
Ability to Act	
4.2.3 Action	57
Attunement to Each Other	
Reciprocity	
Styles of Negotiation	
Impact of Actions	
4.2.4 Relationship	60
Role	
Reputation	
Involvement	
Community	
4.3 Working with the YUTPA Framework	63

4

5. Fostering Trust	68
5.1 Vulnerability: Unequal Opportunities	71
5.2 Reliability: Justice	72
5.3 Trade-Off: Involvement	75
5.4 Resilience for Trust	78

5

Conclusion	82
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Introduction

Trust is an important word in love, friendship and professional relationships. Trust is often discussed in newspapers, news programmes, interviews, and also in everyday conversations between friends and colleagues. Agreements in business and trade are also based on trust. Trust is a force to counteract the abuse of power, indifference, arbitrariness, alienation and unkindness. It is a precondition for physical and mental health. Trust is also a test of safety, and is thus the basis for co-existence. Trust relates to how we share presence, how we are witness to each other, and how we can act together. Trust influences social interactions and dictates the atmosphere between the participants. It is the glue that binds everything together.

The fundamental and most essential form of trust is physical closeness to others: to share time and place, to be in a relationship with each other. If our world becomes uncertain, if we become more vulnerable, and the systems around us are too complex and not evidently dependable, then we lose trust. By considering how trust is or isn't nurtured, we can make uncertainties more manageable.

In my thesis, *Presence and the Design of Trust*, I developed a framework for the analysis of trust. The framework is called YUTPA, an acronym of 'to be with You in Unity of Time, Place and Action'. YUTPA encompasses the four dimensions of Time, Place, Action and Relationship that comprise the physical unity that we are born into, and proceed through the world, where we play and love and contribute to the society that we live in and ultimately die in. In YUTPA, we bear witness to each other, we are vulnerable, and we estimate how reliable the world around us is.

In an interdisciplinary research project involving scientists, journalists, designers and artists, I identified which factors in each of the four YUTPA dimensions influence the decision to trust – the

Trust is a choice

so-called 'trade off'.¹ If we understand how these choices and deliberations are made, we can better influence the development of trust.² And so we can make clear, and possibly improve, the balance between experienced vulnerability and the reliability of the world around us.

Students and colleagues of the university TU Delft, as well as a number of companies and organisations, have worked with YUTPA to better understand how trust is formed and can also crumble. Furthermore, the Corona prevention team of Amsterdam's health service (GGD) applied this framework during the Corona pandemic, to better understand the success or failure of the interventions and measures used in the city. The YUTPA analysis proved to be useful to the GGD to gain insight into the dynamics that comprise the foundation for trust between the citizen and the authorities. Trust also proved to be an important consideration among civil servants themselves. In a workshop involving various teams of civil servants and designers, it was evident that YUTPA can contribute to making transparent the deliberations of trust in the functioning of the city administration of Amsterdam.³

**YUTPA offers a prospect
for action to achieve trust**

YUTPA has primarily proven to be an attractive framework to rapidly come to an understanding and reflection on trust, and to identify a prospect for action. It is a 'talking tool' that inspires debate, in which design spaces that increase trust can be identified. YUTPA has primarily proven to be an interesting framework to serve as the foundation for the creation of various tools to identify possible avenues for action in order to increase trust. This text provides insight into the background.

The first chapter considers the major changes that we are currently living through. It deals with climate change, the exponential growth of world population, and the various ways in which digital systems now help to determine our way of co-existing. These major changes influence our deliberations of trust. Subsequently, the development of the YUTPA framework is sketched out.

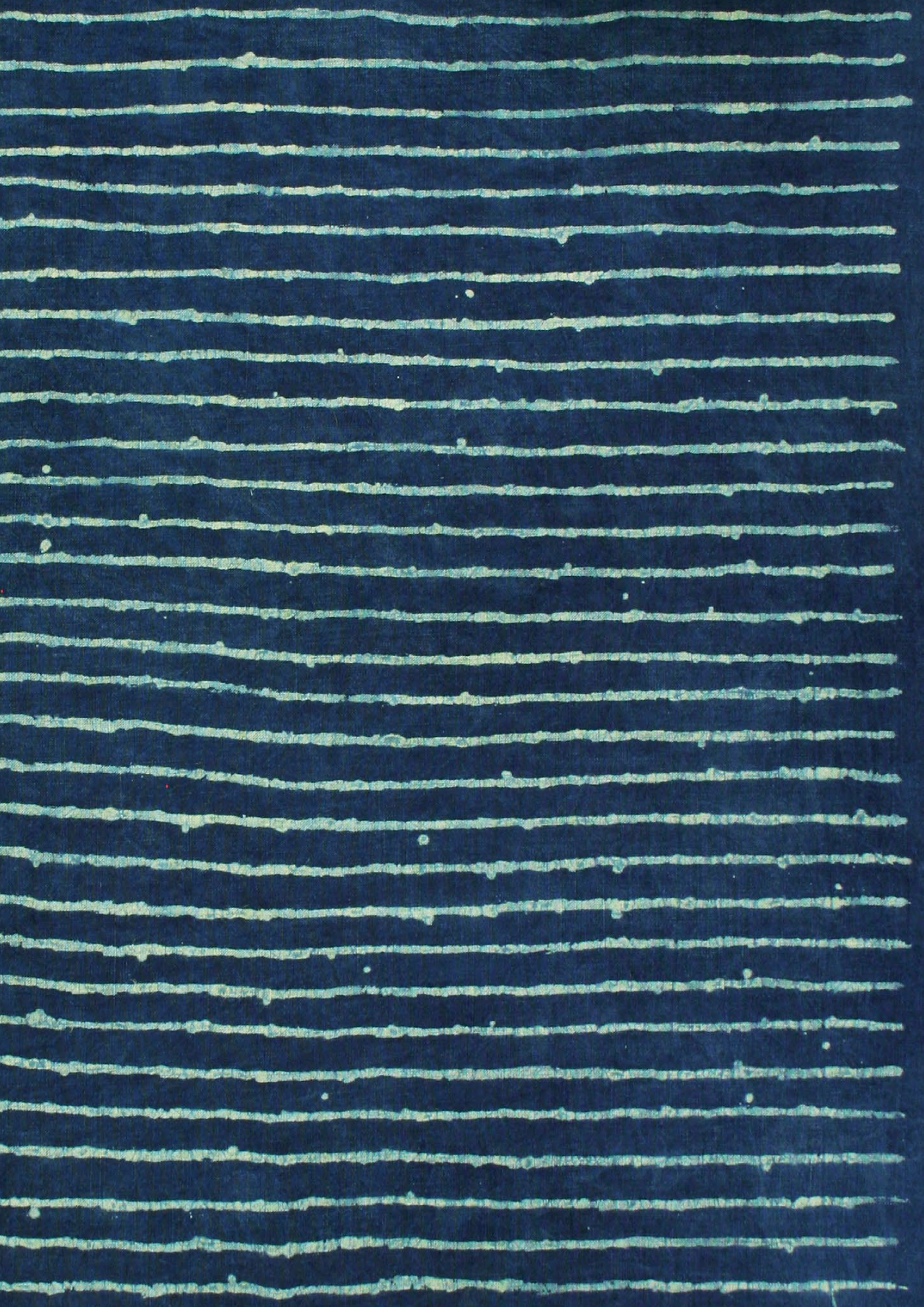
The second chapter considers what 'being present' entails, and goes on to demonstrate the relationship between a person's prospect for action and the system's. The chapter then considers the various ways in which we can be present for each other in our current 24/7 society, with the aid of technology. The final paragraph of chapter 2 introduces a new paradigm of human experience and measurable humanity.

The third chapter considers in greater depth the mechanisms by which trust is deliberated over, and illustrates that this is profoundly influenced by the balance between vulnerability and reliability. The chapter discusses the importance of human dignity in this process, and the new means by which we bear witness to each other.

The fourth chapter explains the YUTPA framework in more detail, and discusses the various factors in each of the four dimensions of Time, Place, Action and Relationship that help to determine how deliberations of trust are made in each dimension.

Finally, the fifth chapter deals with the dynamic between vulnerability and reliability that leads to shaping trust. This is a question of the design of equal opportunities within vulnerability, on the one hand, and the design of a sense of justice for reliability, on the other. It is involvement with this deliberation, and the limited possibilities that are often part of such deliberations, that ultimately determines the resilience with which an organisation or society can give or repair trust.

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- 1 This interdisciplinary study posed the question 'What happens if one person is the witness to another?' Scientists, artists and experts from the fields of design and journalism answered this question from the perspective of their various disciplines. The study was financed by the Participatory Systems Initiative of the Technische Universiteit Delft, EIT Digital and the Amsterdams Fonds voor de Kunst. The original contributions can be viewed at <http://www.being-here.net>
 - 2 Nevejan, C., 2007, *Presence and the Design of Trust*, diss., University of Amsterdam; Nevejan C., 2009. 'Witnessed presence and the YUTPA framework', *Psychology Journal*, Vol. 7, No. 1, pp. 59-76; Nevejan C. and Brazier, F., 2012. 'Granularity in reciprocity', *AI & Society*, 27(1), pp. 129-147; Nevejan, C. and Brazier, F., 2015, 'Design for the Value of Presence', in J. van den Hoven, P.E. Vermaas and I. Van de Poel, *Handbook of Ethics, Values, and Technological Design: Sources, Theory, Values and Application Domains*, pp. 403-430.
 - 3 The teams of civil servants came from the departments of WPI Inkomen (poverty reduction); Vergunningen, Toezicht en Handhaving; Vakgroep Ontwerp and UX; Jeugd/OKT, GGD/Coronavorlichting. The designers were from the social design agency The Beach in Amsterdam Nieuw-West, and from the department Ontwerp (Design) of the municipal Innovatieteam.



Major Rapid **1** Changes

We are currently undergoing a great series of alarming changes and developments on a global scale, such as a major loss of biodiversity, accelerating climate change, over-population and large-scale migration streams, the polarisation between rich and poor and numerous other groups, new geo-political tensions and war in Europe, and these are leading to the weakening of the international order. In this context, the loss of trust is an almost daily news item: the loss of trust in politicians, officials, teachers, doctors, the police, and between citizens themselves.

1.1 Climate change, the growing world population and digitalisation

More than fifty years ago, The Club of Rome (1972) demonstrated that economic growth is a concept that is coming to an end, and that our behaviour as a species is threatening to exceed planetary limitations. Because of this, climate crises are inevitable and are transforming the environment on earth and minimising biodiversity. I was at high school at the time, and for many years, I witnessed denials by the business world, the media and politicians, which deeply damaged my trust in politics at that time, and also the trust of many others. The Cold War was in full progress, East and West were aiming nuclear weapons at each other, unemployment was high, and there was an oil crisis. In 2022, a new war began with Russia, an energy crisis is now underway, and great changes in climate are causing immense fires, floods and droughts, and many species of plants and animals have vanished. Today, the climate crisis is still denied by many, and the international community does not seem able to turn the tide.

At that time, I discovered that doing good and acknowledging truth were not always self-evident, and that 'trust' is ultimately a choice, and that motivation is necessary to shaping trust with courage and decisiveness. My so-called 'lost generation' also grew up and found ways to live with compromise, and to give form to everyday trust in colleagues, friends and family. Today, too, people find hope and comfort in each other, and together they find the courage to continue, and many work for peace and the protection of our planet.

SUSTAINABLE DEVELOPMENT GOALS



In 2015, the United Nations drew up the 'Sustainable Development Goals', whereby new standards have gradually been created in many countries, regions and cities in terms of social, economic and ecological development.⁴ Meanwhile, 'Environmental Social Governance' has also been developed in the business world, whereby taking societal responsibility has become a factor that determines whether a company does or does not receive access to financing.⁵ At the same time, there is still a lack of clear collaboration to save the planet's climate. According to the Intergovernmental Panel on Climate Change (IPCC)⁶, we are heading for a temperature rise of more than 4°C unless drastic measures are taken.⁷ A person with a fever and a temperature rise of 4°C is already gravely ill. This scenario sounds like a bad science-fiction movie, but sadly this is the reality in which we live.

**Lack of clear
collaboration**

Climate change is also a result of the growing world population. After increasing very slowly for centuries, the world population has more than doubled in the last fifty years. In 1981, nearly ten years after the first

⁴ After many conferences since the 1990s, the United Nations formulated the 17 Sustainable Development Goals (SDGs) in 2015. By achieving these goals, peace and well-being will be possible for everyone on earth by 2030.

⁵ In an article in the American business magazine, Forbes, about the history of ESGs, Betsy Atkins argues that the movement developed from 'Responsible Finance' in 2006, and that they are now embraced by the big consultancies such as EY, PwC, KPMG and Deloitte, and large investment funds such as BlackRock, and also, for example, the World Economic Forum in Davos.

⁶ The full report can be found at <https://www.ipcc.ch>

⁷ For more information: <https://www.urgenda.nl/themas/klimaat-en-energie/klimaatvragen/wat-gebeurt-er-als-de-aarde-met-4-graden-opwarmt/>

Theme	Core metric
Principals of Governance	Setting Purpose: Company has stated a purpose linked to societal benefit/core benefit
	Board Composition: Tenure, positions and commitments, gender, membership of under-represented social groups, stakeholder representation
	Impact of Material Issues on Stakeholders: List material topics and how they impact stakeholders
	Anti-Corruption, Anti-Money Laundering, Anti-Harassment: Percentage have received training on all policies and procedures. Number of confirmed incidents
	Protected ethics advice & reporting Mechanisms: Advice, ethical and lawful behavior, integrity
	Integrating Risk & Opportunity into Business Process: Risk factor disclosures as opposed to generic sector risks. Board respect of these risks overtime: data security, the number of data breaches
Environmental	Greenhouse Gas (GHG) Emissions: Estimate and report upstream and downstream emissions where material
	TCFD-Aligned Reporting on Material Climate Risks & Opportunities: If climate change is material, disclose strategy, metrics/targets, and company committed targets
	Land use & ecological sensitivity: Report on land use, affected annual change in area, Red List species present
	Fresh Water Consumption in Water Stressed Areas: Estimate and report for upstream and downstream supply on mega-liters of fresh water
Human Capital	Gender pay Equality: Ratio of salary and remuneration of women to men
	Diversity & Inclusion: Percentage of employees by category - age, gender, etc.
	Wage level: Ratio of entry level wage compared to local minimum wage
	Health & Safety: Injury Rate / Absentee rate
	Training Provided: Number of trainings provided divided by the number of employees
Prosperity	Net Number of Jobs Created: Total number of new employee hires by age, gender, and region. Rate of employee turnover
	Net Economic Contribution: Financial assistance received from tax breaks, subsidies, investment grants, etc.
	Innovation in better products & services: R&D spend ratio
	Community Investment: Charitable gifts and community partnerships; time contribution

The ESGs are a translation of the SDGs for business.

This image was created by Betsy Atkins and published in *Forbes*, 8 June 2020.

report of the Club of Rome, Jonas and Jonathan Salk (father and son) drew attention to the exponential growth curve in the world population, and to the changing values for cohabitation as a result of this growth.⁸ Evolutionary biology has taught us that if a group of animals lives in a limited space with an ever growing number, this will lead to an extremely rapidly rising growth curve in their numbers. This curve will then flatten out naturally because life becomes impossible for too many animals together. Salk and Salk indicate that the growth curve in the world population will increase between 1950 and 2050, and will then flatten out from 2050 onwards. They also argue that before 1950, other values determined life than those values expected from 2050. Therefore, we are transitioning from competition to collaboration, from an emphasis on quantity to quality, from mastering to balance, from winning or losing to win-win situations. Thus, we are now living through that steep growth curve in the world population, whereby the underlying values of our own society are also undergoing major changes. This clash between old and new values is discernible all around us, in (geo)politics, in government, in the business world, at school, in culture, and on the street. This has given rise to conflicts that may sometimes seem insoluble.

The great wave of digitalisation began ten years later, at the start of the 90s. Since then, information and communication technology (ICT) has spread all over the planet. Digitalisation has profoundly transformed the way in which people are in contact with each other, act, and design their memory. New speeds have been achieved in transport with cars, trains and aeroplanes, there are new means of communication via mobile telephones and Internet, there is a new healthcare sector whereby the wealthy can live in good health for longer, and there are also new digital financial systems in which the differences between rich and poor grow ever greater.

We are now living through a time when changes are accumulating so rapidly that they are causing great uncertainty and unpredictability, and we may be collectively losing faith in the future and in each other. Of course, if you list these changes, it is clear that trust has been shaken. This is not caused by you or me, or him or her or them, but is nevertheless taking place in the world community as a whole.

In contrast, the United Nations' statistics show that there is less poverty, less child mortality, more literacy, and more democracy than a hundred years ago.⁹ In the long-term, we as humanity, can do good and live in balance with our environment. In these different timescales,

The world population is growing exponentially

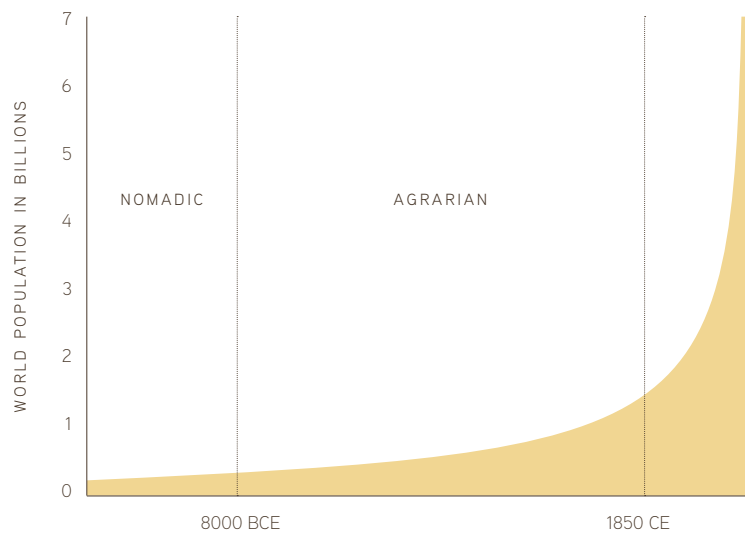
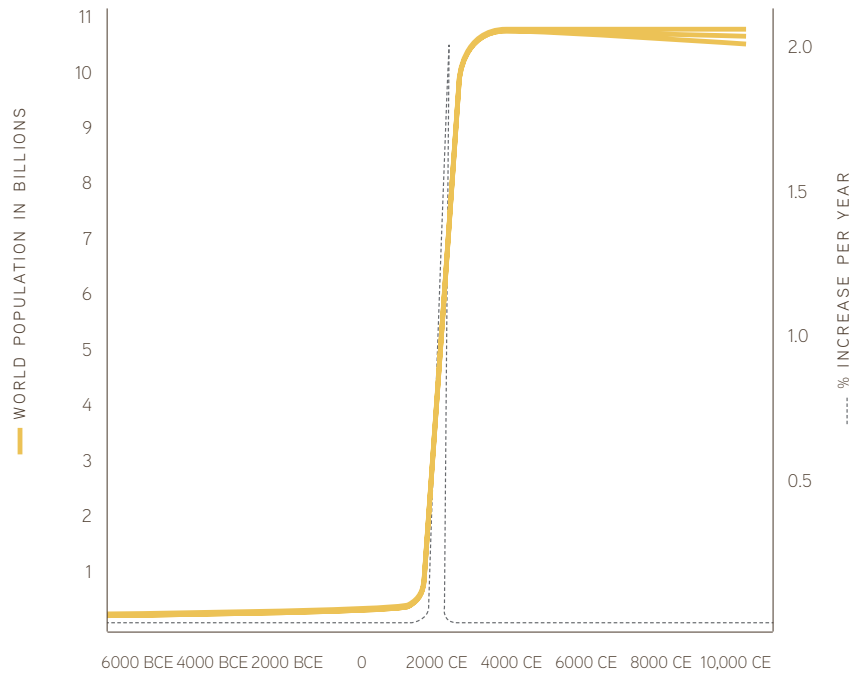
A clash between old and new values

Digitalisation is changing communication and memory

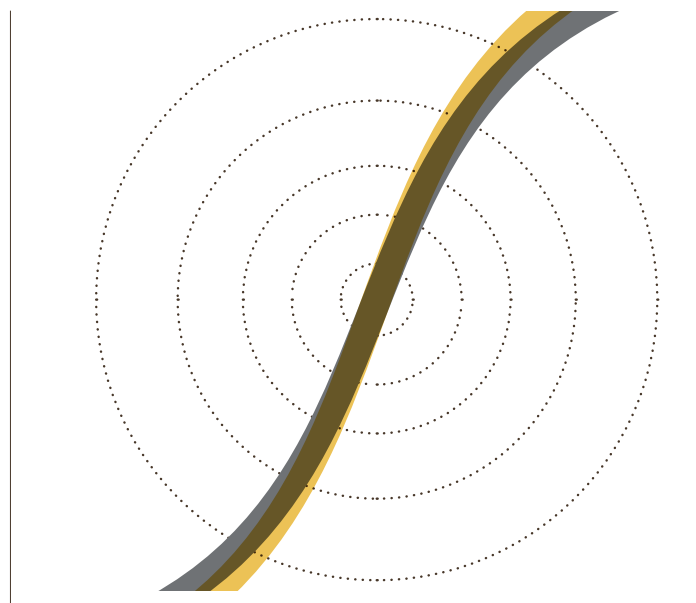
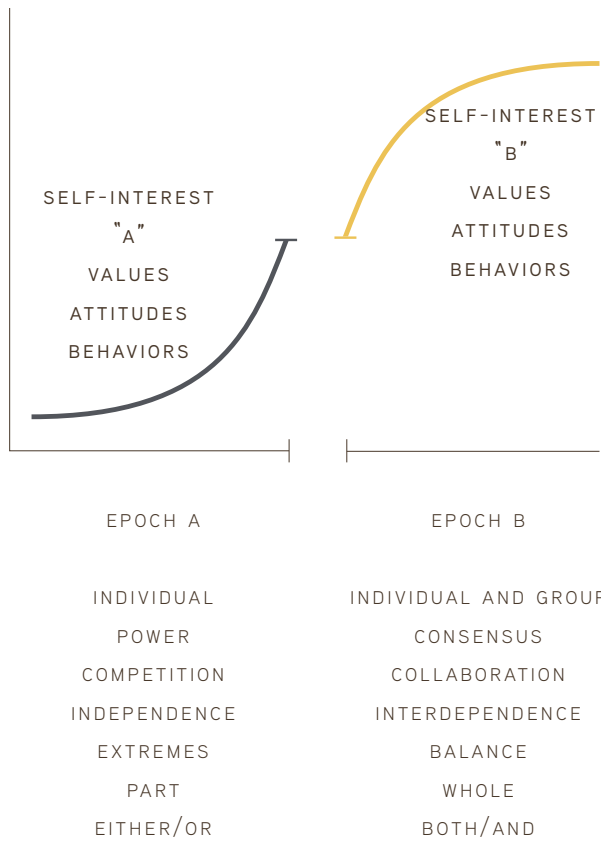
Trust in the future has been shaken

⁸ Salk, J. and Salk, J., 1981, *World Population and Human Values: A New Reality*, City Point Press. In the new edition from 2018, which was exceptionally beautifully designed, [Jonathan] Salk gives the title in reverse: *A New Reality. Human Values and World Population*.

⁹ See <https://ourworldindata.org>



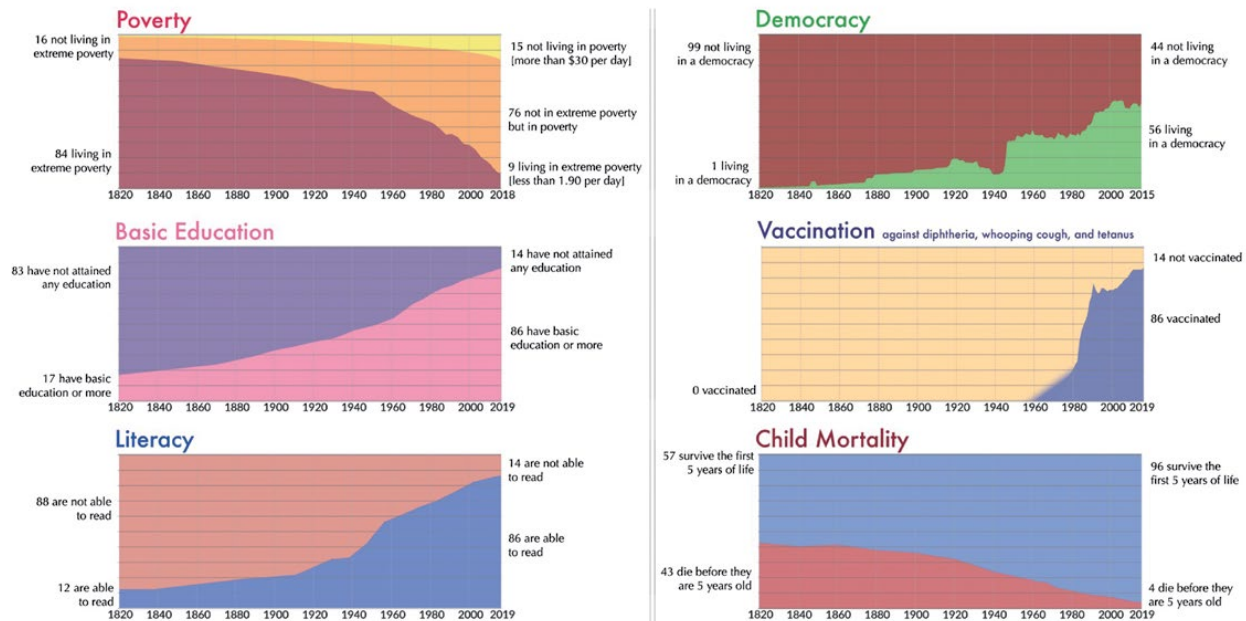
Salk, J. and Salk, J., 2018.
*A new reality: Human evolution
for a sustainable future.*
Simon and Schuster.



When viewed from a short-term perspective, as represented in the figure above, the tension and conflict inherent in this transition may seem chaotic and symptomatic of a disintegrating, collapsing world.

The World as 100 People over the last two centuries

Our World
in Data



**Trust is a great force
for survival and wellbeing**

it appears that trust in the future is a choice that can deeply influence everyday life and give it direction. The daily shaping of trust, even in the midst of great uncertainty and unpredictability, is a great force for survival and wellbeing.

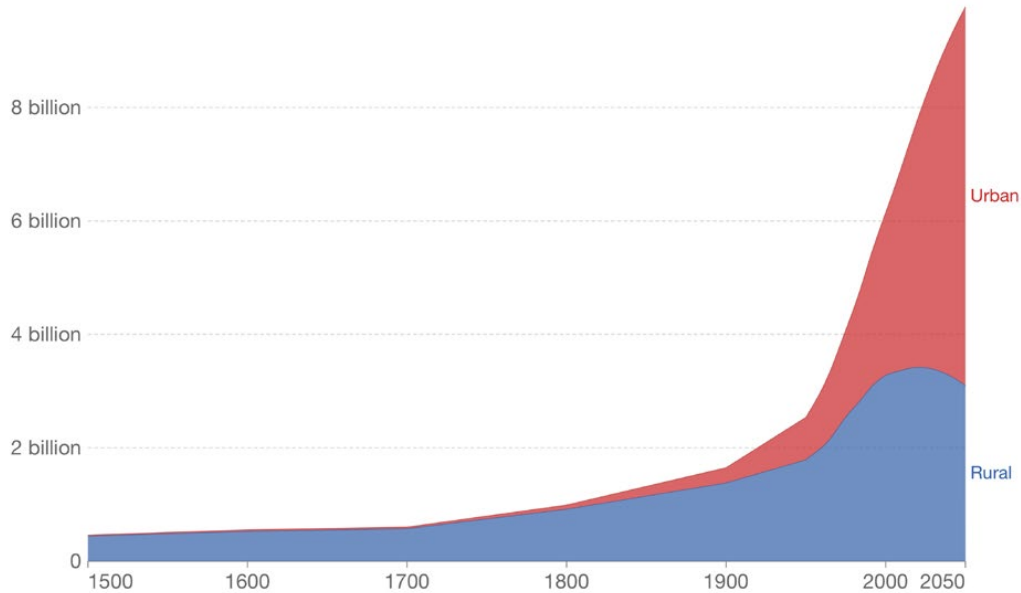
1.2 Living in Communities of People and Systems

Over the last thirty years, we have learned to use numerous new means of presence in our personal lives due to the development of ICT. We surf, app, call, 'like' and post to our heart's content. Companies, organisations, and also the services of the government are changing. Salaries are paid via bank accounts that can only be viewed online, medical files can be consulted online, the tax authorities work with the DigiD personal identification system, and some shopping can only be done through a webshop. It is wonderful to be able to call friends and family who are far away, but it is confusing when you stand at a reception counter while the employee only consults a screen and then answers 'No' to your question. What is actually on that screen, what is it based on, and how can you get onto that screen in a positive way, as it were? Without a digital identity, it is now difficult to get by in Dutch

Urban and rural population projected to 2050, World, 1500 to 2050

Total urban and rural population, given as estimates to 2016, and UN projections to 2050. Projections are based on the UN World Urbanization Prospects and its median fertility scenario.

Our World
in Data



Source: OWID based on UN World Urbanization Prospects 2018 and historical sources (see Sources)

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society. At the same time, no one understands how these new means of communication deeply influence our personal and societal processes. It is as if the whole world is in a large-scale communications experiment.

We currently live in communities of people *and* systems. Systems have become an essential part of our society. But it is unclear who has control of these systems and how they operate. This leads to a feeling of insecurity. This feeling only grows if the people who work with these systems also don't know exactly how they function. At the same time, they are obliged to obey the systems and to take decisions based on them that can have a profound effect on the lives of others. In these situations, one person can come to relate to the other as an 'implementer' of the system, and thereby as a part of the system. This can be difficult for the person who finds themselves in front of the counter, and sometimes for the person behind it, too. Personal ethics form no part of the system. In a medical, or socio-economic context, this systemic dynamic can be very refined, and through computing power, for example, can rapidly produce good insights, fight corruption, or offer neutrality. But sometimes the system has a negative effect on the well-being and even the survival of some people, and this can be extremely difficult to repair. Disastrous cases can be involved, in which the system appears unassailable in its logic.

Our World in Data was established by Max Roser at the University of Oxford in 2011. It is now a highly regarded not-for-profit organisation where more than 30 scientists from different parts of the world work together.

Systems have become part of our everyday lives

Different realities merge in human experience

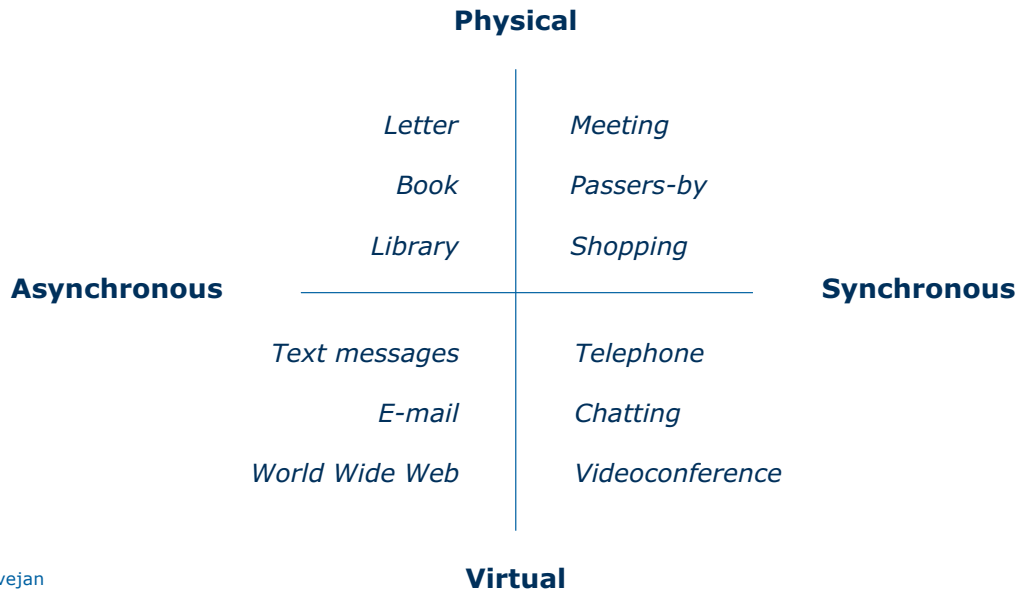


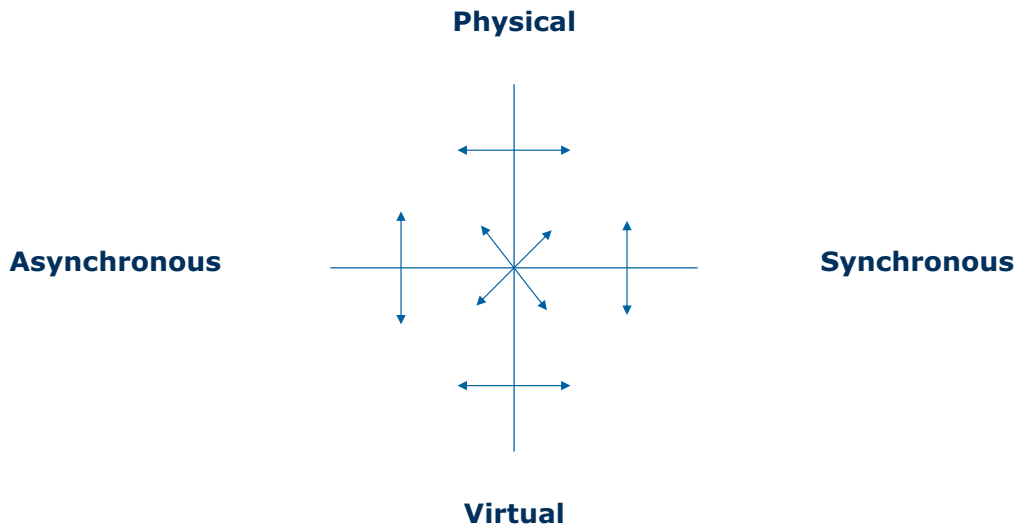
Illustration: Caroline Nevejan

We, as individuals, have little prospect for action against the system. The scale and speed of information and communication have now grown so great that obedience to the system is compelled. Even when people in the higher echelons of a system's hierarchy send down orders to correct something, this does not always take place straightforwardly. For instance, the benefits scandal at the Dutch tax service is an example of this dynamic.¹⁰ Fundamental values are at stake: responsibility, liability and human dignity. For the representatives of the system, too, the fear of repercussions and undesirable consequences has grown. As a result, people comply with the system's reality, and obedience has become the norm. Corrective dynamics are still in their infancy, and our legal system wasn't designed for this scale and speed of communication and action. Meanwhile, it has become clear that courage is necessary to dare to act reasonably and fairly when the system says something different. If anyone goes against the system, they are seen as 'disloyal' and the personal repercussions can be severe.

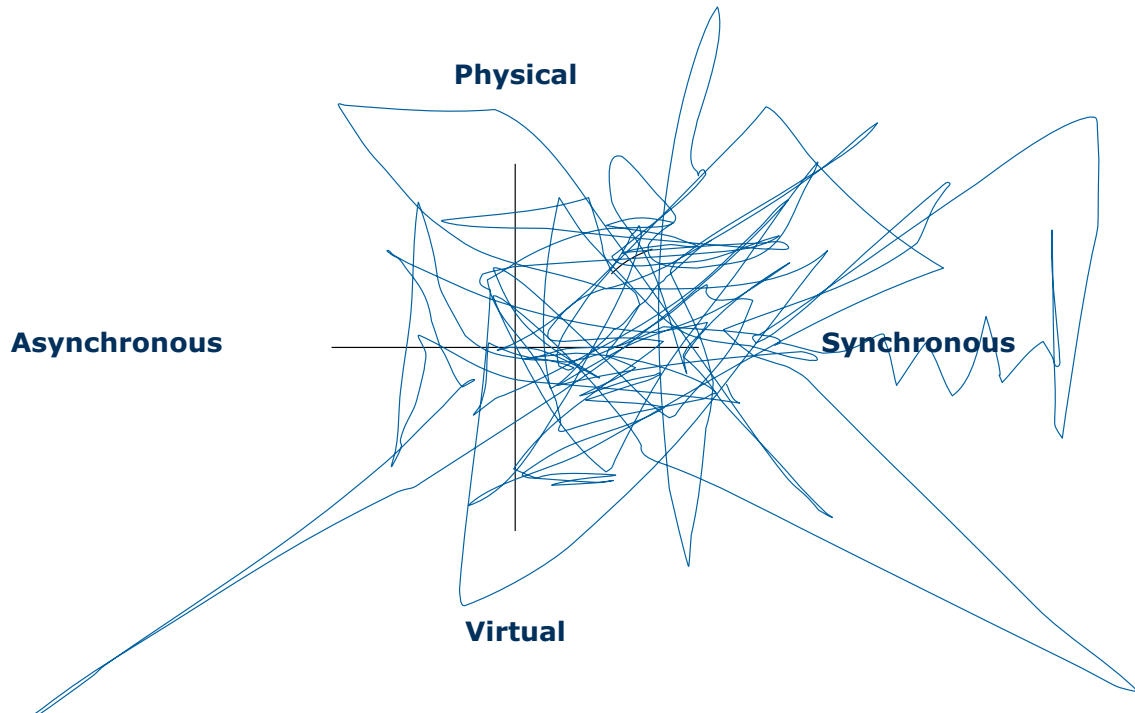
Responsibility
Liability
Human dignity

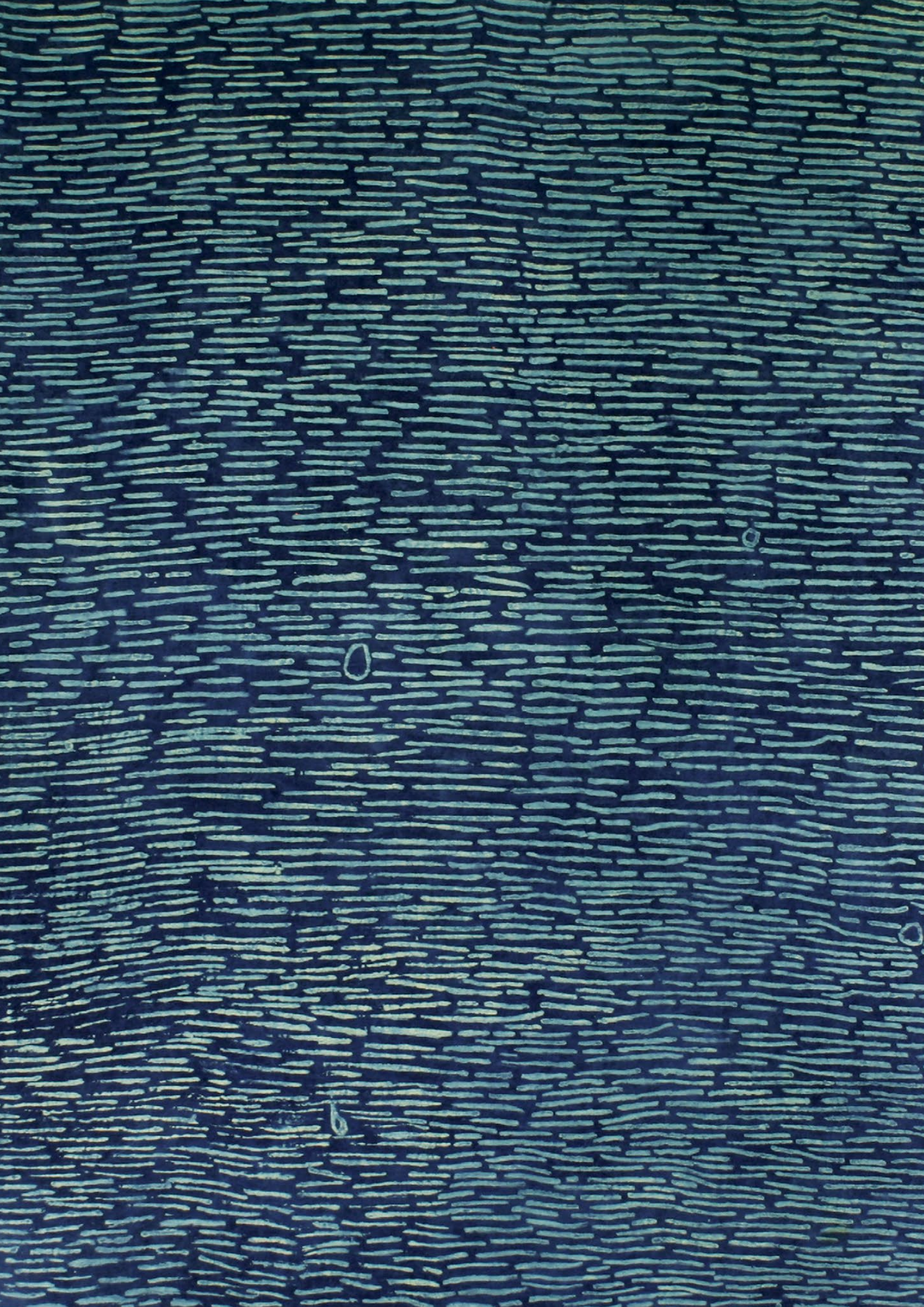
¹⁰ The childcare benefits scandal is a political scandal in The Netherlands. In 2021, it was discovered that the Dutch Tax Office used an algorithm that resulted in profiling migrant people as being potentially fraudulent. Between 2013 and at least 2019, about 26,000 parents in the Netherlands were wrongfully suspected of making fraud claims to childcare benefit and were required to pay back large amounts of money. As a result of being on this list, these people were accused without the possibility of redress, and lost their jobs, homes, and even the custody of their children.

Merging realities affect communication and also have societal and judicial consequences



We do not know how it works





Being Present **2** in Merging Online and Offline Realities

Many religious and philosophical texts over the centuries have given explanations and definitions of 'presence' as the essence of life. For a considerable time, the interaction between physical and religious, or spiritual presence, was determined by the unity of the body and mind. Direct communication was only possible when people shared time and place. Thanks to ICT, we can now communicate with each other independently of time and place and still feel that we are together. Our mind can be somewhere else and manifest itself there, while our body remains 'at home'. Some acts are then made possible, others not. I can order you something online, or show you something, or let you hear something, for example, but I can't embrace you, or let you taste something. If we are online together, it makes a great difference whether it is with someone you know or someone you don't. If it is with someone you know, you can refer back to when you were previously together and, for example, ate a delicious tomato soup. In the new configurations of presence created by ICT, our capacity for action has changed, and the relationship that we have with each other has an influence on what sort of communication is possible and how we experience this.

2.1 Being Present

Following the Covid 19 lockdowns, many people have realised how important it is for us to be present with others at school, at work, at the sports club, etc. During the pandemic, we accepted the flawed interfaces and limited wavelength of online communication with an apparent ease, because we were so happy to still be able to maintain contact with each other. The use of the imagination to supplement flawed communication is a great quality of the human mind. People are very adaptable. When adapting, we add to what is lacking. As playing children say: 'if you are the captain and this chair is your boat, I'm the passenger and the carpet is the quay'. Then a moment later, the chair really becomes a boat and the carpet really becomes a quay in the minds of everyone who takes part in the game.

Since the development of Virtual Reality (VR) in the 1990s, considerable research has been done in a number of countries into the essence of the notion of *presence*, to better understand how people can also be present together in ICT. Over more than ten years, the European Commission facilitated a large-scale research programme to examine this, composed of psychologists, mathematicians and engineers. In my thesis, *Presence and the Design of Trust*, I approached this concept in a more sociological manner. The departure point was the evolutionary-biological perspective explored by the psychologists John Waterworth, Eva Lindh Waterworth and Giuseppe Riva, building on the work of the neurologist Antonio Damasio.¹¹ Damasio proposed three levels of consciousness on the basis of which people steer: The 'proto' consciousness is our awareness of our self in our body and mind; the 'core' consciousness is focused on our environment; and the 'extended' consciousness consists of everything that we have learned and experienced. In all three levels of consciousness, our *survival and well-being* are steered by sensations, emotions and feelings.

On the basis of this earlier work, I formulated a new definition of 'being present' as 'steering towards survival and well-being', in which our feelings help to steer us to where we feel good and safe. Sensory sensations, such as a stove that is too hot, make us react immediately by withdrawing our hand. Or, if somewhere smells unpleasant, we walk in the opposite direction. Emotions such as happiness or fear influence what we move towards or away from. For example, I like to go to the park where I was previously happy. And complex feelings such as friendship, compassion and solidarity also help to determine how we wish to design our well-being and our survival.

Presence

**Sensations
Emotions
Feelings**

**Steering towards
survival and well-being**

¹¹ Riva, G., Waterworth, J.A. and Waterworth, E.L., 2004, 'The Layers of Presence: A Bio-cultural Approach to Understanding Presence in Natural and Mediated Environments', *CyberPsychology & Behavior* 7(4), pp. 402-416.

This definition is also very exciting from a sociological perspective. Whereas psychology focuses on the individual, sociology focuses on how people live as a group. In the three layers of consciousness, we steer on the basis of sensations, emotions and feelings. Therefore, the difference between what people say and do, for example, is perceived both factually and sensorially. Thus, a local authority might say, for instance, that giving trust to the citizen is very important, but if the employees see that a colleague who did this was then given a reprimand, they will be less inclined to give trust to citizens, out of self-preservation. Or, if it turns out that the citizen only grows angrier even though he is given trust, then the official will also move away and grow increasingly less forthcoming. It is also possible that employees derive trust from the team as a whole: in defiance of a manager or angry citizen, the performance of the team may be so good that every team member senses that correctly conforming to the team offers the best chance of survival and well-being. It is not only a question of a narrow self-interest; such a decision or movement can also stem from feelings of fairness, for example.

Striving for survival and well-being in the online world requires a better understanding of 'merging realities'. Experiences in the online and offline worlds merge, and we currently live in communities of people and systems. We accept systems without knowing very much about them, as long as they function and do what we want them to. In extreme circumstances, when someone is seriously ill, for example, the limited possibilities of online presence become dramatically apparent. If I am not physically present with a loved one who is ill, then I am able to do nothing. This is also the case if I am not present at the right moment. If I can do nothing to relieve the pain or combat the illness, then this has great consequences for the ill person, and I will also feel awful. If the person who is ill is a stranger, on the other hand, this will feel different to me, Place, time, relationship and prospect for action together define what occurs.¹²

In striving for our survival and well-being, we design our *presence*. It is as if we 'play', we perform or we enact who we want to be.¹³ And we can do this both online and offline. Identity is not merely a biological fact, it is also a matter of how we present this identity, and have it interact with others. I was born as a woman and can express my being a woman in many different ways. Cultural, socio-economic and political environments all have an influence on how I express my being a woman. The way in which we design, 'perform', 'enact' and 'execute'

our *presence* is largely determined by how we bear witness to each other and to ourselves. This is where the three levels of consciousness work together; sensations, emotions and feelings give us direction, and we also make political and cultural choices. Trust plays a major role in the 'performance of presence'. After all, we can adjust our 'performance of presence' according to how we perceive the situation in which we find ourselves. The 'performance of presence' is determined by the way in which you trust something or someone.

**Play
Perform
Design**

2.2 Interaction Between Person and System

The tension between an individual's personal environment and the technological systemic environment of organisations and companies is changing. On the one hand, there are new opportunities for rich and poor. Refugees who have lost everything often still have a mobile phone, which allows them to keep in contact with others. On the other hand, databases and algorithms have created new digital walls that allow entry only to a few. The digital borders are forbidding.

Democratic laws, which not only apply to people but also systems, have been put under great strain. From country to country, there can be a variance between laws and notions of personal privacy, the liability of companies, and the application of governmental power. In the 1990s, with the rise of the new technologies, there were hardly any laws governing their use. In rapid tempo, companies, organisations and authorities changed their processes and (financial) administrations to enable adjustments to the digital age.

**ICT changes the scale
and speed of communication
and transactions**

ICT accelerates processes and makes a great deal of data immediately available. It now seems as though nothing more needs to be preserved; all knowledge, after all, is immediately accessible. It is true that there is a great deal that can be searched for and there are many references to be found, but knowledge based on experience cannot be discovered with ICT. Mario Tokoro, head of Sony Research at the start of 2000, gave the example of when a child has not experienced running their fingers through a stream of water for themselves, and how they cannot then understand a cartoon featuring running water.¹⁴ Another major question is digital archiving. ICT standards supplant each other very rapidly. Much of my own work from the 1980s and 90s, for example, can no longer be retrieved because of this. More importantly, many governmental authorities do not have their digital housekeeping in order.

12 This is what the YUTPA framework is based on, which is discussed in chapter 4.

13 In science, the word 'performativity' is used to describe this phenomenon. Judith Butler, in particular, has developed this term: Butler, J., 2011, *Bodies that Matter: On the Discursive Limits of Sex*. Routledge.

14 Steels, L. and Tokoro, M., 2003, *The Future of Learning: Issues and Prospects*. IOS Press.

There is no version control, questions such as identification and traceability are not well organised, and archiving is not integrated into the primary process. Therefore, the Freedom of Information Act, for example, is often unenforceable because officials cannot find the digital indicators and files.¹⁵

The scale and speed of the new ICT also leads to violations of privacy and the abuse of power. There has been a data law in force in the European Union that is intended to prevent this only since 25 May 2018, the so-called 'General Data Protocol Regulation' (GDPR). There are seven principles to the GDPR: lawfulness, fairness and transparency; purpose limitation; data minimisation; accuracy; storage limitation; integrity and confidentiality (security); and accountability. Because of the GDPR, it is now also possible to make companies liable for their data policy, which leads to new normalising behaviour. Such legislation was long feared because it might damage European business interests. The opposite appears to have been the case. Even companies in other parts of the world that want to do business with Europe increasingly comply with the GDPR. In Amsterdam, a local ethical deliberative framework (Tada) has been enforced by the city council that was inspired by the GDPR.¹⁶

**We trust systems
as long as they do what
we want them to**

At the same time, we are all aware that we don't exactly know what happens with our data. If we want to use the new technologies for communication and information, we often first have to sign a statement or accept cookies when we visit a new website. But few people read the accompanying conditions. We mostly just want to use the application, visit websites and send our apps. Our decision to use or not use something is not particularly determined by a sensible deliberation, but is chiefly motivated by the degree to which our expectation and our actual experience clash in Damasio's three previously mentioned levels of consciousness.¹⁷ If what happens is what we think will happen, and this is very much what we want, then we don't concern ourselves with whether the system is reliable. As long as it does what we need it to *now*, we will work with it. We will trust systems as long they do what we want them to.

2.3 Anywhere-Anytime-Real Time 24/7

ICT has contributed new dimensions to society with mobile telephones, Internet, algorithms, databases and artificial intelligence (AI). We can maintain contact 24/7 with people and companies in all parts of the world. We can find information immediately; we can buy what we need at home. We can view the weather report on the other side of the world, and we can translate into languages that we don't speak in real time. It makes online collaboration possible. The scale and speed of this technology has changed the way we feel about the world. It is as if the age-old human dream of being present here and elsewhere at the same time has now come to pass.

Science researches new insights and functions for the benefit of information and communication technology. Scientific innovations are then applied to design new products and services in large industrial laboratories. Thanks to intensive marketing, news of these products reaches consumers, who ultimately want to buy them. The acceptance curves of the Internet and mobile telephones are exponential growth curves, because a great deal of marketing is based on being present together 'anywhere anytime'. Every day, millions of people participate in large social networks, such as Facebook and Google. It is a way of keeping in contact with loved ones, close and far away, at any moment you wish. This gives the impression of knowing what is taking place, and that you belong because you are aware of the developments.

However, it is not entirely clear what algorithms do, and people increasingly live in their own 'bubble' – precisely because of these algorithms. Therefore, it is not only feelings of belonging that are growing, but also feelings of distrust and uncertainty. In recent years, manipulation through algorithms, robots and data has taken off. This is, of course, how 'fake news' began, which now plays a major role in the polarisation of population groups in many countries. Companies collect the data of millions of people and create algorithms to make this data useable for their clients. Big money is earned with adverts and propaganda, and these companies are generally not prepared to share that data, unless a government or court compels them to.

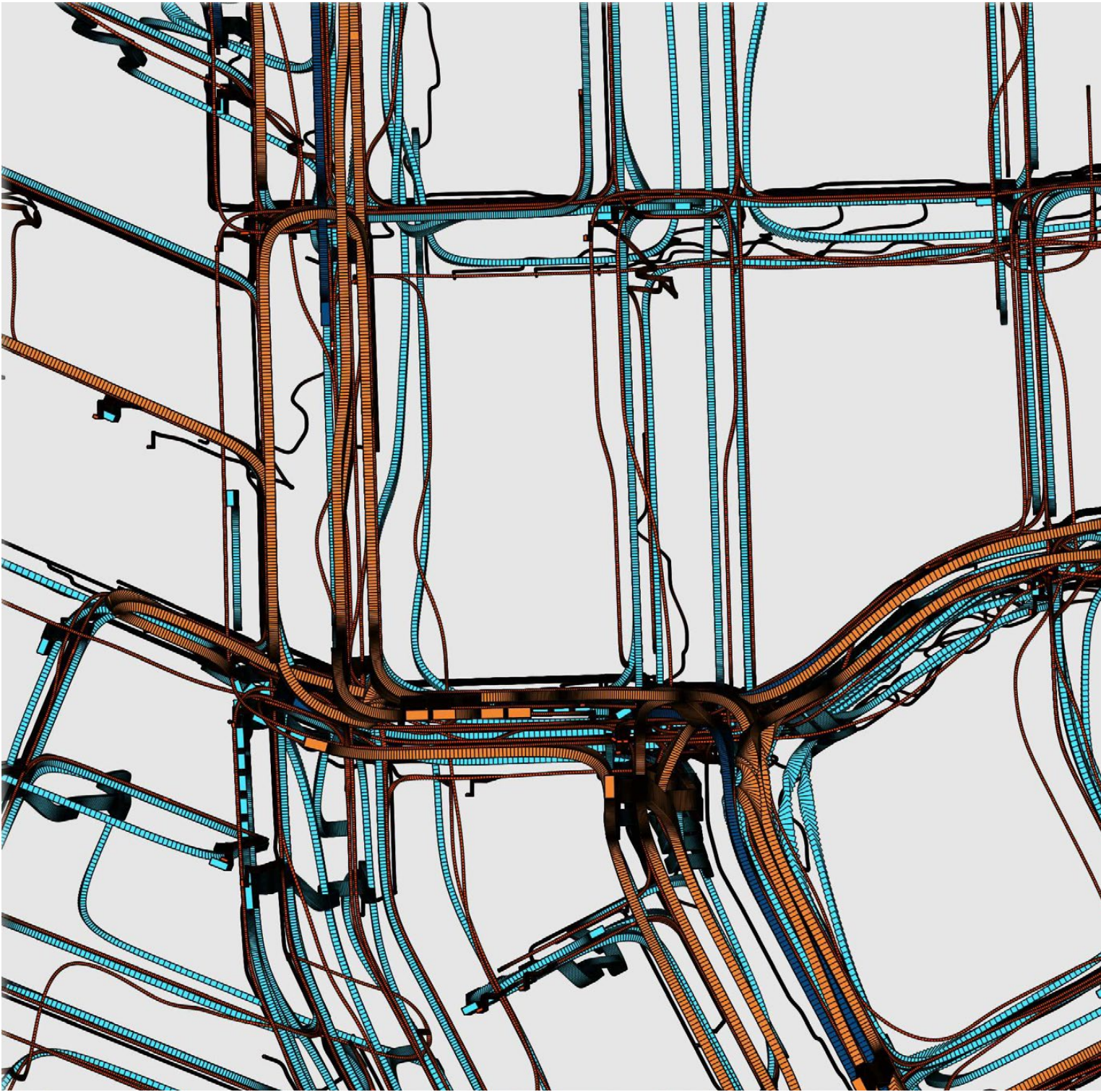
Age-old dream

Manipulation through algorithms, robots and data

15 The commission, Archives of the Board of Culture, has regularly reported on this for more than 15 years.

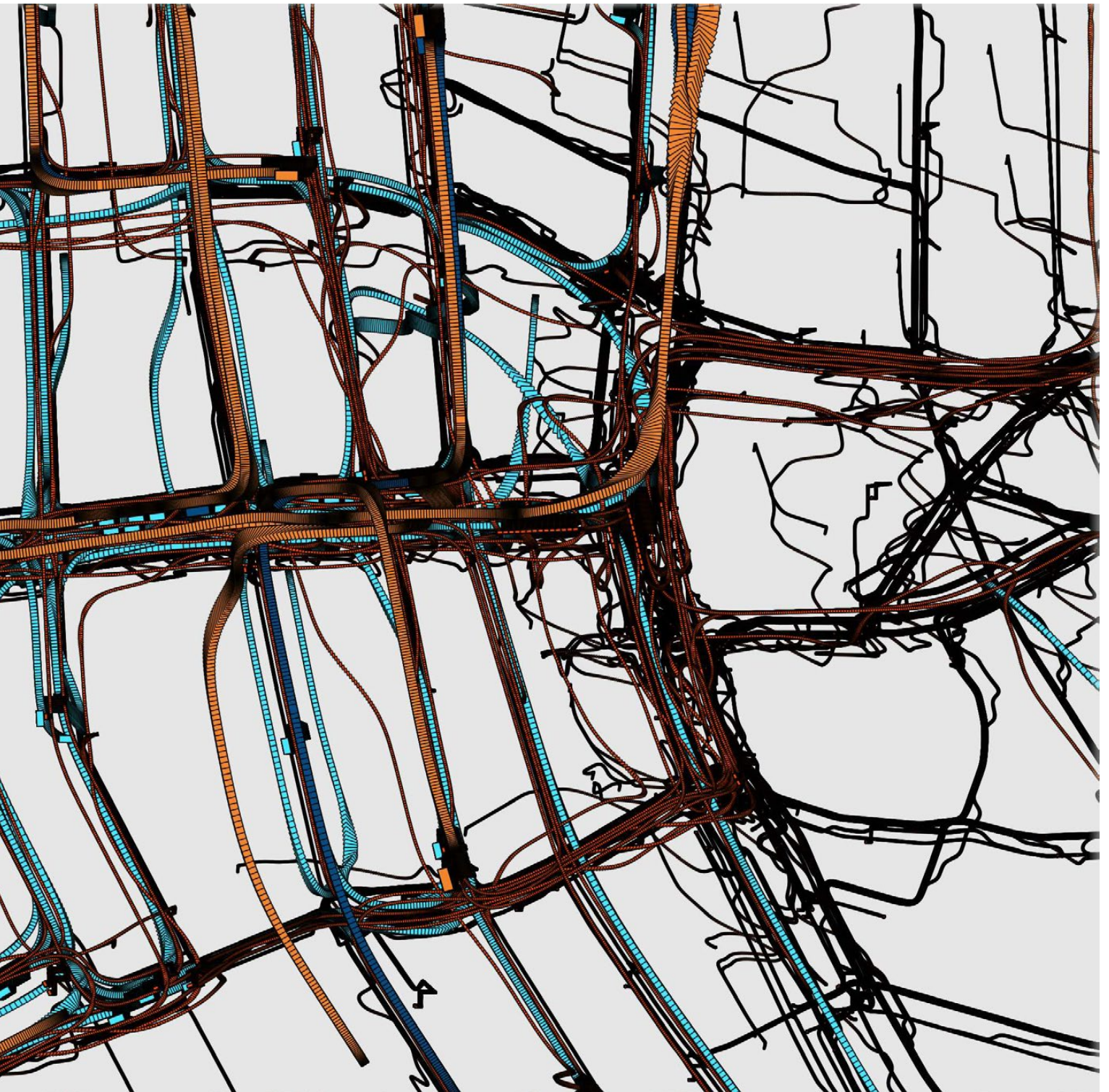
16 For the EU legislation GDPR see: <https://gdpr.eu>. For Amsterdam's TADA see: <https://tada.city>

17 Chapter 5, 'The Thinking Actor' in the dissertation *Presence and the Design of Trust* deals with this dynamic. See: <http://www.nevejan.org/presence>

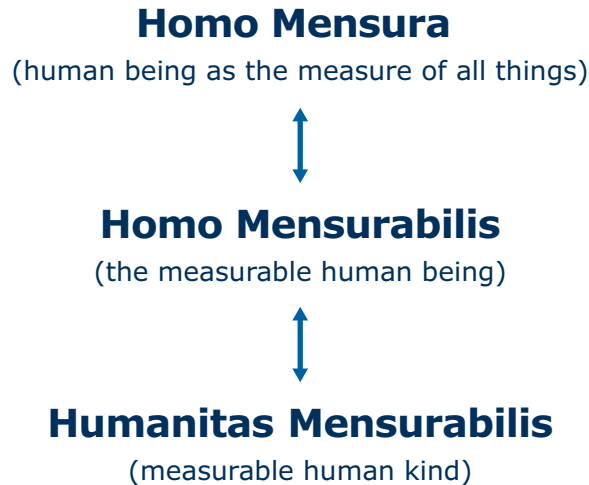


Artist: Richard Vijgen

This is a visualisation of the traffic lights in Amsterdam, which regulate people's movements. This visualisation was made to illustrate a children's story about artificial intelligence, *Elsa and the Traffic Lights*, which was written by Professor Alessandro Bozzon in the context of the research programme for the Dutch contribution to the Architecture exhibition of La Biennale di Venezia in 2021.



Paradigm of human experience



In 2014, I introduced this paradigm shift in human experience in Montreal (Canada), during the opening of the UNESCO world conference on social sciences.

Illustration: Caroline Nevejan

**Truth and trust
must go together**

Many people believe that another world lurks behind the easy access to the digital social networks, and all the advertisements that you receive for free. While, on the one hand, we accept the conditions of every app that we want to use as if this were natural, on the other, we feel that we don't actually know what happens afterwards. This creates uncertainty, and at the same time, we begin to 'read between the lines', and find it increasingly more difficult to accept the reality that is served up to us. If words are no longer acts, and the systems are impenetrable, how can we live together in trust? Truth and trust must go together.

2.4 New Experience: Measurable Humanity

For millennia, nature was more powerful than humanity, and survival was the most important consideration. When people began to settle and founded societies, more attention was paid to well-being, and 'the human became the measure of things'. Over the past 2000 years, a new paradigm of human experience has developed under the influence of science. The notion of 'knowing is measuring' began to play a major role in societal and economic life. Because of the influence of ICT, which makes 'real time data' available simultaneously worldwide, a third paradigm has arisen for future human experience, that of 'measurable humanity'. For example, applications for navigating a car warn of traffic jams, so that car drivers can immediately change their route. By combining real-time

data and returning that data straight to the people who generated it, they are immediately able to adjust their own behaviour. In this way, it is conceivable to monitor the effect of the behaviour of humanity in 'real time' – with regards to issues such as climate change or energy use – and at the same time to provide feedback at an individual level. At this moment, the computing power for such applications is still too small, but this is changing rapidly.

Because of this new phenomenon of 'measurable humanity', millions of people have grown accustomed to adjusting their behaviour in 'real time', on the basis of the data that they themselves generate. But the time allowed for you to consider how to respond is increasingly shorter. Therefore, manipulation is ever more simple, while predicting side-effects is ever more complex. As a result, very different movements and developments have become possible in society, and we have scarcely seen the tip of the ice-burg. But what is clear is that more and more people are taking part in these 'participatory systems', which influence the everyday behaviour of many of us, on the basis of data.¹⁸

Major changes in human experience have taken place in the last two millennia: from survival, to well-being, to forming part of a greater whole. Although many of us are happy to live in a world where 'the human is the measure of things', and we have also now integrated 'the measurable human' into our image of the world and of ourselves, the new paradigm of 'measurable humanity' is spreading rapidly, despite the great uncertainty that accompanies it.

Furthermore, new possibilities for the management of cities are emerging through collecting large data sets in real time, and processing them, and sending them back to residents, companies and visitors in real time within a few seconds, so that they can adjust their behaviour to the desired outcome for the management of the city. This is currently done with traffic flows, but numerous other applications are also conceivable. For example, when neighbours switch on their coffee-makers at exactly the same time at 07.30, we need twice as much energy in the street than if the second neighbour were to do this at 07.35. But do we want negotiations with neighbours about what time they switch on their coffee-makers? Do we want to have some governmental authority or company decide who is allowed to go somewhere and when? Radical transparency is actually seen as a way of restoring trust between companies and governments: by sharing knowledge, publishing data and algorithms, giving full disclosure in business transactions and governmental procedures. To this end for example, the Open Government Bill has been in operation in the Netherlands since 2022.

**Making data available
in 'real time' and using it
to adjust behaviour**

**New possibilities for the
management of cities**

¹⁸ Brazier, F. and Nevejan, C., 2014, 'Vision for Participatory Systems Design', in *4th International Engineering Systems Symposium (CESUN 2014)*.



Trust 3



Trust is a broadly used concept, but at the same time no one can precisely define it. When we talk about trust, we tend to be concerned with what we do, or don't do, personally, and where we do or don't wish to go, and with who we do or don't want to associate, or that we need more time before we are able to trust. Trust is not a tangible thing, yet you can still sense it in your body. If you don't trust something or someone, you will be less forthcoming, and more cautious and distant. If you do trust something or someone, it is good to share, to be open and to be approachable. Trust determines how we are present in the world and with each other. It is of great importance for our survival and for our well-being.

3.1 Trust in Society

Laws can create an environment that enables people to trust each other. Countries have laws that determine what good behaviour is, and offer principles to judge this by. Laws record the definition of reliability and the conditions for having trust. Thinking about these laws began more than two thousand years ago, and it has its own intrinsic logic, in addition to that of people themselves. The majority of people have never actually read the law, but they do understand the essence of the basic principles of the legal system.¹⁹ The law makes a relationship possible between people and systems, such as the market, education or healthcare. However, the current laws were not designed for the scale and speed of digital systems.

Trust is an important factor in how countries, regions or cities function. In a society with little trust, conflicts are treated differently than if mutual trust does exist.²⁰ This is also reflected in the legal system. Dutch society has traditionally been an example of a 'high trust' environment, where everyone in the polder landscape had to work together to keep the water at bay. In a 'low trust' society, such as the United States, for example, conflicts are generally fought out in front of a judge. There, people can hold each other liable for various things, and public life is organised very differently because of this. Mistrust is the starting point, and reliability is created by holding another party liable.

Trust determines the character of a society

¹⁹ One of the interviewees for the study into Witnessed Presence was Inge van der Vlies, professor and judge. She named the first eight legal principles on which the Dutch constitution and legal system are based.

²⁰ Fukuyama, F., 1996, *Trust: The Social Virtues and the Creation of Prosperity*. Simon and Schuster.

Eight Legal Principles on which the Dutch Constitution and Legal System Are Based

1. Integrity of body and mind
2. Freedom of expression
3. To live under the rule of law
4. A law that has been created by democratic process
5. Courts will apply the law
6. There will be no other force in society than the police, which operates under the rule of law
7. The right to build your own capacity
8. The right to build your own direct social relationships

Lady Justice or Themis

Lady Justice was originally a Roman goddess. She became the personification of law. Her depiction can often be found on court buildings and other places where justice is dispensed. Her Greek equivalent is Themis.

This photo was taken in 1937, the restoration of Lady Justice on the Old Bailey in London on the occasion of the coronation of George VI in May 1937.

Old Bailey / Lady Justice / Photo 1937, ©akg-images



high trust and low trust

A society with a high degree of trust is based on a strong sense of community, in which people are involved daily, and they together determine how they want to live. In such a city or village, you can safely leave your door unlocked. The whole village applies the same standard if the code of conduct is transgressed. Someone will be excluded from the group until he or she conforms. Likewise, with a football team, when a player is suspended if he breaks mutual trust. 'High trust' works on the basis of social inclusion or exclusion. Exclusion in a 'high trust' society is based on a culture of shame and/or guilt.²¹ In societies with little trust, disputes are viewed as conflicts of interest, which often lead to legal actions. Because this can easily encourage violence, there is a great deal of investment in security measures in 'low trust' societies. Here, trust costs money. The doors are not left unlocked; in fact, there's more likely to be a security camera installed.

3.2 Vulnerability, Reliability and Human Dignity

Differing concepts of trust

In Dutch, the concepts of reliability and the placing-of-trust-in are used as synonyms. Something can be 'trusted' or someone can be 'reliable' and we 'place trust in' or 'dare to be vulnerable to'. Placing trust is influenced by personal circumstances: if you feel good, if you have friendly people around you, if you are free to do what you want, if you are treated with respect, if you have the experience that you were able to trust something or someone in your childhood. To be able to place trust in others has to do with the experience of personal vulnerability. Life experience makes a great deal of difference in being able to judge whether you may or may not be harmed. You can practice to learn trust and how to deal with conflicts with trust. The way you learn trust is also related to how society sees you: whether you were born as a girl or a boy, whether you grew up in a wealthy and healthy environment or not, if you were discriminated against as a young person, whether you were able to go to a good school, etcetera.

When we talk about 'reliability', we generally relate it to systems and large organisations. A system is characterised by function, structure and behaviour.²² Executors of the system operate on the basis of experience. Experience comes from reflection on, and integration of, Damasio's three previously mentioned layers of consciousness.

Reliability involves whether the people who represent the systems or organisations are able to do as they say, act with integrity, and are well-willing.²³ These three elements, 'ability, integrity, and benevolence', are described in studies about systems and infrastructure as the base values for reliability, which are meant to give shape to the management in large organisations. They primarily determine the reliability of an organisation.

**Capacity
Integrity
Benevolence**

What is confusing is that one person represents 'the system' or 'the organisation' for another. Government officials, for example, represent the governmental system for citizens, teachers represent the education system for children, doctors the healthcare system for patients, employers the business system for employees. In your professional role as part of the system, capability, integrity and well-willingness are expected. Some accept this role because they think they can contribute to a better world, others appreciate being part of the system and thereby being able to carry out the rules; while others abuse the power that the system has given them for their own advantage, and sometimes it is difficult for one person to represent 'the system' for another because they may see an injustice arise, for example.

**Representing the system
for another person**

Following the Second World War, a new concept was introduced to set boundaries for what one person could do to another using the power of the system. The Universal Declaration of Human Rights was introduced, partly as a result of the system of mass destruction that was supported by thousands of people and led to the deaths of millions of others.²⁴ This declaration calls for the concept of 'human dignity' to be respected at all times, for every person, in every country and in every system. The respect for human dignity has become a strict bottom line for professional behaviour at every level. It applies to the soldier and the general, the director and the employee, the teacher and the pupil, the doctor and the patient, the highest official and the citizen with debts. They all have a right to have their individual human dignity respected. Because, sometimes, discussions about trust are actually about respect for human dignity, although this is not necessarily recognised.

**Human dignity
at all times**

21 Braithwaite, J., 1989, *Crime, Shame and Reintegration*. Cambridge University Press.

22 Nevejan, C. and Brazier, F., 2011, 'Time Design for Building Trust in Communities of Systems and People', in: *ICORD 11: Proceedings of the 3rd International Conference on Research into Design Engineering, Bangalore, India, 10-12.01.2011*, pp. 663-670.

23 Colquitt, J.A. and Salam, S.C., 2012, 'Foster Trust through Ability, Benevolence, and Integrity', in *Handbook of Principles of Organizational Behavior: Indispensable Knowledge for Evidence-based Management*, pp. 389-404; Lleo de Nalda, A., Guillen, M. and Gil Pechuan, I., 2016, 'The Influence of Ability, Benevolence, and Integrity in Trust between Managers and Subordinates: The Role of Ethical Reasoning', *Business Ethics: A European Review* 25(4), pp. 556-576; Svare, H., Gausdal, A.H. and Möllering, G., 2020, 'The Function of Ability, Benevolence, and Integrity-based Trust in Innovation Networks', *Industry and Innovation* 27(6), pp. 585-604.

24 See <https://www.un.org/en/about-us/universal-declaration-of-human-rights>.

**The balance between
reliability and vulnerability**

Trust is created in the balance between reliability and the vulnerability that comes from 'placing-trust-in'. If reliability is great, then one is able to be vulnerable. If vulnerability is great, then high demands are placed on reliability. Each day, we take stock hundreds of times – sometimes very quickly. For example, when we decide what we do or don't trust to eat, and whether or not we should maintain distance from each other on the bus or tram, or when we confide a secret to another. We 'compartmentalize' who we trust, to what degree, and in what area. Thus, I can trust someone because of their quality as a baker, but not when it comes to cutting down a tree. And we are often tempted to trust something that turns out not to be reliable, and this makes us vulnerable. This can cause a great deal of pain – children often experience this. It's part of growing up, we tell them. But sadly, we do this to each other as adults, too. This is why there are courts that ultimately judge who is at fault and how, because of fraudulent reliability, or gullibility that has led to unnecessary vulnerability. Trust and the betrayal of trust are characteristic of all eras. In both classical drama and contemporary literature, a frequently occurring theme is how trust is created, changes, disappears, or can be restored.

3.3 Bearing Witness

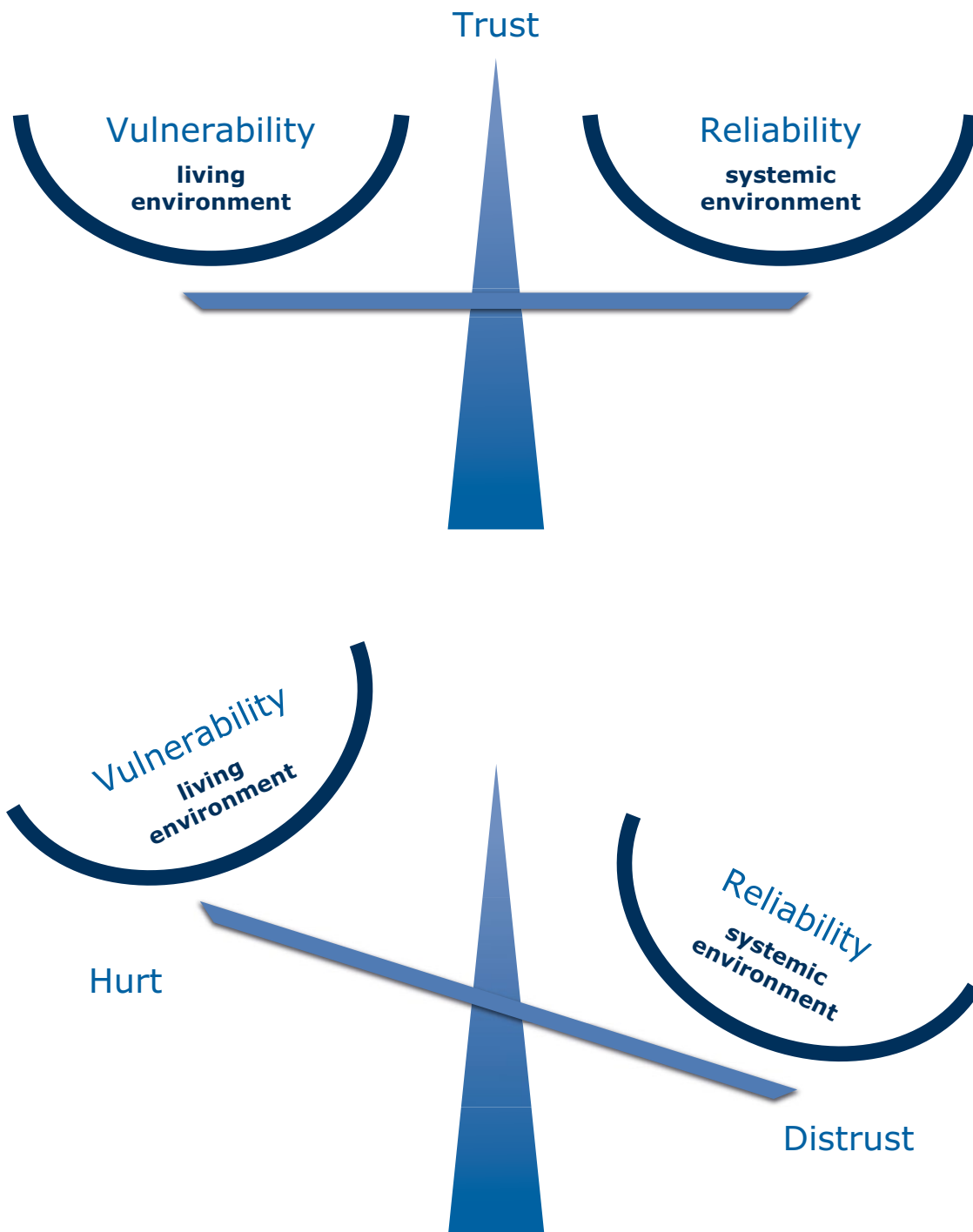
When we bear witness to each other, there is a balance between vulnerability and reliability, whereby trust may possibly crumble or grow. As a witness, I observe what takes place, and in a very short time – often less than a second – I judge according to my values and decide whether I want to do something. As a witness to your act, I can enter into conversation with you, or do something that influences how you respond. In the moment that I witness you, and you me, we reflect on our action. Is what I'm doing good? Is what you're doing good? Can it be different? Is there danger? Is it true? Can it be better? In this way, the interaction between witnesses leads to a negotiation about truth and trust.²⁵

**Social structures are created
because people bear
witness to each other**

Social structures are created because people bear witness to each other. Family and friends, neighbours and colleagues are all witnesses to each other. The witness is an important factor in law and in science. In law, the witness is a physical figure, who when confronted with others present, such as the accused party or the victim, bears witness to their truth under oath. In science, one scientist bears witness to the quality of the work of the other.

²⁵ Oliver, K., 2001, *Witnessing: beyond Recognition*. University of Minnesota Press.

Trust is the result of an equilibrium



The influence of technology has changed how we bear witness to each other, and how we give testimony to each other.²⁶ We meet each other, call and app and hold meetings online. All of these realities merge into one experience. While the law has taken more than 2000 years to arrive at a balanced whole,²⁷ we are now confronted with systems that have been developed by a handful of engineers within a few decades that already influence two thirds of humanity every day.

New scale and speed of digital networks

These complex participatory systems, which are extensive social networks that are run on the contribution of people, and which are increasingly determined by artificial intelligence, possess a fundamentally different scale and speed than the systems of survival and well-being that we as people can follow and recognise.

The basis of trust is teetering

Because of the new ways of bearing witness, and the new forms of human experience, there has also been a change in our feeling about survival and well-being, and about vulnerability and reliability. The balance of trust has become unpredictable, and this leads to existential uncertainty. Although we seldom speak in these terms, most people unerringly feel that the basis of trust is teetering, and the old forms of survival and well-being are over. The current participatory 'complex systems' no longer offer any guarantee of survival and well-being, although no one is precisely able to pinpoint where the shoe began to pinch, as it were. Social networks such as Facebook, Twitter, Alibaba, and WhatsApp not only make interaction possible, they also play an important role in the creation of social unrest and political control. Naturally, the political world is responsible, but the political world has also grown dependent on the systems of digital technology, and visible and invisible hierarchies and informal cultures in the present-day communities of humans and systems.²⁸

26 Gill, S.P. and Nevejan, C., 2011, *AI & Society Journal of Knowledge, Culture and Communication*, special issue *Witnessed Presence*.

27 For the whole interview with Inge van der Vlies, see: <http://www.being-here.net/page/1407/inge-van-der-vlies--in-the-presence-of-law>

28 Nevejan, C., 2012, 'In time: Between Emergence and Design', *Next Nature*, pp. 214-221.



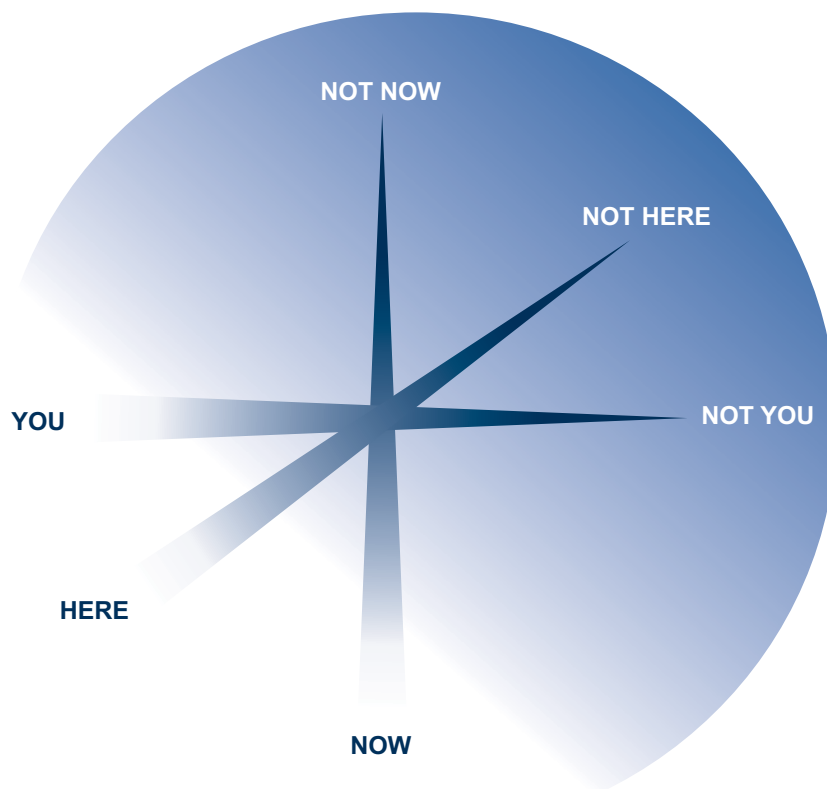
YUTPA 4

In our rapidly changing, uncertain and unpredictable environment, people still have to make daily choices about what they do and don't trust. To better understand how we make choices in situations where it is unclear whether or not we can trust, I developed the YUTPA framework that will be discussed in this chapter. Trust is foremost the result of a deliberation between vulnerability and reliability. This deliberation is determined in the four dimensions of Time, Place, Action and Relationship. Knowing whether an environment is reliable or not gives maximum opportunity to shape one's own presence, and to be able to anticipate what is likely to happen.

4.1 The YUTPA Realm

In my PHD study, *Presence and the Design of Trust*, I introduced the YUTPA framework to describe the newly merging online and offline communication spaces.²⁹ The acronym YUTPA stands for 'to be with You in Unity of Time, Place and Action'. As well as the communication space in which we physically live together, we have also developed new ways of being present together through technology. The framework establishes a relationship between our physical presence in the world and the new means of being present that ICT now offers in the four dimensions of Time, Place, Action and Relationship. In my thesis, I describe these situations as Now/Not-Now, Here/Not-Here, Do/Not-Do and You/Not-You. Between these positives and negatives is where deliberation ultimately takes place: the compromise on the basis of which we shape our presence.

In these new communication spaces, truth and trust are not necessarily deliberated on in the same way as previously. In the YUTPA realm, there are eight different communication spaces. The four dimensions of You, Now, Here, and Do make up the original communication space in which mutual trust is created among people who are physically present. Technology has added extra spaces. Technology consists of techniques, tools and an infrastructure within which these function. In collaboration with colleagues in the sciences, the arts and the design discipline, we identified factors in each dimension that influence the trade-off for trust.



The YUTPA Realm:
to be with You in Unity of Time,
Place and Action.

In the light half of the sphere
we live, we love, we are born
and die.

In the dark half of the sphere
we cannot act.

Nevejan C., 2007. *Presence
and the Design of Trust*, diss.,
University of Amsterdam

image: Max Bruinsma

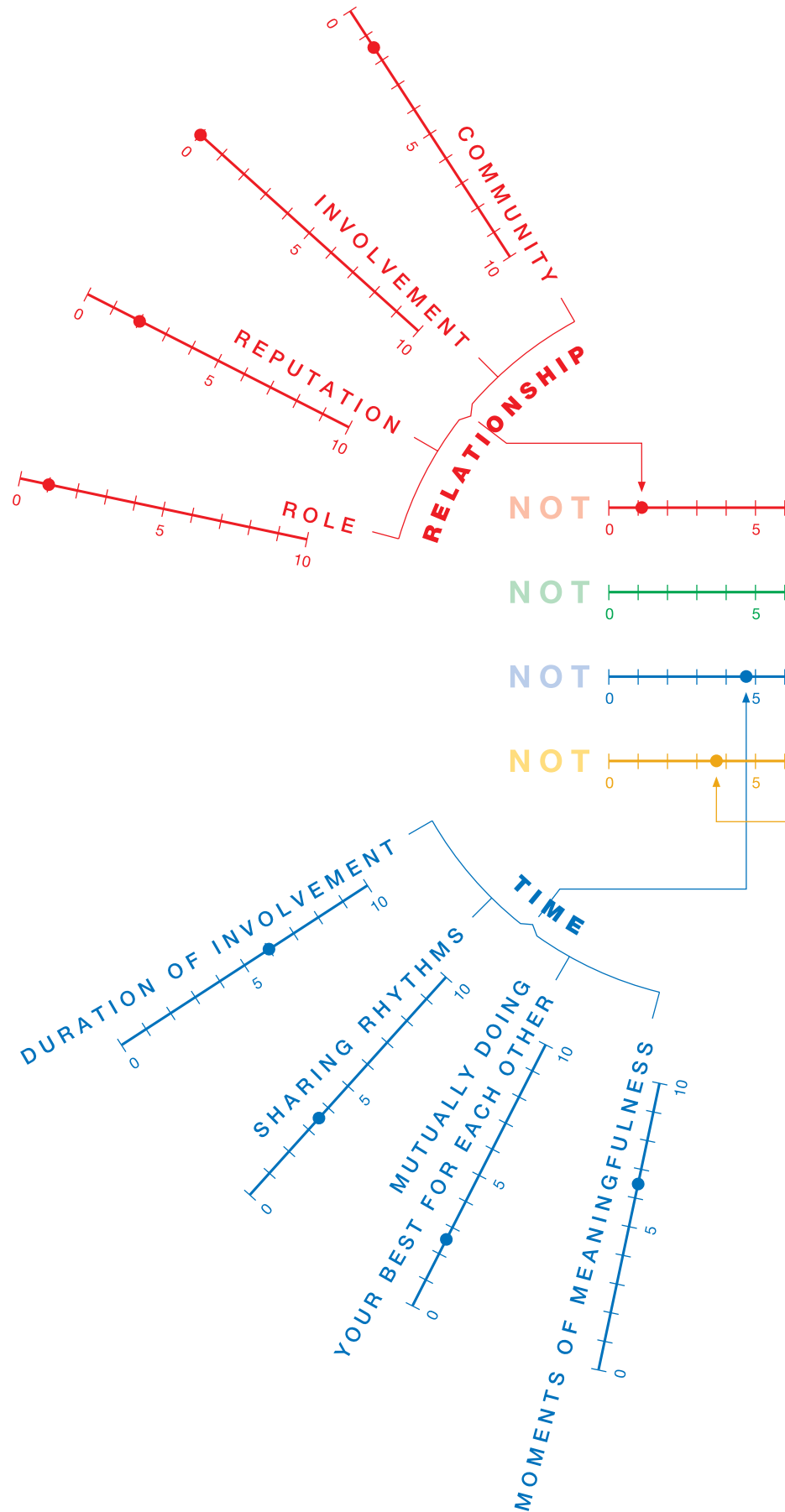
- **You / Not-You** is concerned with whether you are in a relationship with someone. A text message from a friend far away has an entirely different significance than a text message from a telephone company around the corner. If you don't know each other, such as the other people walking on a busy shopping street, for example, then these others are primarily information: so that you don't bump into them, for example. If I am in a relationship with them, as with family, colleagues, friends or neighbours, then the online communication with them is also meaningful.
- **Now / Not-Now** is concerned with whether you are present now or not. Perhaps earlier or later, but not at this moment. Not-now means that you are involved with documented information and communication. Now means that you can communicate in real time.
- **Here / Not-Here** is concerned with whether you are physically present, because you then also share a sensorial world together. Not being physically present means that you have very limited sensorial information available, but you can be present all over the world with your mental power. You are dependent on others, though, to be able to act in the other physical space that you are not present in.
- **Do / Not-Do** is concerned with whether you can act. This may involve acting physically, or acting online, or not acting. The feeling of being able to act contributes to trust.

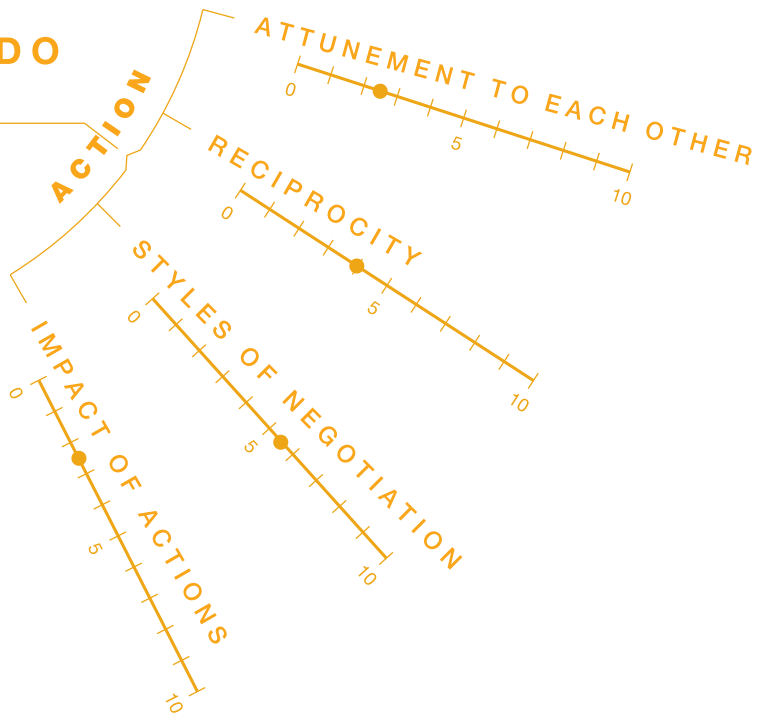
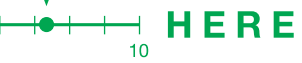
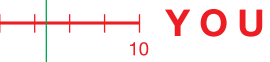
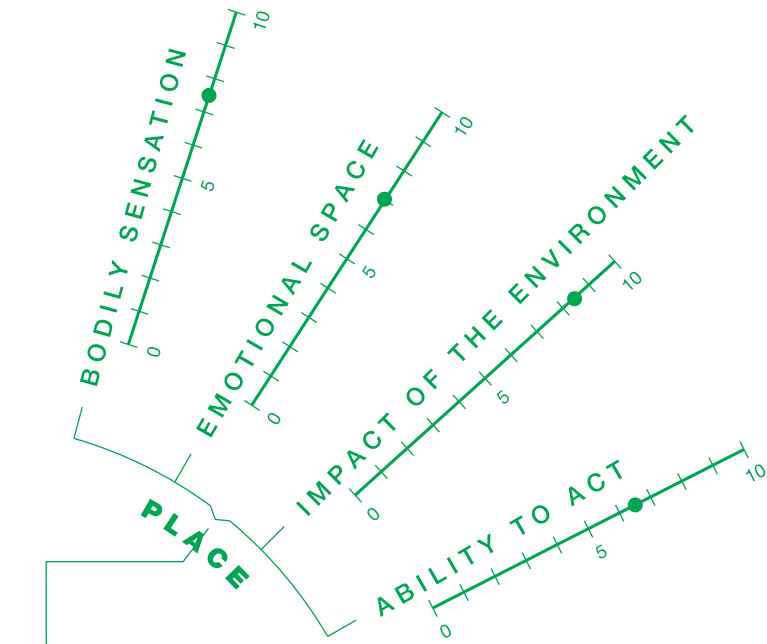
29 See research via www.being-here.net

Publications: Nevejan, C. and Brazier, F., 2012. Granularity in reciprocity. *AI & society*, 27, pp. 129-147.

Nevejan, C. and Brazier, F., 2011. 'Witnessed presence in merging realities in healthcare environments'. *Advanced Computational Intelligence Paradigms in Healthcare 5: Intelligent Decision Support Systems*, pp. 201-227.

Nevejan, C. and Brazier, F., 2015. 'Design for the value of presence', J. van den Hoven, PE Vermaas, I. Van de Poel *Handbook of ethics, values, and technological design: Sources, theory, values and application domains*, pp. 403-430.





Factors have been identified in every YUTPA dimension that influence the deliberation to trust.

Concept: Caroline Nevejan

Design: Chin-Lien Chen, Office CC

These eight communication spaces involve specific opportunities for communication; thus, the deliberation and negotiation of truth and trust are different.

'You/Not Now/Not Here/Do' could include a letter I write to my grandmother, for instance. I am in a relationship with her, she is not present with me here and now, and I do perform an action, namely write a letter. 'Not You/Now/Here/Not Do' could involve being present in an environment where I don't know anyone and can't do anything. For example, waiting for a train.

The space 'Not-You, Not-Now, Not-Here, Not-Do' is characteristic of the numerous underlying technological systems around us. It is a space in which we cannot live, cannot breathe, although these systems do have a great deal of influence on our daily life. It seems obvious to point out, but this is important in an age when systems threaten to become omnipotent. In contemporary society, a great deal of reliability is attributed to these systems of 'Not-You, Not-Now, Not-Here, Not-Do', and we have become deeply intertwined with these systems. They have become part of our bodies, so that we are now in fact cyborgs.³⁰ The tension between the living space 'You/Now/Here/Do' and the systemic space 'Not-You/Not-Now/Not-Here/ Not-Do' demands daily attention from many people, and we often do not know how to deal with this.

4.2 The YUTPA Factors

Following the development of the YUTPA realm, I investigated what factors influence the deliberation of trust in each dimension. In an interdisciplinary study including scientists, artists and communication experts, such as designers and journalists, the factors were identified in each of these four dimensions that partly determine the deliberation of trust, and also influence how people want to, and can be, present.³¹ This framework was created based on 22 interviews, commissions awarded to thirteen artists, and a special publication, *Witnessed Presence*, with 11 scientific articles from the journal *AI & Society, Journal for Knowledge, Culture and Communication*.³²

4.2.1

Time

People are, of course, mortal beings. Our mortality is an existential perception that often occurs in puberty. Mortality is a major theme in cultural and religious rituals, and in world literature. In popular games, people repeatedly die, and we have many lives. In reality, this is not the case. According to science, we have only one.

Before the arrival of IT, time was a natural fact that originated with the local rhythms of day and night, and the rhythms of the seasons of the plants and animals around us. Currently, we have a 24/7 economy, and we always know where the sun is going to rise somewhere in the world at any given moment, while in our region the sun may only just have set.³³

People integrate various sorts of time into their personal lives. The time of nature around us, the time of and inside our bodies, the beating of our heart, our breathing in and out, the time of the clock that characterises our societies, and now the 24/7 systemic time that our information and communication increasingly depends upon.

Time is an important dimension of personal experience, and also of communal social experience. Paradoxically, a minute's pain may feel as though it lasts longer than ten hours of waiting for a bus. While a day spent together in love with someone can feel like an eternity, and ten years of living together can feel as if it's just flown by. At school, and later at work, time can often feel like an accordion squeezing in and out according to what is taking place.

Duration of Involvement

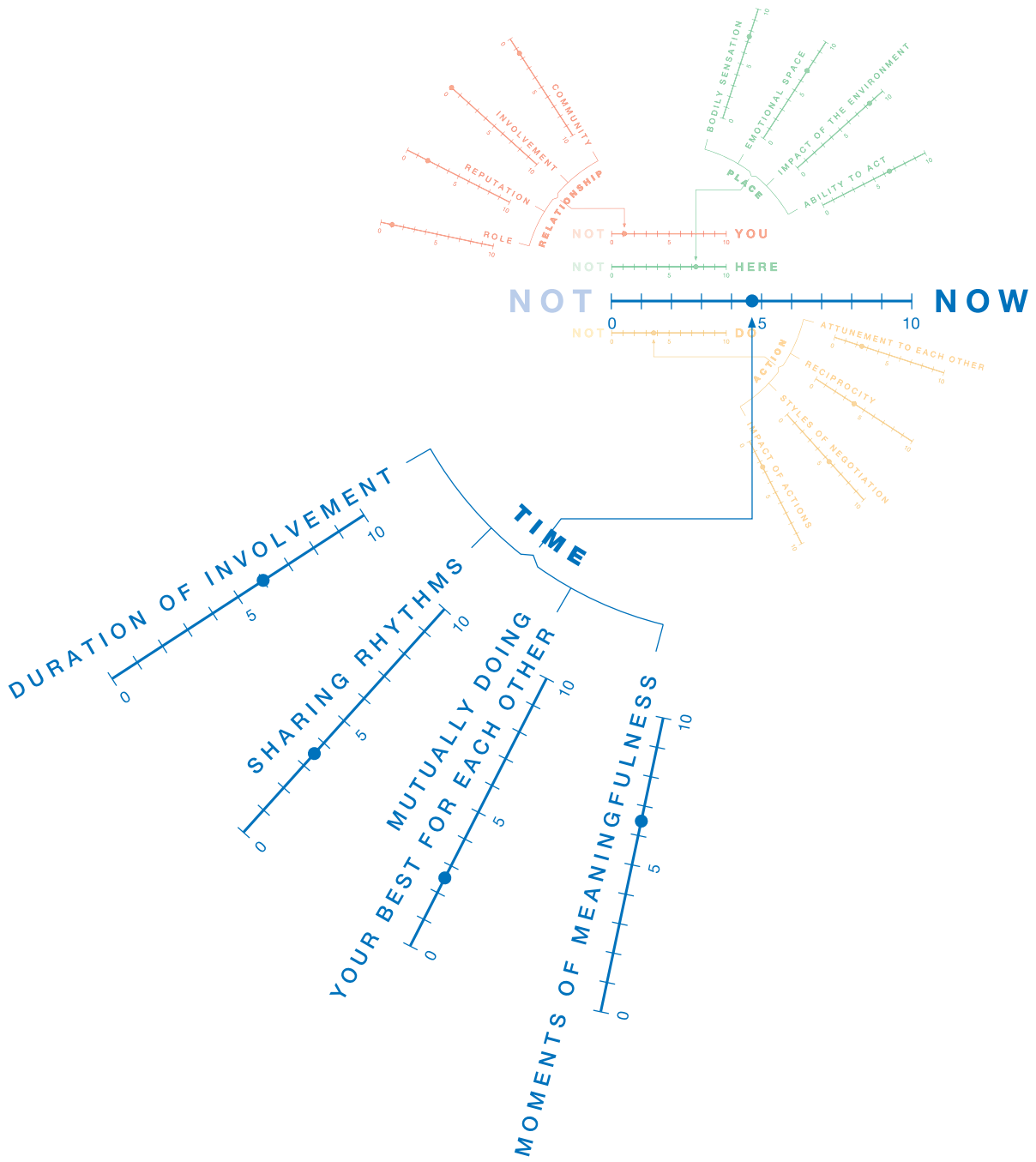
To evoke trust, the duration of involvement must suit the goal of the interaction. If it is a question of living in a street, for example, the longer one lives there, the more knowledge will be acquired of what can or cannot be trusted. The duration of the involvement can also give one the right to speak. In contrast, when downloading software, it is important that the duration is as brief as possible.

30 Haraway, D., 2006, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century', in *The international handbook of virtual learning environments*, pp. 117-158. Springer, Dordrecht.

31 The entire study, *Witnessed Presence 2009-2012*, can be consulted via www.being-here.net

32 Gill, J.S. and Nevejan, C., 2011, *AI & Society Journal of Knowledge. Culture and Communication, special issue Witnessed Presence*.

33 The various New Year's Eve celebrations on television on the night of 31 December to 1 January are an excellent example of this. The New Year travels across our planet with the international date line.



Sharing Rhythms

People develop rhythms to give structure to life. Some examples include working hours and school hours, lunch breaks, agendas, vacations. The integration of rhythm into an interaction provides certainty and the sense that something, or someone, is reliable: such as the family that has breakfast every morning at 7.30, the team meeting every Tuesday morning, or the local police officer who stands outside the school at the same time every week, so that the parents can speak to them.

Mutually Doing Your Best for Each Other

If two parties attune to one another simultaneously, mutual trust is created because one offers the other the opportunity to be approachable and vice versa. Examples include saying good morning in a shop, two people ensuring that they arrive at an appointment on time, or two people giving the best of themselves in a meeting. It is a question of large and small efforts to offer one another an opening.

Moments of Meaningfulness

As people, we have the need to give meaning to time. We do this through rituals and celebrations such as birthdays, weddings, or an annual neighbourhood party, for example. In this way, shared experiences are created and also relationships in which norms and values are (again) confirmed.

4.2.2 Place

Place is where the physical and mortal body is present. The interaction between the body and the environment is fundamental to steer survival and well-being, and also in order to be present. Organisations often also offer a physical space through their location, just like the city, the school, and the family do. The feeling of being at home, of having the right to speak in a certain place, is not always self-evident for many people because it is connected to physical places that have sometimes become inaccessible through changes or migration.

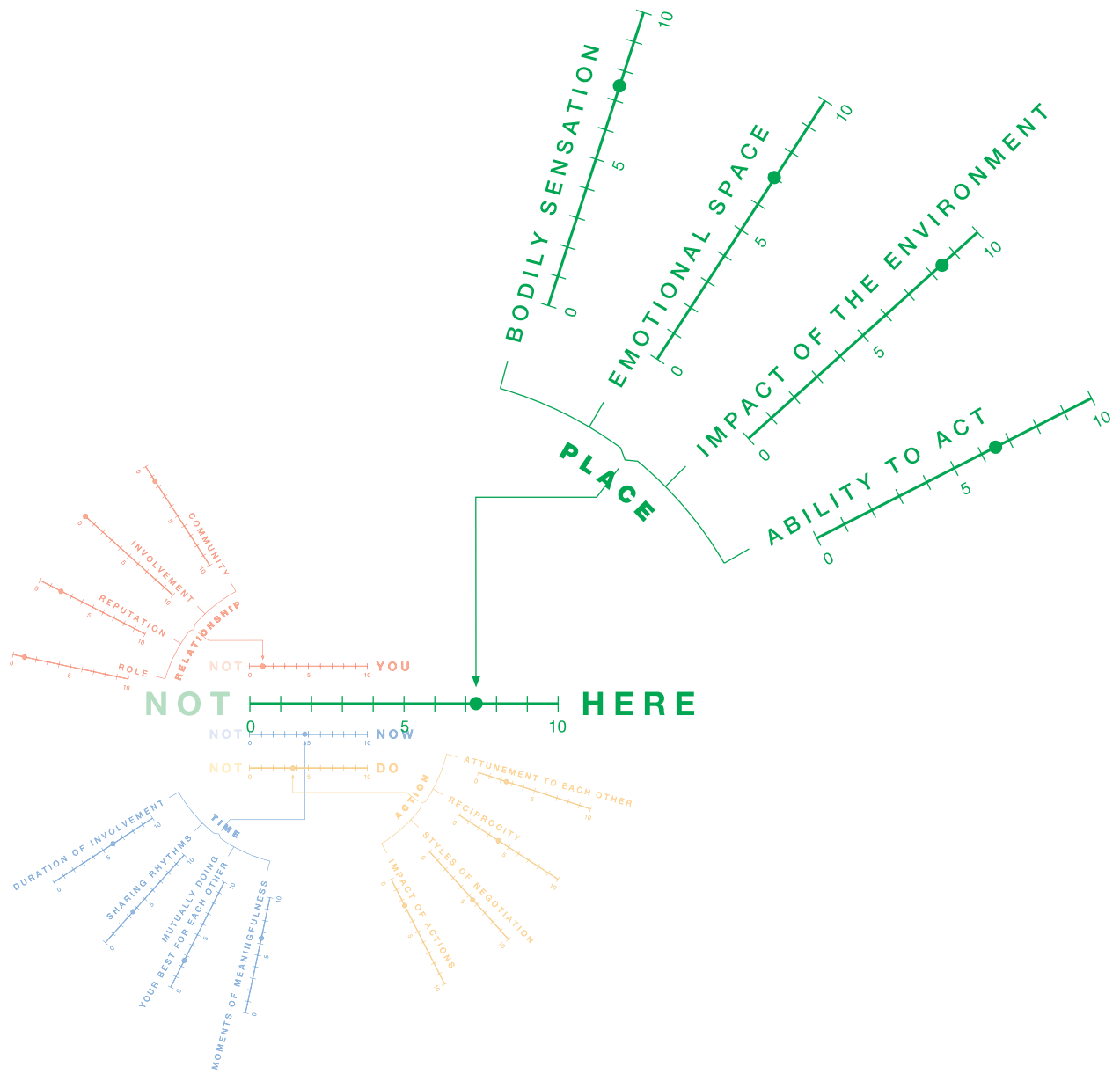
In the online world, our not being in the same place is frequently a given. People meet each other on screen. People increasingly frequently do their best to look good for each other on screen. Since the Corona pandemic, work and professional contacts have increasingly taken place in communal online environments. And in 'multi-player' games, thousands of people play together at distance every day. The expectation is that such online environments will develop further, and that we will operate in other ways online.

One important fact to consider is that when you have met each other in real life, it is also easier to have an image of each other online. Following the pandemic, we now sometimes meet colleagues who we only knew via the screen, and who appear to be very different 'in real life'. People can also be represented spatially in online forms of appearance. For example, when I teach online, I ask someone to be my 'physical social interface', and to move through the space on my behalf, while I speak with various students via the laptop.³⁴

Bodily Sensation

Our physical condition influences how we experience an environment. If we are fit and well-rested, a street looks very different than if we are sick or tired. The bodily sensation is also determined by our clothing or the way in which others look at us. It has an effect on you if you are a woman who is whistled at in the street, or if you are the only person with dark skin in a white environment, or vice versa. Sometimes, the body also gives us intuitive information about safety. Bodily sensation is often very clear and cannot easily deceive.

³⁴ Gullström, C., 2010. *Presence Design: Mediated spaces extending architecture*, diss., KTH Royal Institute of Technology Stockholm.



Emotional Space

Our emotions have a great influence on how we experience our environment. If we are tired and depressed, a sunny beach can be a tiresome experience. If we are in love, a small room can feel like a palace. But if we have a quarrel, that palace can feel like a prison. If an interaction or intervention has a positive effect on the emotions of the party involved, this strengthens the feeling of trust.

Impact of the Environment

The environment can have a positive or negative impact on our presence, and thus can influence our feeling of trust. For example, it makes a difference if you meet someone outside in the rain or inside in a sociable and warm community centre. The body responds to the environment and atmosphere, sometimes before our consciousness even realises it. Being present online demands a great deal of the body and mind. Online, you have to call others to mind, and you have to add to the missing sensory communication with references and imagination. The body plays a subservient role in this, because you often barely move: only your eyes, ears and your typing fingers clearly grow tired.

Ability to Act

If the place where you are located offers the opportunity to act (yourself), this creates more trust because you can exercise an influence. Can you hang photos on the wall at school, for example, or are you not allowed to touch that wall? Are you allowed to cook at home and do you have the right to speak at work? If all sorts of rules apply in the public space of a shopping mall, so that you can't move as you wish, this has an influence on the degree of trust. If you *are* allowed to paint the wall in a youth centre, or if you *are* allowed to plant flowers and trees with others in your own street, trust soon grows.

4.2.3

Action

The way in which we act together determines both reliability and vulnerability. As witnesses to each other, we observe and form judgement, and afterwards we can decide whether or not to contribute to a situation or to intervene. Bearing witness to each other can transform a simple action into an act. In bearing witness, we not only observe one another, we also bear witness to ourselves. This involves a moral or ethical judgement, as well as the power to act. Interaction stems from a series of successive actions, in which we bear witness to each other and to ourselves, and in which trust is built or not.

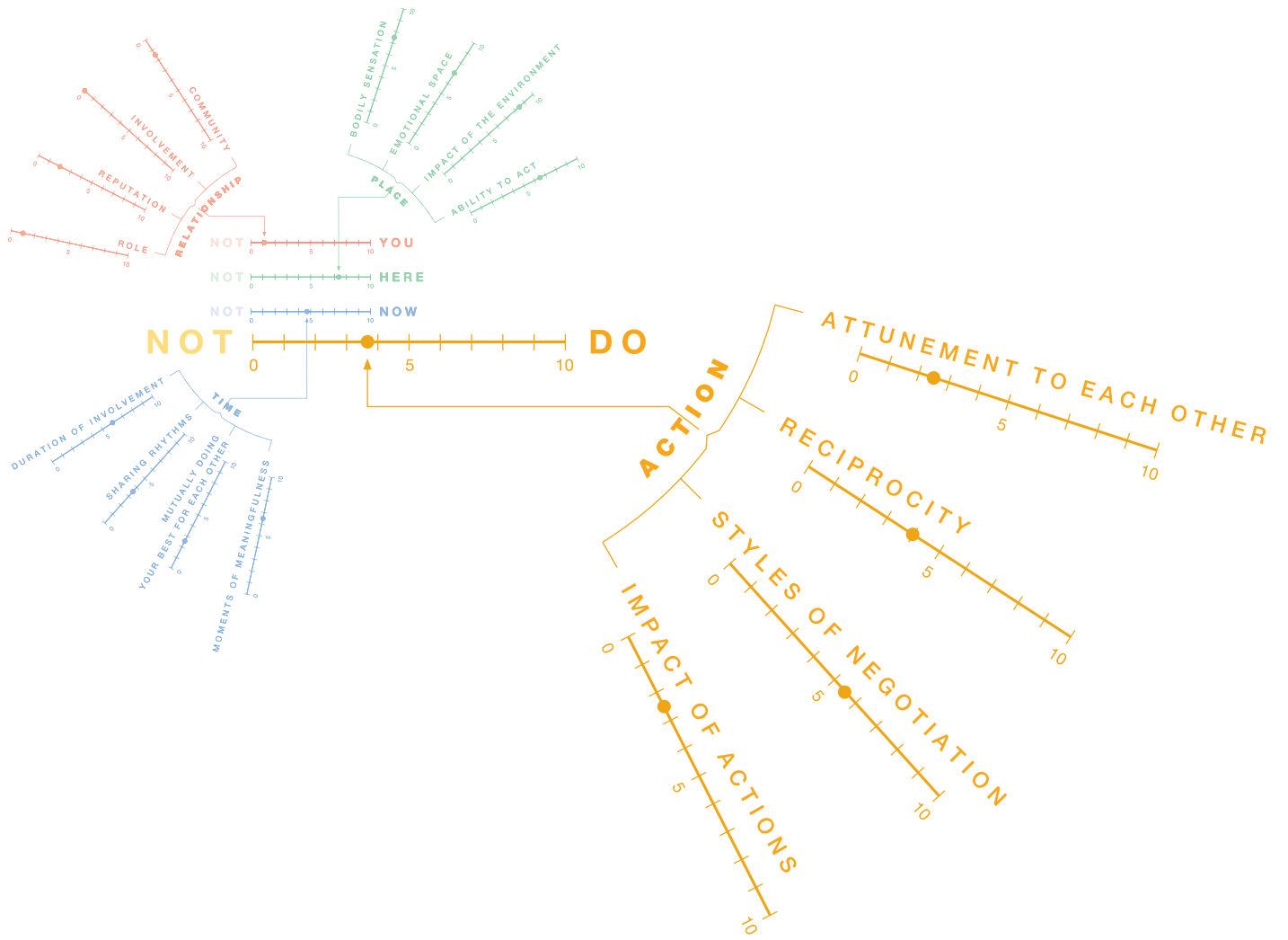
If people are able to act for themselves, this gives them a feeling of having freedom of choice and being able to exert an influence on what takes place. One is able to take responsibility. If the opportunity to act does not exist, people then adopt a moral distance towards others and sometimes even towards themselves.

Attunement to Each Other

We don't bump into each other on a busy street because we adjust to each other's movements naturally. We often do this at home and at work, too, without thinking about it. It is important for the degree of trust whether the parties involved (unconsciously) adjust themselves to each other. When two people meet, there is an unconscious attunement of their bodies, breathing and movement. If the first moment of attunement does not go well, it is more difficult to trust each other. Attunement is of great importance in formal environments, too. Online, attunement is more difficult. There is little bandwidth, it is difficult for you to move, and computers turn on or off. During Corona, many people nevertheless found ways to be able to attune to others to some degree, with games online, walking with Teams on, chat breaks, etc.

Reciprocity

In forming trust, it is important that there is give and take in the mutual exchange. I make a cup of tea for you, and next time you will do that for me. It could also be that you don't make tea, but you do take my rubbish out, for example. Reciprocity is not a question of doing exactly the same thing, or counting or measuring, but mostly taking turns to do each other favours out of a feeling of respect. Reciprocity plays a major role in friendships, for example. Reciprocity online could also consist of taking turns to do things for each other. The exchange



of creative expression, for example, – I send you a piece of music, you send me an image, then I send you a poem – can also create great trust between people who do not know each other and cannot meet each other.³⁵

Styles of Negotiation

Negotiation is a process involving many interactions, in which various interests are set out, there are winners and losers, and sometimes also a balance is sought among the various interests. People have different styles of negotiation that are dictated by culture and upbringing. If there is a case of a similar style of negotiation, then negotiations progress more easily and trust grows more quickly. Tough negotiators enjoy other tough negotiators. They play the same game and recognise each other's emotions. Applications and artificial intelligence programmes increasingly aim to play a role in negotiations, whereby these negotiations are viewed as technical procedures and deliberations. The financial world is now entirely dependent upon them. However, they are not transparent to the layman, and this can contribute to feelings of unease.

Impact of Actions

An action can be simple, but the consequences can be great. A simple pen stroke, or a tick placed in a database, and an entire life can change. Every act can have significant consequences, but in the online world it is sometimes a case of a great distance between action and impact. The drone attacks in Pakistan by women and men who were physically in the United States are an extreme example of this. But in the case of a local government, too, typing a few words can dramatically change the lives of other people. For people who represent the system, it is of great importance to regularly and consciously examine the effects of their actions.

35 Nevejan C., 2020. 'Architectures of Trust', in *Values for Survival, Cahier 2, Chapter 6*. Het Nieuwe Instituut, Rotterdam (<https://openresearch.amsterdam/nl/page/65307/chapter-6-architectures-of-trust--introduction>).

4.2.4

Relationship

Trust plays a major role in how we relate to each other. The customs called upon to orchestrate relationships and trust can differ per culture. Sometimes they are obligatory, and at other times they are simply enabling. However, you cannot compel people to trust one another, which has been shown time and again.

Societal and political dynamics also have a major influence in this. Respect for human dignity plays a key role before there can even be any question of trust. How people relate to each other is also significantly influenced by power and powerlessness, undermining and oppressing, and autonomy and dependency.

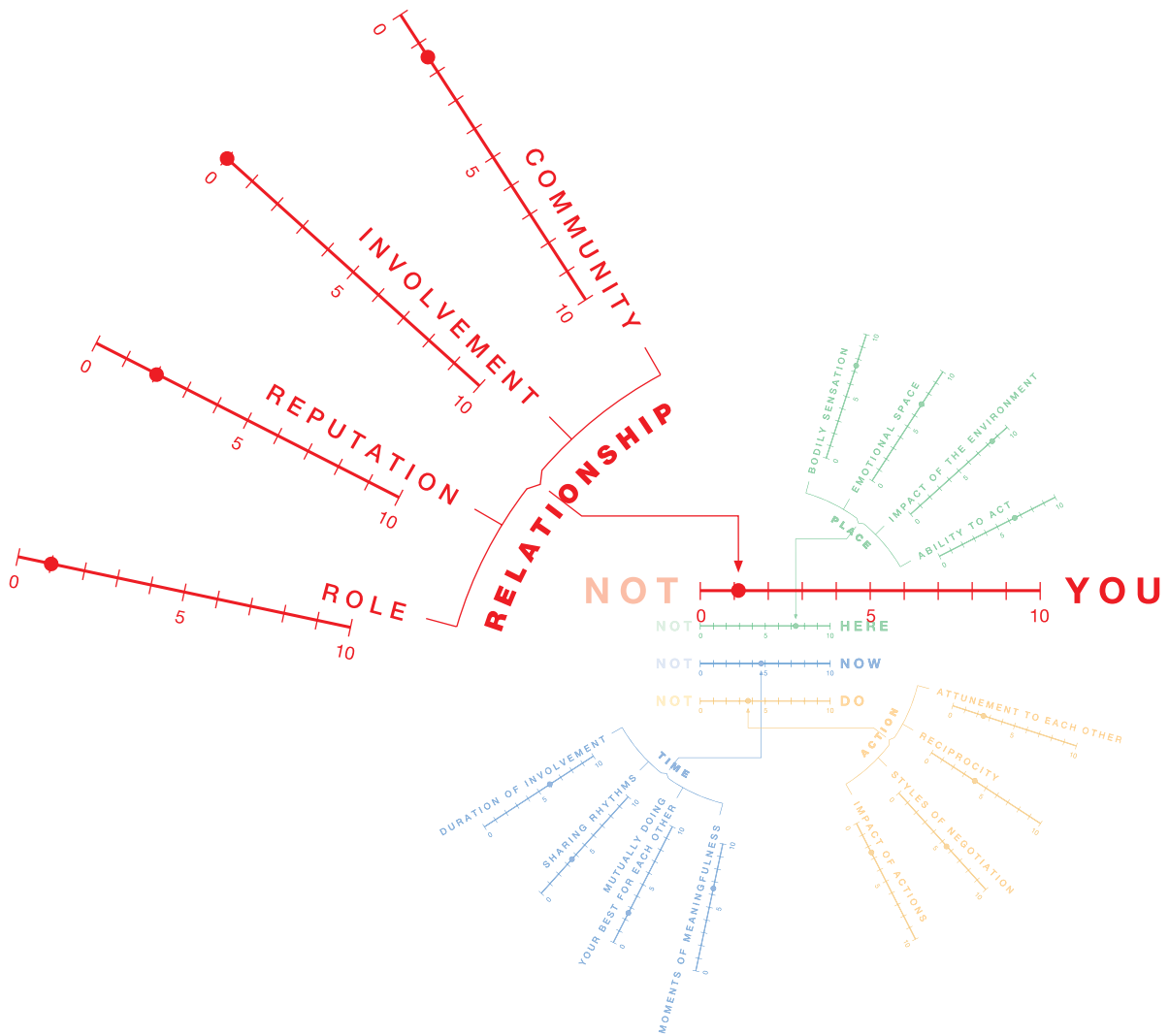
Trust is an important factor in the online world. There are relatively few reference points, and it is difficult to check whether what you think you are a witness to is really taking place. And if you are aware of this, how are you supposed to act? There is a great deal of mistrust in the anonymity of the Internet. Time teaches, however, that whereas you could previously have separate identities in the offline and online worlds, this has grown increasingly difficult in the digital world in particular. More and more companies now only work online and, unexpectedly, people that work in this way develop solid reciprocal relationships. In this regard, you can see that we as a society, and as individuals, are becoming used to the new age, and that our bodies and social structures are adapting.

Role

When a doctor or teacher behaves in a way that is appropriate to the role of doctor or teacher, this creates trust. The way in which an individual behaves professionally determines whether an interaction is fruitful and if trust is established. Sometimes it is necessary to be word perfect in your role, sometimes less so. The police officer has less latitude in their behaviour than a grocer does. Some professions have strict protocols; others are more dependent upon reputation.

Reputation

The reputation of an individual or system plays a role in building trust. Trust is slowly won and quickly lost. The management of reputation is an important task, particularly in the case of big organisations. Reputation stems from previous behaviour and sets the pattern for expected behaviour. Many reputation systems have



been created in the digital world, and especially the Internet, which have an influence on business or people's work. Reputation can also make or break people in the context of a neighbourhood, family or circle of friends. A 'cancel culture' has now developed because of the current large scale and speed of the online world. Movements such as #MeToo are powerful and have become well-known because of the Internet, which acts as a catalyst for justice. Reputation systems are also able to exclude and break people. However, reputation systems that are based on rumours and fake news actually undermine justice and reliability.

Involvement

Personal involvement often has a positive influence on the degree of trust. Only when it is too great or undesired does it lead to less trust. Systems that create involvement function differently: a good monitoring system, for example, guarantees safety, but can also intrude upon privacy against one's wishes. A good understanding of the functioning of systems is a precondition for being able to evaluate their involvement.

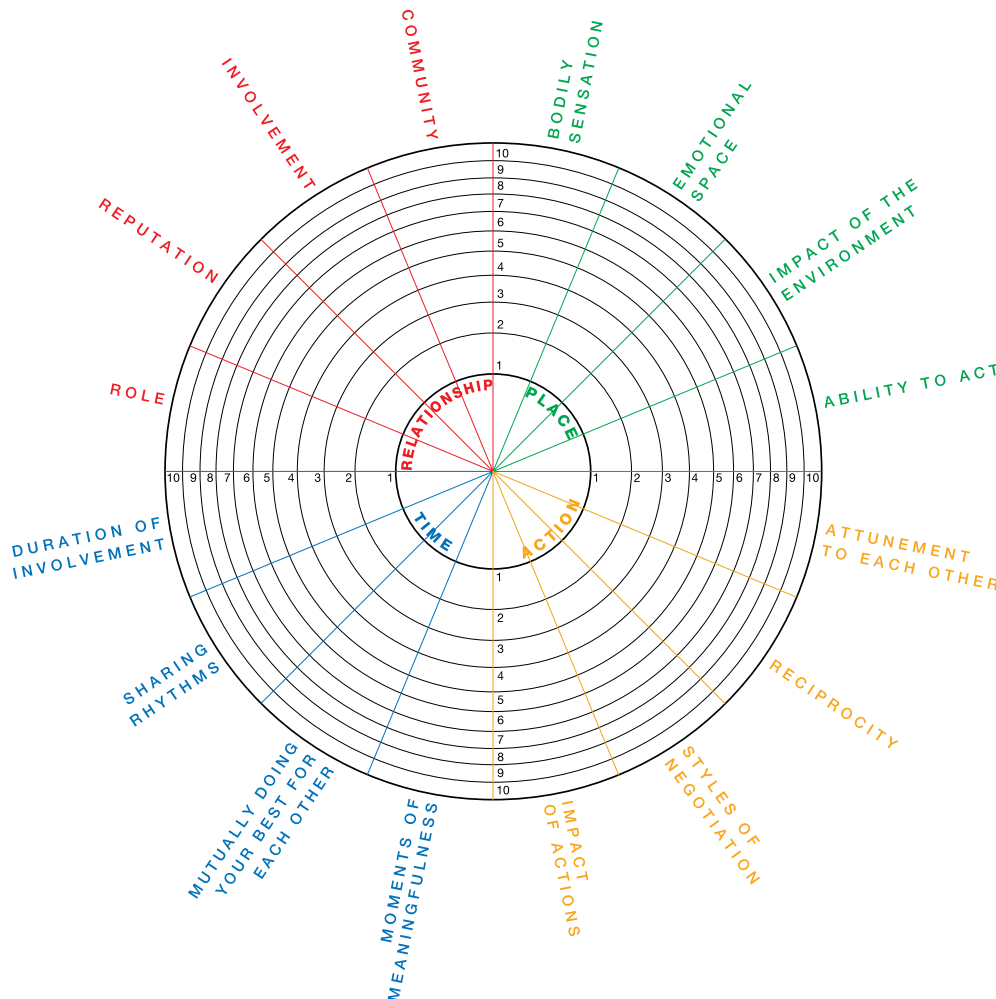
Community

If you form part of a community, you experience more trust. A community can include a neighbourhood or a family, a culture or sub-culture, or a football team, for example. In a community, norms and values are shared, the same (symbolic) language is spoken and recognised, and sometimes people also share a spiritual dimension. Communities include and exclude, and this can be very painful. When people are part of the same community, and this is also true online, there is a natural trust.

4.3 Working with the YUTPA Framework

The YUTPA framework was developed to analyse how and why we trust something or someone. It provides insight into the way in which trust is designed, and how we can better achieve this. It offers both an analysis and an indication of where design space exists to be able to make trust greater or smaller. A YUTPA analysis clarifies how the deliberation of trust is arrived at. This analysis does not formulate what 'good trust' is, it facilitates the discussion of how the deliberation of trust is made. By making this deliberation clear and transparent, it is possible to create design spaces for new solutions for the design of trust within the four dimensions.

In each of the four YUTPA dimensions, Time, Place, Action and Relationship, there are four factors that influence the deliberation of trust in that particular dimension. These factors are issues, or themes, that play a role in every deliberation, but the way in which they achieve it differs per situation. For every factor, it is therefore essential to first



This is the **YUTPA rose** that we use when making analyses for deliberations of trust, and for the identification of design spaces.

Design: Chin-Lien Chen

establish how that factor plays a role in a particular situation before beginning to work with the framework. When it comes to the factor of 'duration of involvement' in the dimension of Time, for example, if you are waiting to have something repaired, a short period of waiting time will generate more trust than a longer period would, while the repair person will gain more trust if they take time for a client.

Teti Verhoeff, Aisling Kloosterhuis, Heike Faber and Jurriaan Baas design new materials for using the YUTPA framework in the municipality of Amsterdam. These are sketches from their process.

Before beginning a YUTPA analysis, one must establish when a factor increases or decreases trust. In science, this is referred to as 'designing a protocol'. Hereby, the contribution and the value of the factor in

1. Answer the questions about the case study

Time

Relationship

See how trust is created

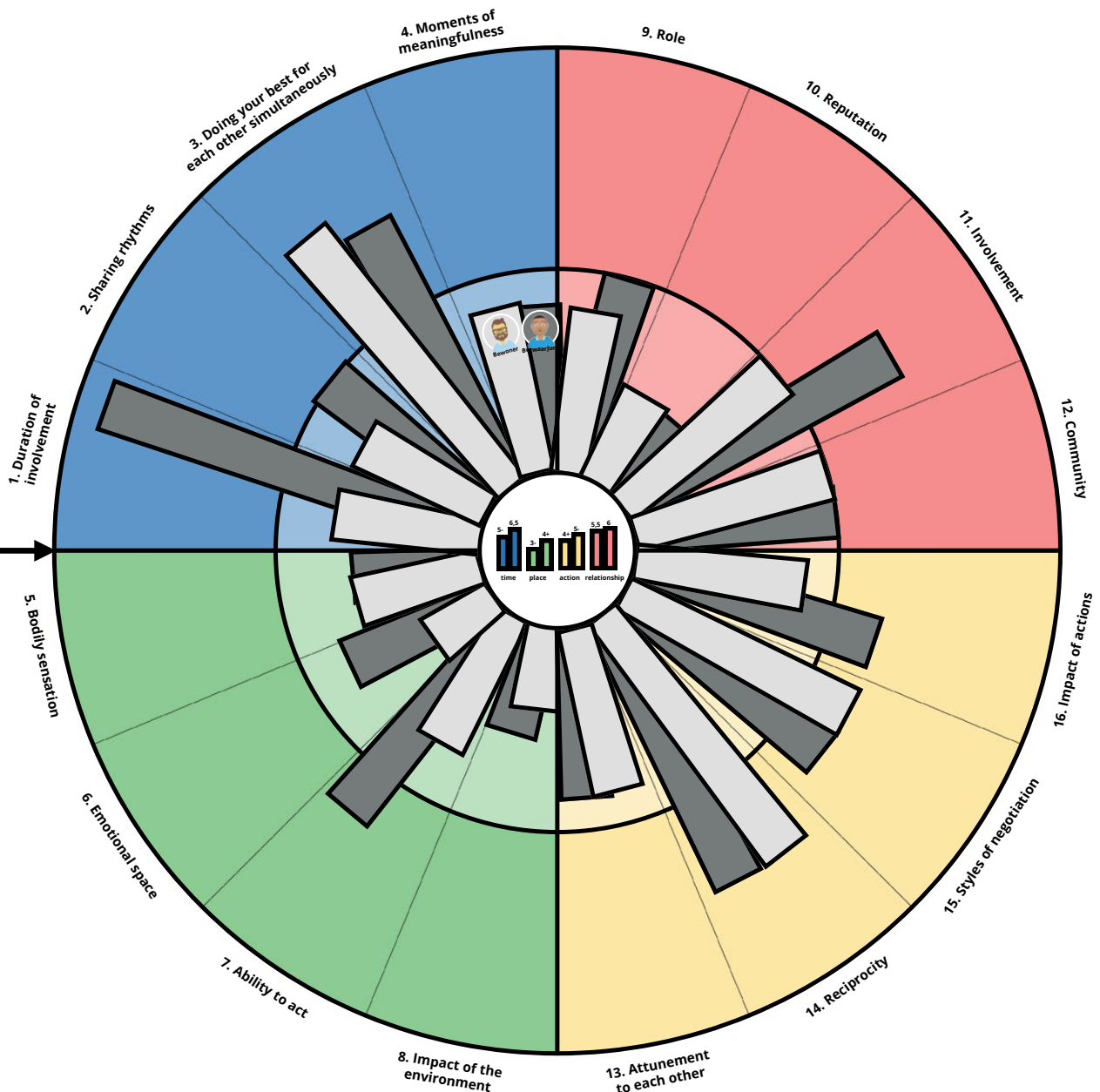
Place

Action

question in the deliberation of trust must be established. Sometimes a protocol is designed in advance, sometimes the participants do this themselves. The discussion about the protocol in itself is very valuable for participants in the situation that is to be analysed.

A YUTPA analysis is created for a specific situation, interaction or process, from a specific perspective by colouring in one or more 'YUTPA roses'. You place the process, or the intervention, or the various participants of the interaction in the middle of the rose. Then a value is assigned per factor. This can be done individually or with others. The self-reflection

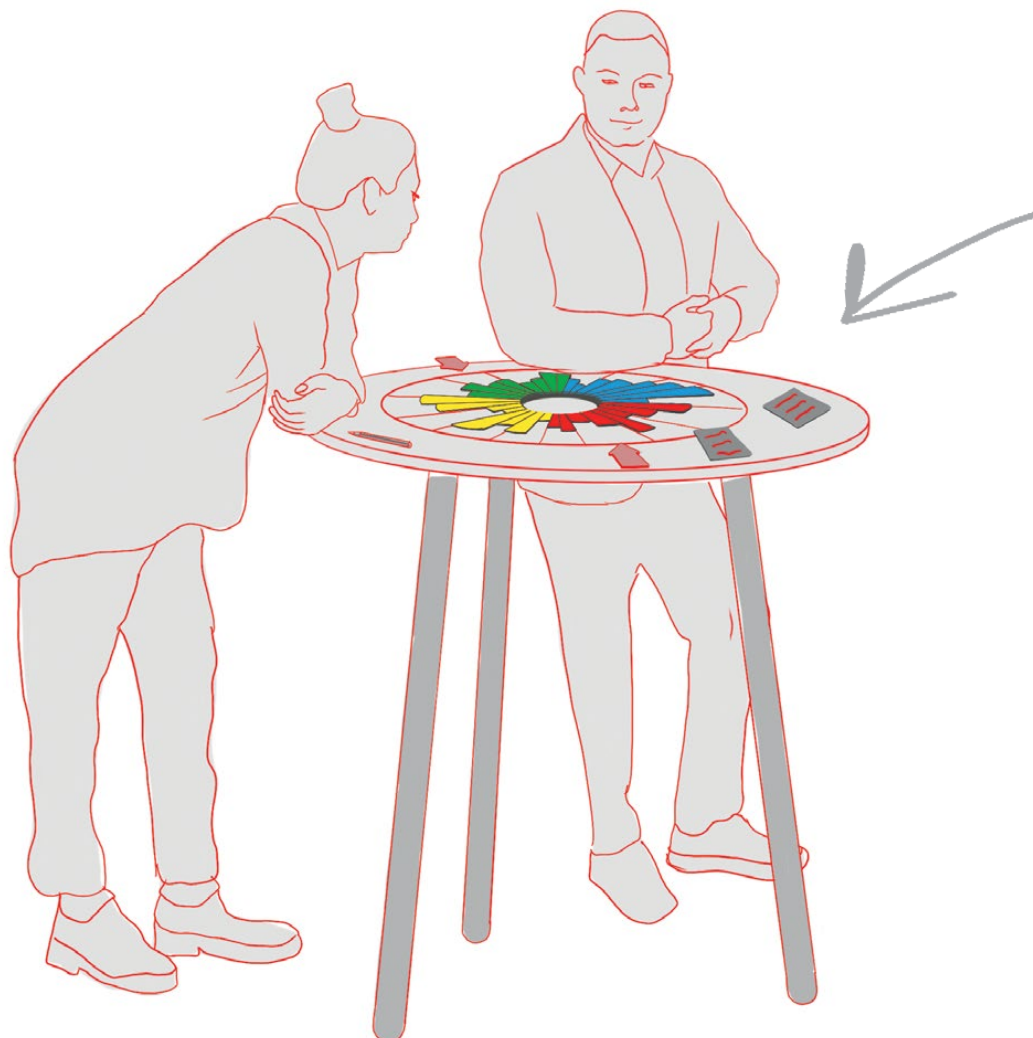
2. See how trust is created between the main participants



or the discussion about what value to attribute to each factor, and the completion of the entire rose, provides insight into how the deliberation of trust is made.

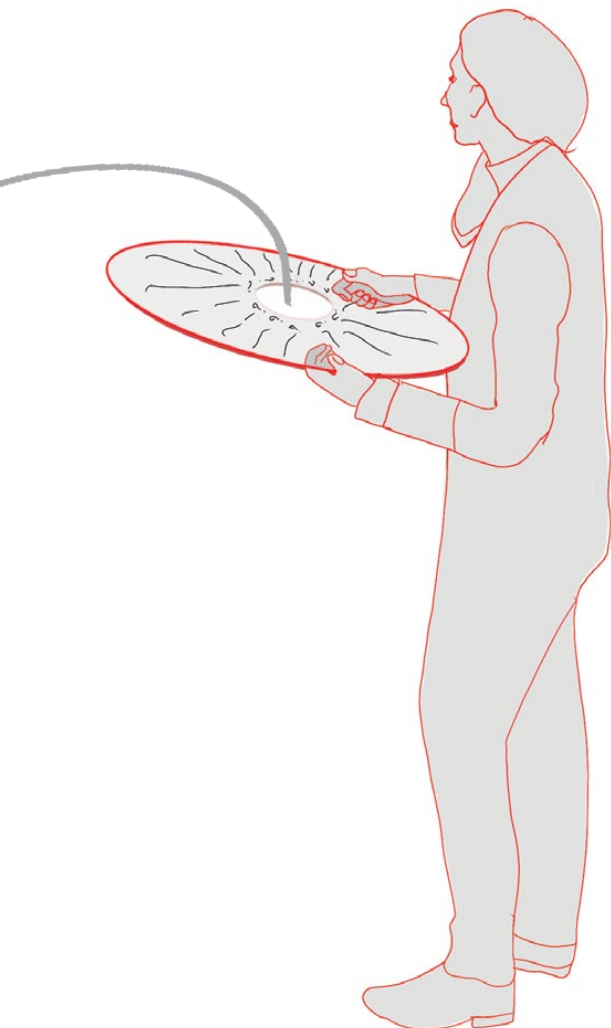
Civil servants and citizens, doctors and patients, teachers and pupils, and entrepreneurs and clients all have differing perspectives. Comparing these perspectives gives insight into unexpected design spaces. An analysis of a process or an organisation can indicate what factors one expects to be successful. It is only when confronted with a YUTPA analysis that it becomes apparent whether this is actually the case.

When conducting a YUTPA analysis from multiple perspectives, a structured discussion emerges regarding how the deliberation of trust is made, and you gain insight into how different this deliberation can be experienced from differing positions. By making clear that the value can be high for one party and low for the other, greater understanding develops about how trust works.

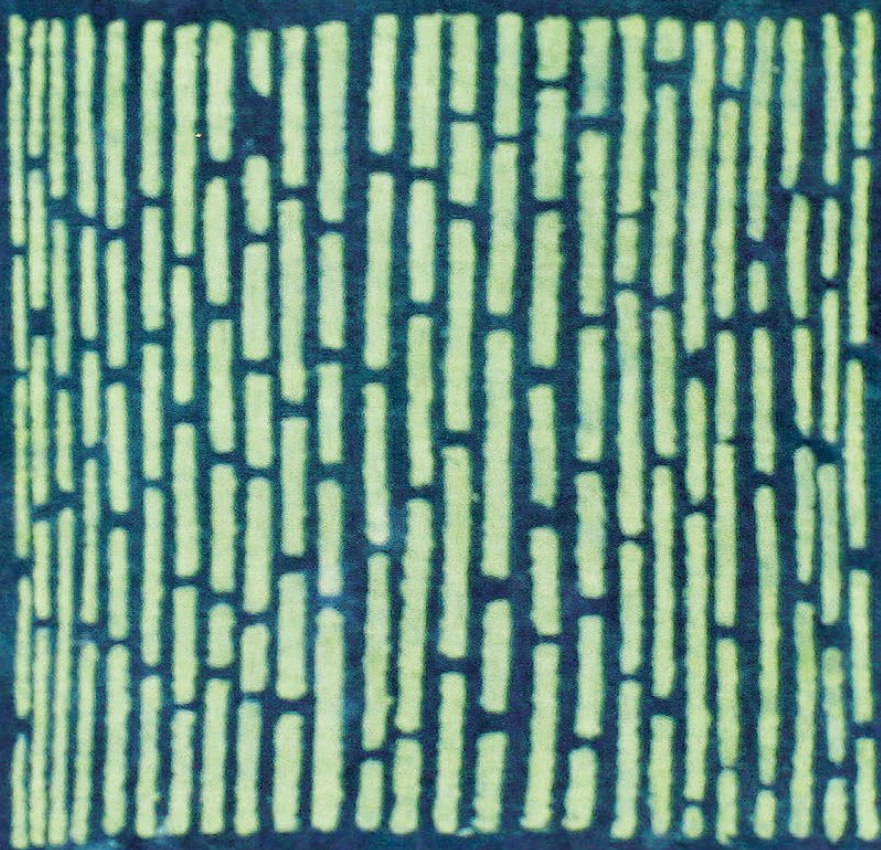


Value is assigned through a simple grading from 1 to 10, because most people have a clear and common feeling about a grade between 1 and 10. The discussion about the difference in assigning a valuation to a specific factor is an important step in the analysis.

When a value has been assigned to all factors, the various perspectives can be collated to observe where the factors diverge. In this way, the design spaces for trust are made apparent. The greater the difference, the more interesting the design space. In the case of a wide difference in the lower grades, between 1 and 5, for example, it is often more difficult to design than in the case of a difference in the higher grades, between 5 and 8. In the latter, there is already a degree of trust that you can work with as a designer, and the chance of success is greater.



- 1.** Choose the process, intervention or interaction that you want to analyse.
- 2.** Design the protocol and state how you want to evaluate the factors.
- 3.** Determine from what perspective you are going to evaluate the factors.
- 4.** Assign a value to each factor.
- 5.** Make an analysis from two or more perspectives, collate and compare the various analyses.
- 6.** Identify the new design spaces.



Fostering **5** Trust

A community needs mutual trust in order to flourish. In her book, *Building for Hope*, the Syrian architect, Marwa al-Sabouni, considers what her role is as an architect and municipal developer in the re-building of her war-ravaged city of Homs.³⁶ She identifies five major fears among the inhabitants of the city that she has to take into account as an architect: the fear of death, of scarcity, of betrayal, of loneliness, and of boredom. Solutions to these require that the city provides for continuity and for sufficient food for everyone, that there are outlets for release and diversion from tensions, and that people can be together. The city must also make it possible for people to give meaning together to what is taking place. Trust is crucial to these fundamental preconditions for Marwa al-Sabouni.

**Trust is crucial for
successful and sustainable
communities**

The Nobel Prize winner and economist, Eleanor Ostrom, studied more than forty successful and sustainable communities, and subsequently formulated eight design preconditions. She emphasises that to achieve the good functioning of a community, trust in each other and the networks one forms a part of is crucial for the sustainability of the community.³⁷ The economist, Kate Raworth, also emphasises that new ways of organising trust are essential, if we wish to have a circular economy function in a social and ecologically responsible way at a local and worldwide scale.³⁸ Frederique Six has studied the arrangement of trust in interpersonal relations in organisations and business.³⁹

The previous chapter dealt with how to analyse the deliberation about whether to trust something, and how design spaces can be identified from this starting point. In this final chapter, I wish to deal with how the balance between vulnerability and reliability plays a major role in the formation of trust in communities where people have lived together for a long period of time, such as a city. Trust is also systematically undermined by uncertainty and unpredictability, and this requires well-thought-out design trajectories. Vulnerability can be very great because of psychological processes and/or socio-ecological processes of unequal opportunities. Reliability can be deficient because injustice is not systematically addressed. And involvement has proven crucial because obstacles to trust can thereby be eliminated.

5.1 Vulnerability: Unequal Opportunities

The way in which we perceive the world around us is partly determined by our personal capacity for trust. It is known from developmental psychology, pedagogy and didactics that the experiences of childhood continue to be a factor throughout life in regards to how people perceive and approach their environment. Both inherited and social factors determine the character, and thereby also the self-confidence that someone later takes into the world. Self-confidence plays an important role in the deliberations that you make about whether or not to trust other people and systems.

One's childhood is profoundly influenced by socio-economic circumstances, such as whether there is enough money to buy healthy food, or new shoes, to go to a good school and to be able to go on school trips, or to have music lessons, or to take part in sports. Emotional security in childhood also influences the foundation of trust for the later adult. If there is a kitchen table where the conversation is warm and interested, then money is less important: You are then seen as a child by your mother, father, brother or sister, and you feel you have the right to speak. If someone is bullied or excluded at school, this can undermine self-confidence. But children can also grow to be strong after such an unpleasant experience; for example, if they see through the bullies, fight back or escape if that is possible.

Children learn to deal with other children 'being different' at school or at the sports club. Some teachers are very good at guiding this as a joint growth process, whereby every child has a right to speak, so that curiosity and respect for each other's differences is nurtured. There are also school situations that are governed by survival of the fittest, and every child has to get by on its own for better or worse.

If you are discriminated against as a child, it is difficult to later occupy space with self-confidence. For others, the experience of discrimination can later be the motivation to deepen their knowledge of the political context of the abuse of power that discrimination stems from, and to emancipate oneself and to combat injustice together with like-minded

Many factors contribute to vulnerability and strength

36 al-Sabouni, M., 2021, *Building for Hope*. Thames & Hudson.

37 Ostrom's criteria for a community are: clear boundaries and clarity about who has the right to speak and about what; rules that can be carried out locally; processes for taking joint decisions; the monitoring of what is taking place; increasing penalties in relation to the restoration of trust that is needed; help in solving conflicts that is readily available; the right to design community organisation (higher authorities acknowledge the local organisation); the local community is part of larger regional, national and international networks.

38 Raworth, K., 2017, *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*. Chelsea Green Publishing.

39 Six, F., 2008. *The Trouble with Trust: The Dynamics of Interpersonal Trust Building*. Edward Elgar Publishing.

people. The communal culture that children share, such as in the areas of fashion, music, religion, or a local identity, make a great difference. Such a communal culture mediates how people trust one another or not, and what standards one has to satisfy to be reliable and trustworthy. In principle, we already learn in our early childhood at school, at the sports club, or on the street how to deal with the diversity all around us, and also to accommodate the human dignity of each person. This gives us resilience and perspective.

Children who receive many opportunities progress through the world with more trust in themselves and others. If you have the experience of being helped at a young age when things go wrong, and things turn out well afterwards, then you dare to rely on that later and take more risks. Someone who takes more risks has a greater chance of success. In the design of trust, it is important to recognise the significant influence of everyone's younger years on the later person, and to acknowledge this influence in the design processes that aim to foster trust.

Childhood has a great influence on how someone later makes deliberations of trust

Equal and unequal opportunities at an early age also play a major role in the work environment. Joris Luyendijk has analysed which people in privileged positions in the Netherlands hold power, and he has come to the conclusion that they are all people like him.⁴⁰ He is a man of the so-called 'seven ticks': he is male, highly educated, white, with parents who are also highly educated, he is straight, lives in the Randstad metropolitan area, and speaks sophisticated Dutch. In contrast, it is much more difficult for people with only four ticks, for example, to achieve a similar position. Luyendijk developed this conceptual framework to show how naturally inclusion and exclusion takes place when inequality of opportunities is not explicitly recognised and acknowledged. Insight into the equal or unequal opportunities of future 'users' of trust is of great importance in designs for the formation of trust.

5.2 Reliability: Justice

Few would expect the world to be completely just, but most people consider it intolerable when they experience injustice at first hand.⁴¹ The Indian philosopher, Amartya Sen, states that when injustice occurs in your immediate environment, a moral indignation ensues that takes precedence over your self-interest.⁴² He describes how our sense of

40 Luyendijk, J. 2022, *De zeven vinkjes, Hoe mannen zoals ik de baas spelen*. Uitgeverij Pluim.

41 Maiese, M., 2003, 'Types of Justice'. *Beyond Intractability*, ed. G. Burgess and H. Burgess. Conflict Information Consortium, University of Colorado, Boulder. Posted: July 2003 <http://www.beyondintractability.org/essay/types-of-justice>

42 Amartya Sen developed the 'capability approach' on the basis of his book, *The Idea of Justice*, together with Martha Nussbaum.

justice assumes that we will have the freedom to pursue our own well-being, and that our well-being involves us being able to do our own things, and to take part in social developments.⁴³ If we experience injustice, this influences our judgement of the degree of reliability of others and the system. This is why it is important, Sen asserts, to together translate the sense of justice into practical services and functionalities, whereby we can preserve our own norms and values, and make use of communal services.

It increasingly appears that people who are part of a system, and who simultaneously experience the injustice of it, are incapable of changing that system. We know, for example, that children from a weaker socio-economic background have fewer opportunities for a good education (either vocational, university of applied science, or university) than those from a financially stronger background, despite the efforts of so many teachers who do their absolute best. So far, the education system has shown itself to be unable to offer equal opportunities to all children. The statistics provide information to politicians, parents and teachers about what is taking place in the system. The tension between being part of the system in which you give your best, and the impossibility of reversing the injustice in the system that you witness personally, undermines the trust that one places in the reliability of that system. People who find themselves in the eye of the storm of an unjust situation will experience this as very destructive. They can become overworked and lose their love of their profession. In other situations, so-called whistle-blowers often pay a high price, which leads to incomprehension, because according to the generally held sense of justice, they are correct. However, the systemic power is so great that many are broken before the system can adjust itself. Attention for systemic power is of great importance in the design of trust, and especially in the design of the reliability of systems: it is far from generally accepted that we now require new solutions for the current situation.

Systems make safety and reliability possible. In a democracy, in a safe society, it is essential that systems are reliable. In countries that are rife with corruption, arbitrariness reigns and every right to speak disappears. The non-transgression of certain rules is an important pre-condition, but governmental systems do include and exclude, and can also grind people down, sometimes in large numbers, as is demonstrated by the unequal school placement recommendations,

A communal sense of justice

Experienced injustice

Systemic power is too great

Systems make safety and reliability possible

⁴³ The United Nations' Human Development Index is developed annually on the basis of this 'capability approach'. Thereby, the Sustainable Development Goals are translated into concrete data, such as: how many schools are there in a particular region and for how many children, or how many people have access to clean water, or how many women can take part in the economy, or how many psychological problems have arisen in a particular area. By combining many data from many countries, world trends become apparent. For the Human Development Index 2021-2022 see: <https://hdr.undp.org/content/human-development-report-2021-22> (consulted September 2022)

or the Dutch child benefits scandal. Systems can increase the inequality of opportunities without anyone personally wanting this, or indeed being held accountable for it. The damage that can be caused by systemic power that can also significantly affect the deliberation of trust is one of the major issues of our era. Even the algorithm-based system used by the financial markets, which all economies are now dependent on, is uncontrollable. Although trust is a 'fuzzy' and abstract concept, rising or falling trust in the financial system has concrete consequences for many people around the world.

It has proven to be extremely difficult to safeguard justice within systems. If there is a problem, and legal solutions are necessary, then justice serves four societal purposes: an equitable division among people, transparent and equivalent procedures, the punishment of misconduct, and the repair of damaged trust or other damages.⁴⁴ In jurisprudence, both 'blind trust' and 'unreliability' are seen as culpable. But when it comes to technological systems, it becomes more complicated for current jurisprudence. After all, justice is based on the original YUTPA of sharing place, time, action, and relationship in a physical presence. Injustice that is caused by systems is primarily judged in its relation to the original YUTPA of the parties involved. However, both the scale and speed of systems are now of an entirely different order than when the jurisprudence was developed. As an individual, for example, I can pay money into four different banks in one morning. But due to previous legislation, it takes the Public Prosecution Service at least two years to be able to examine those transactions. Meanwhile, research has been carried out into what systems must comply with to be able to function in the constitutional state, and also to be made accountable for the consequences of their actions.⁴⁵ Nevertheless, it is clear that the clash between systems and individuals affects many of us, and we do not yet know how to deal with this.

The clash between systems and individuals

The individual is often powerless in the face of systems in which databases are decisive. The Freedom of Information Act and the Open Government Act were intended to give the citizen more opportunities to examine what is being done in the system of government. But in regards to their personal lives, citizens require other legal avenues to protect themselves from the power of systems, so that mistakes in the systems can be corrected, and what has gone wrong can be repaired. Here, it is the civil servant that represents the system, and they should be able to safeguard the human dignity of citizens in relation

to the system. The red button that both citizen and civil servant need to be able to press is often no more than a formal complaint process or objection, which seldom leads to the repair of trust. To achieve this, new instruments are necessary.

**New instruments
for the repair of trust**

For the last fifteen years, there has been an ombudsman in Amsterdam who deals with some 2000 complaints each year. This exceptional institution identifies and signals where recurring mistakes are made in the system, and it also has the right to address and condemn them. The current ombudsman, Munish Ramlal, emphasises the importance of mediation as one of the most useful new instruments in conflicts, because it is focussed on the repair of trust. This will be discussed in more detail below.

5.3 Trade-Off: Involvement

If trust is a deliberation between vulnerability – through experienced inequality of opportunity – and reliability on the basis of experienced justice, then involvement is a third factor that determines the deliberation. Involvement is concerned with how we bear witness to one another, as is the case with societal structures and jurisprudence. The philosopher, Kelly Oliver, has designated three elements that make this possible.⁴⁶ Firstly, there must be clarity regarding the so-called ‘subject-position’ of the witness. This means that a baker, for example, cannot provide testimony about being an actress. You can only provide testimony about your own specific circumstances, and not about someone else’s. Secondly, it is important that you can direct your testimony to another. Oliver refers to this as ‘addressability’. Thirdly, it is essential that the other party listens, and is able to respond. This is known as ‘response-ability’, whereby listening as a witness requires co-responsibility for the testimony of the other. This is a question of the readiness to dare to share knowledge, and also to share the joy or pain that the other feels. Thereby, a new togetherness is forged, in which compassion is able to flow, dividing lines can be dissolved, and trust restored to balance.

**Taking co-responsibility
for the testimony of another**

When people are in pain, or are disappointed, or feel that they are unseen, then adopting a hard attitude can often be easier than admitting such feelings. If justice does not function in our systems, and we have to save ourselves, then we can become cynical or adopt a moral distance. Only very few may be prepared to become

**Attention, courage
and compassion**

44 <https://www.rechtspraak.nl>: The Judgement is fair, accessible, timely and transparent and responds to societal developments.

45 Instituut voor Informatierecht, Universiteit van Amsterdam: <https://www.ivir.nl>

46 Oliver, K., 2001, *Witnessing. Beyond Recognition*. University of Minnesota Press.

Professional witnesses

a whistle-blower or resistance hero. Sometimes, it is only when someone is involved as a witness that they are able to break through this hardening of attitude, and thereby to dissolve the moral distance. Meanwhile, our society currently has 'professional' witnesses, such as the psychiatrist, the psychologist, the therapist and the nurse, who have been educated to offer relief and space to the other through their listening presence as witness. The coach of a sports team, the teacher of a class, or the manager of a team of employees are not only witnesses within their group, they are also responsible for the justice within the system that they represent.

Employees regularly experience the friction in their work between their personal environment and the systemic environment. In order to channel this, large organisations appoint counsellors for employees to talk to. These are prepared to bear witness to what someone is experiencing, and listen with personal attention. However, counsellors often do not occupy a high position within the hierarchy, and they have little authority to address injustice. Until approximately 2005 in the Netherlands, the departments of Personnel and Organisation (P&O), or Human Resources (HR), often played a positive role in this regard, when they were explicitly instructed to guide employees, and also to protect them from management and the system. At that time, directors did not have to organise continual contradiction and control of the employees because the protection of the employees resided with HR.

Anonymous complaints in non-transparent procedures

With the implementation of so-called 'integral management', HR began to serve the management itself and the system. Thereby, employees lost a certain degree of protection.⁴⁷ The current procedures when one employee accuses another appear to be the reverse of what might be commonly considered fair in law. Although someone in the Netherlands is legally innocent until proven guilty, and justice is meant to protect the individual from powerful governing bodies, you often see that an accused employee at a large organisation is immediately removed from their daily work, and during the process of truth-finding is already treated as though they have been found guilty. Such processes of truth-finding are often not transparent, and are carried out by the organisation itself, or by a commercial agency. While in law, a witness cannot be anonymous, and testifies under oath, anonymous witnesses are given free rein at companies. While in law, the judge can look the suspect in the eye, persons in large organisations can be removed on the basis of anonymous complaints without right of reply. While in law, you

have rights and protections as a suspect, there is no question of this if there are suspicions at a large organisation anno 2023. Accused employees can undertake legal proceedings later, but generally they will have already lost their job and their reputation, and they will be demoralized.

The procedures at P&O, or HR, and sometimes also Integrity Agencies, are partly intended to preserve justice within the system, so that employees can continue to trust the labour system, and thereby produce good work. The employers' sense of justice at large organisations is presently focussed primarily on the design of transparent procedures and on penalising misconduct. Scant attention is paid to measures to repair trust. These are necessary because if an employee finds themselves in conflict with colleagues or management, others will observe this. The manner in which the conflict is resolved has a deep impact on the sense of trust of colleagues in the environment they work in. This is why new instruments are essential for the repair of trust on the work-floor.

Firstly, mediation is a promising option. With this approach, a conflict between two parties is viewed as a conflict of interests, whereby a common basis that can be built upon is worked out step by step, so that solutions then become apparent. In law, mediation is increasingly advised as a form of conflict resolution. This type of expertise is lacking in large organisations and could make a great difference in the repair of trust.

Secondly, a more genuinely accurate means of communication is necessary in large organisations. This is often absent, which increases the sense of insecurity. Colleagues may be from different generations and have diverse backgrounds. Personal histories can also resonate in communication on the work-floor. Another important element in a safe and agreeable working environment is that attention is paid to psychological processes, and the capacity to deal with these in a professional and responsible way. Good communication that recognises and acknowledges differences can inspire people, and also offer a prospect for action by naming what is truly taking place.

Thirdly, it appears that in our current communities of people and systems, we could take more time to reflect on the great changes of the moment. In neglecting this, we seem to be less good at dealing with conflicts, as a result of which feelings of insecurity are now increasing. Together, we have to invest more in joint truth-finding

New instruments for the repair of trust on the work-floor

Conflict mediation

Attention for psychological processes

Reflecting together on what is taking place

to increase our capacity for dealing with conflicts, and thereby strengthen the deliberation of truth. Amid current accelerating developments, too little time is taken to reflect on the influence of systems, which are a component of communal services and provisions, or indeed the vulnerability of people. If attention is paid to one's specific situation and opportunities, then genuine communication and reflection on the interaction between person and system can take place. There will then be ready access to conflict mediation, with attention paid to psychological processes, and the justice that the system may or may not be able to produce. 'You can only build the future based on truth', asserted the director of the Centre for Investigative Journalism, Gavin MacFadyen.⁴⁸

5.4 Resilience for Trust

Peace and clarity

In the span of a human life, it is inevitable that we encounter injustice, and we may lose trust. The world can be very harsh. In such situations, it is important to reflect with family, friends and colleagues on these events, and how we function in relation to them. New approaches can be explored, and primarily peace sought to allow the first extreme emotions to calm. It is only then that clarity will emerge in regards to the operation of the system, and the implications of our behaviour and that of others in the environment.

Letting go

I have found myself at such points on a number of occasions in my life, and finding peace and clarity was always important to be able to properly survey the situation. I've changed organisation and sector on a number of occasions, and I had to let go of my previous responsibilities and networks. When making such a change, the system that you are leaving naturally assumes responsibility for the continuity of that system. After you have left, you no longer have any role to play in determining how things proceed, in spite of the fact that shortly before you were deeply involved and bore responsibility. This requires a cooling off period and the adoption of distance, both for the person leaving and those that remain at work within the system.

Not damaging people that leave

However, if you leave because of a painful conflict, the behaviour of the people that represent the system can have great consequences for the degree of damage that may be inflicted on you: Psychological damage, professional damage, or financial damage all play a role. This can also have an effect on someone's relationships, family and

friends. This is why the current dynamic of P&O, HR, and Integrity Agency discussed above can be so destructive. It is an easy path for management, but people can be damaged more than is necessary, and many lose trust entirely.

As an individual, it is difficult to protect yourself from the system. You can engage in dialogue, lodge an objection, inform and persuade people, but if none of these approaches work and you lose, there is little else to do than leave. By leaving, you preserve your own integrity and also create space to discover new situations in which you can share visions and attitudes. If you are still fit and healthy, this will be easier; but if you have a great deal of stress and have grown uncertain, it will be more difficult. If you have help from other people to disentangle yourself from the emotional knots of a conflict, a crisis can even be an opportunity for a new phase in your life. But if you do not have help, people can sometimes experience irreparable damage.

In order to protect human dignity in such conflicts, it is necessary to develop new instruments so that even in such a period of confusion we can bear witness to each other, we can reflect together, and we can develop new perspectives for every party involved. We need new instruments that require time and attention for genuine communication, and that make mediation between the individual and the system manageable. This is when the call for diversity and inclusion acquires more meaning, because we assert this principle even when things become difficult. It is precisely when things become difficult that trust in those involved and everyone around them can grow in an extremely credible way. Instead of sweeping aside conflicts and allowing people to disappear, these conflicts can actually be an opportunity to design the balance of trust together, and to increase the resilience of the organisation.

Crisis as opportunity

Human dignity is decisive





Artist: Cyprian Koscielniak

This is an illustration from a children's story by professor Marie Rosenkranz Lindegaard, about how people share rhythms when they bear witness to each other in love, dancing and fighting.

This illustration was created in the context of the research programme for the Dutch contribution to the Architecture Exhibition at La Biennale di Venezia in 2021.

Conclusion

We are now living at a time when even the system of the earth has become uncertain. Humankind has subjugated the planet, polluted it, exhausted it, and exploited it with shameless lack of care. Climate change and the loss of biodiversity are two consequences of human behaviour that are accelerating and expanding. Our trust that trees will remain standing, that birds will migrate from Siberia each year in March or April, that fish will swim in the rivers has also grown increasingly less certain. We see major droughts, floods and enormous fires on TV, and we are aware that they surround us, too. This all makes us deeply uncertain.

At the same time, we now find ourselves living in communities of people and systems, where the systems have acquired an increasing capacity to act. The transformations in the relationship between knowledge, information and data, and the new digital organisation of society, have created new paradigms of human experience. What we still don't understand is leading to increased uncertainty. In regard to these systems, the lack of transparency, the apparent immunity, and the changes influenced by artificial intelligence, all affect our psychological constitution, although we still don't understand how and to what extent. And this also leads to greater uncertainty.

Of course, we would like to believe that everything will turn out well, and certain images can be very attractive, or easy to believe. But it is precisely in times of accelerating and accumulating crises that truth is essential for survival and well-being. Not only truth as science, but also truth in the sense of what is positive and possible to do. This relates to all kinds of knowledge if we wish to approach a collective truth, and to achieve this, trust is necessary in the process, and/or the people, and/or the context in which this takes place.

Trust is the result of a deliberation between vulnerability and reliability. This deliberation occurs in the four dimensions of Time, Place, Action and Relationship. In each dimension, factors can be identified that influence the deliberation: the YUTPA framework. By using YUTPA to analyse deliberations of trust from two individual standpoints, it is possible to compare these and to identify new design spaces for trust. In making new designs, it is important to take account of trust as the balance between vulnerability and reliability. Underlying dynamics, which arise because people grow up differently and have often not experienced equal opportunities, exert a great influence on whether new instruments are embraced or not. A sense of justice also plays a major role in how people perceive systems.

This age of major changes is causing a great deal of tension among very many people. Therefore, strategies are important to increase trust in large organisations, which include open processes to collectively reflect on what is taking place between the individual and the system, developing 'mediation' to use when conflicts arise, and the stimulation of genuine truth-finding. This is sometimes referred to as radical transparency in the business world and in public-private collaborations. Systematically setting aside time and attention for reflection on how people do or do not trust each other will ultimately result in the valuation of communal trust as the basis for organisational resilience. This communal truth-finding and conflict mediation requires new instruments, so that people can again bear witness to each other in truth, and thereby design trust in their daily social, cultural, economic and ecological lives.

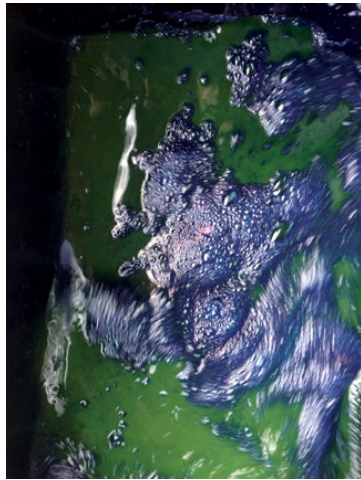
Indigo is a colour that has been made in every part of the world in various ways for more than 3000 years, using local plants. The indigo-blue pigment is used to dye fabrics for everyday clothes and royal robes, for tapestries and rugs, and also as ink for manuscripts in many cultures. The making of the colour indigo requires all the attention and experience of the dyer. Methods are passed down from generation to generation. Since colonialism and later industrialisation, the making of indigo has also become an industrial process. Today, millions of people wear indigo-coloured jeans and enjoy the changing colour over time. Indigo is magical and mythical, and it is continually exciting to see how the colour will reveal itself, just in the same way as various designs of trust continually arise.

Indigo Works by Rody Luton

A number of 'Indigo Works' by Rody Luton are portrayed in this publication. The linen canvases and photos were created in 2016, during her artist's residency in the Khamir Centre for Crafts, Heritage and Cultural Ecology in Kachchh, Gujarat, in western India.

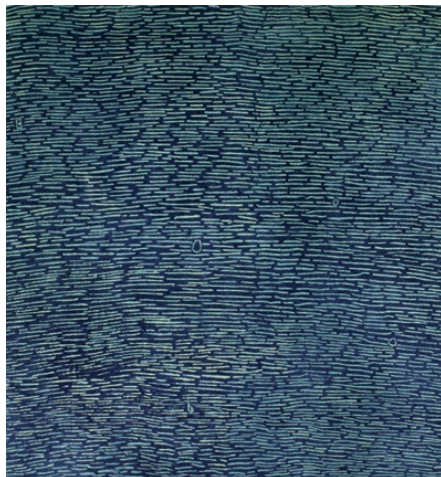
Rody Luton's Indigo Canvases combine traditional textile craft with the colour techniques of painting. Drawing on the natural pigment of the *indigofera* plant, she employed the resist technique on unbleached linen. The photos depict the indigo toning bath. The green colour that is visible only becomes indigo-blue through a process of oxidation, after the canvases have been dried in the sun. The indigo dyeing process was carried out by the master dyer Khengar Vankar and his son.

Acknowledgements for Works by Rody Luton



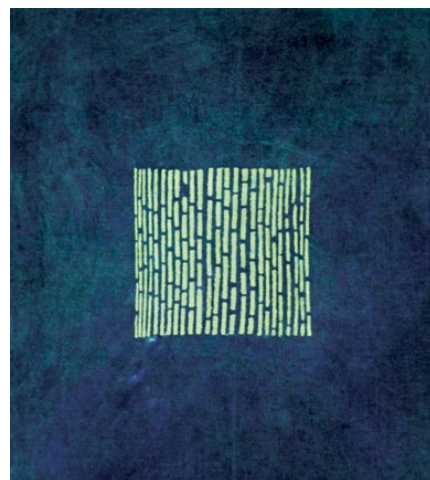
Cover
No title, 2016,
Photo, Kachchh, Gujarat, India

Page 10
Khamir Indigo C, 2016,
linen (110x115 cm)



Page 22
Khamir Indigo B, 2016,
linen (130x120 cm)

Page 34
Khamir Indigo E, 2016,
linen (122x114 cm)



Page 44
No title, 2016,
Photo, Kachchh, Gujarat, India

Page 68
Khamir Indigo H, 2016,
linen (120x106 cm)

Caroline Nevejan is a researcher and designer. Since the 1980s, she has been involved with the rise of the network society and digital culture. In her PHD thesis, 'Presence and the Design of Trust', she formulated the basis for the so-called YUTPA framework, for the analysis and design of trust in social, organisational and business contexts, in which online and offline communications merge. She developed this framework further in association with TU Delft's Participatory Systems Initiative. Since March 2017, Nevejan has been the Chief Science Officer of the Municipality of Amsterdam, and initiator and editor-in-chief of <http://openresearch.amsterdam>. In addition, she is the Endowed Professor of Designing Urban Experience at the University of Amsterdam and leads the NWO research programme 'Designing Rhythm for Social Resilience'.

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Time

Duration of Involvement

Sharing Rhythms

Mutually Doing Your Best for Each Other

Moments of Meaningfulness

Place

Bodily Sensation

Emotional Space

Impact of the Environment

Ability to Act

Action

Attunement to Each Other

Reciprocity

Styles of Negotiation

Impact of Actions

Relationship

Role

Reputation

Involvement

Community