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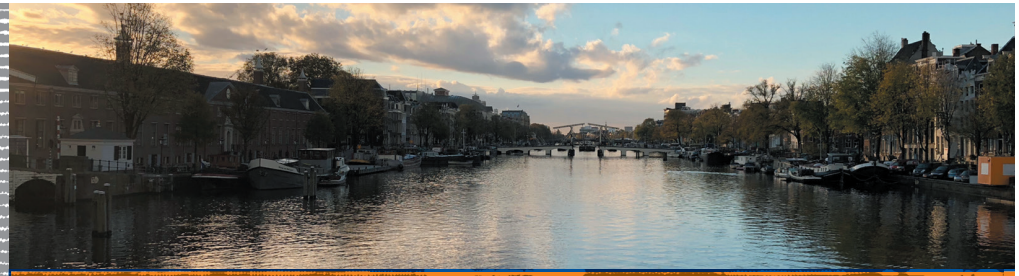
Faculty of Social and Behavioural Sciences



Caroline Nevejan

Urban Reflection

On the design of diverse engagement in the networking city of Amsterdam

In the rapidly transforming world, cities play a crucial role in ensuring that global impact is locally acceptable. Currently, more and more cities are becoming complex systems, in which social structures, network technologies, infrastructures and ecology together form a single system, and in which design plays new roles of importance. Furthermore, trade-offs for trust and truth are also transforming because we now bear witness to each other in new ways, due to the different technologies that format our presence. Consequently, sharing rhythm appears to be fundamental in enhancing trust between residents in city neighbourhoods. Establishing a rhythm allows diverse rhythms to attune to one another, and is central to our ability to communicate. Hereby, rhythm can offer a relevant perspective on certain social situations. It is fundamental to shared reflection.

This inaugural lecture argues for an understanding and design of urban experience as a shared reflection on the many sensations and emotions that a city offers. Such a shared reflection, such a 'collaborative authoring of outcomes', is necessary and should nurture diversity to enable networking cities to contribute to survival and well-being. However, it is still not entirely clear how technology can contribute to such reflection. Nevertheless, with the acceleration of AI around the world, and the potential to create thinking robots, the human capacity for shared reflection must position itself in relation to these developments.

Caroline Nevejan has held the chair of Designing Urban Experience since April 2018. This chair was created by special appointment at the Amsterdam Institute for Social Science Research at the University of Amsterdam. The chair was initiated by the City of Amsterdam, where Nevejan was appointed Chief Science Officer in March 2017.

Previously, Nevejan was a researcher and designer at Delft University of Technology, the Vrije Universiteit, the Hogeschool van Amsterdam, the Waag Society and Paradiso in Amsterdam. She obtained her PhD, Presence and the Design of Trust, at the University of Amsterdam in 2007.

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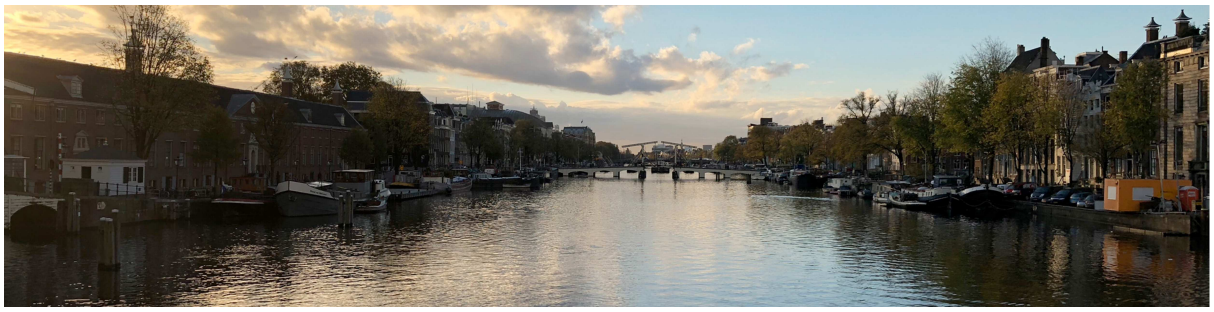

Caroline Nevejan

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Mevrouw de Rector Magnificus,
Mevrouw de decaan,
Leden van het Curatorium van de leerstoel Designing Urban Experience,

Dear Colleagues, Family and Friends, Ladies and Gentlemen,

Today, I am very happy to accept the chair of 'Designing Urban Experience'. This professorship forms part of the position of Chief Science Officer (CSO) of the City of Amsterdam. As chair, and as CSO, I connect questions about the city of Amsterdam and its region to questions that are of relevance to researchers in the different Universities of Amsterdam. Their research in all areas of the sciences, whether alfa, beta, or gamma, contributes to making Amsterdam and its region a better place to live and work. Fundamental and applied scientific research, professional research, practical research, artistic research and design research each have their role and significance. For example, in the current major challenges like energy transition we require all these skills. We must invent technologies, distributed ICT networks and household appliances, influence new behaviour and thereby introduce new values. We are currently creating new infrastructures and will need to assist people in adapting their homes.

Furthermore, the network society is gaining new momentum, and so networking cities are developing in many locations. Similarly, international relations are transforming rapidly, urbanization is growing exponentially (up to 70 % of the world population will be living in cities by 2025), the climate crisis is accelerating and the gap between rich and poor is dramatically increasing (Segal 2013). Yet, more and more people are living in better conditions, according to the Unites Nations Development Index. Moreover, we have fewer wars, but paradoxically more refugees in the world than ever before. Is it the technology of war or the technology of media that is depriving people of the sense that they can overcome, survive, and enjoy well-being in the places they once called home? Also, it is very important to realize that most people, both rich and poor and also refugees, have a smart phone within their reach and participate in networks around the globe.[1] We are entering an era of unprecedented crisis and unprecedented potential on a global scale.

In this inaugural lecture, I will argue that cities play a role of great significance in these developments, which in turn profoundly affect the cities themselves. Cities are becoming complex systems, in which design is playing new roles of importance. I will argue that trade-offs for trust and truth are shifting because we are bearing witness to each other in new ways, due to the different technologies that format our presence. I will then discuss my research into rhythm, which appears to be fundamental in enhancing trust between residents in city neighbourhoods. Establishing a rhythm allows diverse rhythms to attune to each other, and is core to our sensorial perception and to our ability to communicate; while unfortunately technology design does not take this into account. Lastly, I will make a plea for an understanding and design of urban experience as a shared reflection on the many sensations and emotions a city offers. Such a shared reflection, such a 'collaborative authoring of outcomes', is necessary and needs to nurture diversity to enable networking cities to contribute to survival and well-being. It is still unclear how technology can contribute to such reflection. However, with the acceleration of AI around the world, and the potential to create thinking robots, the human capacity for shared reflection needs to position itself in relation to these developments. In conclusion, I will argue that for networking cities to contribute to well-being and survival, these cities will need to be reflective and rhythm based. Such cities need to invent and design processes of complex governance for diverse engagement to contribute to the collaborative authoring of outcomes in every street, borough and/or enterprise.

Life in the City

Fig. 2 Fragment of the 14th century fresco 'Allegory of Good and Bad Government' by Ambrogio Lorenzetti, which is located in the Palazzo Pubblico in Siena, Italy

In the 14th-century fresco of the Allegory of Good and Bad Government by Ambrogio Lorenzetti, the relation between the city and its region reveals a complete inter-dependence. In periods of good government, the region, its

agriculture and the surrounding nature also flourishes; while in times of bad government, the region declines.[2] Lorenzetti was convinced that peace is achieved when work is done in accordance with nature, when appropriate tasks follow the seasons and also, when justice is honoured by all.

Italo Calvino, the Italian writer, described the essential characteristics of possible cities in his luminous 'Invisible Cities' (Calvino 1972). In this book, adventure and aesthetics, chaos and enlightened structures appear in different configurations, and each time one recognizes the specific vibrancy a city possesses. In today's world, Eyal Weizman and the Forensic Architecture group at Goldsmiths, UCL/UK, use the logic of the numerous elements of the built environment to deconstruct actions of war and oppression around the world (Weizman 2014). For example, Forensic Architecture can reconstruct an air raid by analysing the images of the impact of bombs in a street that is shown on the national news, and as result can reveal previously unknown or unacknowledged background information about the event. Clearly, some cities have good governments, which have policies that nurture trust and a good life for many of the people who live there. However, other cities have bad governments, in which people are abused and oppressed. Here, inequality and ignorance can generate distrust and hate.

As the history of Amsterdam during World War II illustrates, good governments can be over-run, and bad governments can be defeated. Herein, infrastructure and architecture create context: the government enforces the law, yet ultimately the people create the city. A diversity of persons participates in, and constitute, different cultures in response to the dynamics around them: the young and old, the residents and visitors, the healthy and the ill, the employed and the unemployed, the rich and the poor. This diversity in cultures and social structures defines shared dynamics in city life. Certain people are included and others are excluded in specific areas and at specific times (Foucault 2003). Some social structures are distinguished as high trust; while others are low trust (Fukuyama 1995). Some are driven by shame and others by guilt (Braithwaite 1989). In the experience of the city dweller, these cultures merge and inspire individuals to perform their identities. Later, I will argue that experience creates the basis upon which individuals act. As such, the people can decide to fight a bad government, or to support and empower a good one.

Cities are the locations where cultures flourish and interact - the high and the low, the dominant and the underground - often as a direct result of social and economic dynamics (Hebdige 2012). This was evident in concert venue Paradiso, where I worked between 1988 and 1999. In conversations about the program, for example, there was a profound awareness of the social and eco-

nomic roots of musical and artistic developments. There was also a strong awareness that underground subcultures and, or, deviant opinions needed to be heard and to be offered a place (Nevejan 2007). In order to 'read' a culture, to recognize blank space, for example, one needs to be engaged in this subculture and experience its specific relations to other dominant and underground dynamics (Essed 1991, Hooks 2006). The politics of representation offer recognition of certain cultures, but easily ignore other 'unwanted' groups, which can deprive children in these unwanted groups, for example, of role models who inspire their imaginations about their own futures (Hall 1997, Hooks 2003). Therefore, cultures of resistance, of empowerment, of emancipation, need to be radical to break with a previously agreed status quo.

The "radical" can take many forms and shapes, as is shown in different places of cultural innovation. Think about the Elance Academy and De Garage Notweg in Nieuw West, which apply smart social design to support people in developing heir talent. Think about the award winning Black Archives, in which the Dutch history of slavery and black culture is gathered and made available. Think about Red Light Radio and No Limit in Zuidoost, which empower young people through music, dance and spoken word. Think about The Ceuvel and Urbaniahoeve, which develop new concepts for nature in the city. Think about the Syrian Legal Network in which lawyers and legal experts who are refugee, can find each other, or think about We Are Here, a movement of people 'sans papiers', who are considered to be 'illegal' and demand the right to exist. And think about for example Only Friends, a grand sports club for people with a handicap in Amsterdam-Noord, which is recently adopted by Ajax. Unfortunately, current debates about radicalization in the media do not offer any insight into such dynamics, which are often deeply human and connected to profound progress (Hamelink 1994).

Inner cities, in particular, can resemble jungles: they are diverse, dangerous and nourishing. While suburban neighbourhoods can resemble eroding landscapes, yet they offer safety, clean air, sports and leisure. Over the centuries, Amsterdam has had different jungles and suburbs in various locations. If value propositions go seriously awry, or if gentrification processes are not well managed, social structures can collapse and inner cities implode, and a suburb's atmosphere can change dramatically. This 'social erosion' leads to crime and a lower quality of life, and even to shorter lives for many. For example, in Amsterdam Nieuw-West, and in Amsterdam Zuidoost, the female residents live 8 years fewer on average than in Amsterdam Zuid. Furthermore, as Detroit in the USA illustrates, in long-term processes of social erosion, fundamental social infrastructures disappear: schools, hospitals, supermarkets and even traffic lights. In such times of destruction, no shared action or reflection

seems possible. Consequently, greed flourishes, and everyone is concerned only with self-survival. Only when the crisis is seriously underway does a new awareness emerge and significant new energy is released, and people begin to take their fate into their own hands and begin to forge new and unexpected collaborations, as new cultures emerge. This dynamic was evident in Detroit, but also in Greece, for example (Wijnants 2013, Stavrides 2014).

In the 1980s, I experienced being part of the squatter movement in Amsterdam's Nieuwmarktbuurt. At the time, many houses were derelict and abandoned; the trauma of World War II was still very present. The city wished to demolish the old houses and make a highway to Central Station. The resistance among the people that lived there, together with artists, students and inventors, challenged the municipality's policy. The political movement that arose in the numerous squatted, empty spaces developed radical new proposals for housing, schooling, and gardening in the inner city, and inventions were also made such as the white electric cars, and a new culture emerged with outdoor operas, and new music and films. In an attempt to counter the public unrest, and eventual spiral of violence, the Amsterdam municipality engaged with the residents and squatters, and in negotiation with the neighbourhood, designed and innovated social housing and the use of shared space, and developed new policy as a result. In this case, crisis led to empowerment, which led to resistance, which subsequently led to policy renewal and social innovation. It is possible to develop policies for essential conditions to which people's empowerment and capacity for innovation is core.

At the time we only had the use of old technologies, like tools for building space and landline telephones. Such technologies were easy to understand and easy to improve (Delaet & Mol 2000). The rise of information and communication technologies in the last 30 years, in particular, has caused the network society to emerge (Castells 2011, Castells 2013). In this emergent network society, in which speed and scale of information is beyond human comprehension, and perhaps even beyond control, processes of social erosion and processes of social and political empowerment can accelerate. For municipalities, it is complex to understand how to listen to the people, despite the many digital means available. For the people, it is hard to interact with the city, despite the fact that many services are in place. Technology-based infrastructures that make the daily lives of many people in the city comfortable also contribute to urban complexity in unanticipated ways.

Networking cities need to invent and design new processes for governance for power to be balanced in the many new forms of interaction that are emerging.[3] Smart cities, as we denote the deep commercial integration of technology into municipal processes, increasingly realize the need for public

policy to streamline commercial activities for democracy to survive. Networking cities need to balance transparency with privacy (Borgesius et al 2015), and open architectures with control and surveillance (Eskens et al 2015). The daily supply of goods and services is increasingly based on complex demand and supply networks in which IT plays distinct roles of significance (Rezaee et al 2015). This allows for the emergence of new of platforms for participation between city and region in for example the production of food as well (Van Kooten et al 2018). The total sum of the diverse local coordination of the many residents and visitors, SMEs, civic society and businesses creates the urban performance of the city and its region as a place.

Amsterdam was one of the first digital cities in the early 1990s, and today it is again at the forefront of the development of networking cities. Amsterdam closely collaborates with Barcelona. Both municipalities, with different societal organizations and design agencies, are exploring how a 21st-century networking city should be orchestrated in terms of information architecture, data-management, the city's self-organizing potential, allowing people's voices to be heard and new governance to be created. However, by focusing mostly on those who adapt, non-users become less and less relevant, which causes new blind spots and societal divides as a result (Wyatt 2008).

The financial and business world, social and cultural developments, and political arenas are interdependent for centuries on a global scale. Long lines of geographical development are now challenged by today's digital global society, in which speed and scale of interactions are increasingly beyond human understanding (Virilio 2006, De Landa 1997).[4] After seven centuries, Lorenzetti's allegory of good and bad government is very much alive in debates on how smart- and networking cities should be designed and governed. Cities like Amsterdam or Barcelona can be considered as increasingly complex participatory systems, while the necessary governance of such systems is still very opaque. Causality, for example, is a very important concept in current law. Complex systems, AI and robots are seriously challenging causality as we know it.

More than 50 years ago, scholars in cybernetics started to explore the phenomenon of complexity from a social and interdisciplinary perspective (Pask 1975). In complex systems, laws of causality are challenged. One wing-beat of the famous butterfly here can have an unanticipated effect elsewhere, without the 'elsewhere' knowing why something has even happened at all (Urry 2005). Complex participatory systems can be influenced, but this requires processes of structural iterative design, to which participants contribute (Glanville 2007, Nevejan & Brazier 2014). These processes are not only dependent on logic, but what occurs subsequently in such 'communities of systems and people' is

affected by trial and error, attraction and friction and creative dynamics, which are structurally monitored and adapted. I argue that because the development of the city as a complex system is not linear, the formulation of values as guidance in design processes is of vital importance. Where Lorenzetti asserts that peace emerges when the city lives in accordance with the rhythms of nature and respects justice for all, smart- and networking cities today have not yet agreed on such fundamental building blocks.

New Role of Design

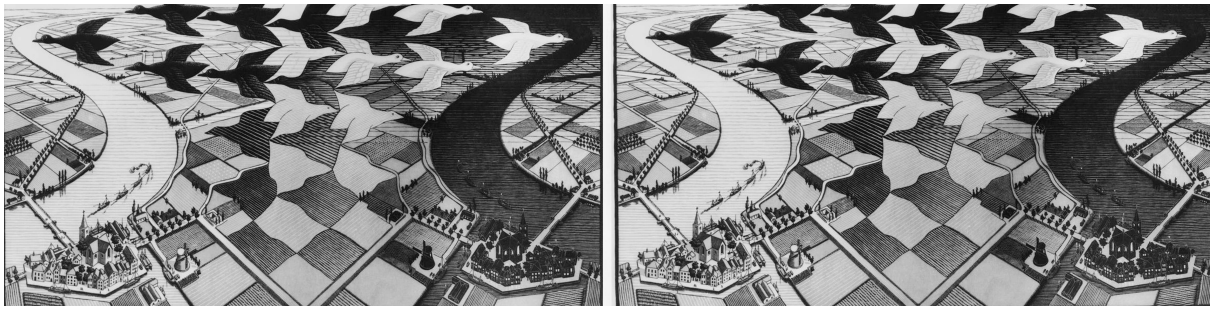

Fig.3 'Day and Night', woodblock by M.C.Escher, 1938

The emerging network society involves a rapidly transforming, yet hardly discernible process. As in this drawing by Escher, change is clearly taking place, yet even on such a small-scale as in this drawing, it is hard to pinpoint exactly where the perspective is changed and the world is reversed. Urban environments are designed, most is man-made. Likewise, telephones and many applications and IT infrastructures are designed in the transformation into the network society. However, amidst the bombardment of business propaganda and expert bewilderment, an actual outcome has never been formulated, and a moment of change is difficult to pinpoint precisely.

The natural environment within which cities are built influences how they are constructed. Cities, which contain many people living together in a limited area, require infrastructures to be adequate to large numbers of interactions in terms of food, water, waste disposal, transportation, sports or leisure. People will try to do their own thing and yet still collaborate. The municipalities will try to control and facilitate. Urban designers need to take into account that cities are simultaneously many different things to many different people. Specific details can cause intense emotions for some, and be of no interest to others (Alexander 1977). Furthermore, cities offer particular sensorial environments and particular landscapes as we move through them. Therefore, some cities are easy to walk in, while in others one needs to drive

or have greater access to public transport. In addition, sounds and smells are particular to specific neighbourhoods, and local cultures turn general spaces into places of personal significance (Tuan 1979). Consequently, cities are products that are marketed to offer experiences of aesthetics, meaning and emotions (Desmet & Hekkert 2007).

In all these processes, design contributes to aesthetics and utility. Despite the increased complexity, a 'general' design process can be identified: there is a problem or a question, this is then studied and reformulated, and subsequently several options are generated, after which the chosen option is tested, adapted and implemented. The different design processes are characterized by various levels of stakeholder involvement, piloting, monitoring and evaluation. However, over the last two decades, design as a discipline is acquiring a new status in both the arts and the sciences.

As result of the ubiquitous introduction of information and communication technologies, business models and business processes have been changing in large companies and in many SMEs (Castells 1996). In these rapid transformations of whole sectors and industries, design is not only the business of shaping products and interfaces. Design now invents new services and information- and communication structures. Actually, design has become foundational for business innovation and played roles of significance in transformation processes. Design includes 2D for graphics, 3D for products, 4D for service design, user interface design and time-based experiences, as are offered by games and pop music concerts. Furthermore, the word 'design' can now also refer to 5D for strategic design, in which relations between people are orchestrated, as in business transformation processes, through what is formulated as 'design thinking' (Brown 2009). Design is also used as a term for designing information architectures including governance structures, which can be denoted as design in 6 dimensions, the basic 3 plus time, plus relation and power balances. Ambitions such as 'Privacy by Design' or 'Democracy by Design' can also qualify as 6D design, and require highly skilled and elaborate design expertise to which also the (social) sciences contribute.

Interestingly, an image can change the perception of a product, a product can affect how we relate to others, and information architecture defines how processes over time take shape and define power structures also. Professor Kees Dorst argues that scientific research is concerned with different configurations of the calculation "what + how = result", in which one of the variables is usually unknown. Design research, he argues, is often not granted any variable. Instead of a result, here a value needs to be formulated, whereby the 'what' and 'how' can be identified in a series of scenarios (Dorst 2011). Additionally, value sensitive design as an approach to designing complex multi-

actor systems, as in next generation infrastructures for energy, for example, has been studied by my colleagues in the Faculty of Technology, Policy and Management at Delft University of Technology for over a decade now (Van de Hoven 2013, De Bruijn & Heuvelhof 2018). By focusing on the role of people in these systems, we have developed the notion of Participatory Systems as one integral whole, in which we have considered the physical world of built infrastructures, the ICT, the social structures and the ecology that they are part of (Brazier & Nevejan 2014). A design intervention in any of these four layers affects the other layers. Cities are Participatory Systems in which for example, a bridge over a river creates new housing developments, transport lines, a new experience of proximity which generates jobs and education. A specific app can generate the use of nature in a park and affect how we interact and experience our environment.

The value of participation is acquiring new meaning in the era of the city as an emerging complex system. Paying attention to those that participate – social, technological, ecological – is becoming unavoidable. From a systems design perspective, diverse local coordination defines what subsequently happens. Participation in the larger whole of the city is characterized by the many specific local examples of coordination that are driven by personal values, and constitute processes of self-organization, upon which any city is built. Thus, the design of a city as a complex participatory system requires new strategies and methodologies of scientific and design research.

Different forms for including the participation of people in research trajectories have emerged in the sciences, in design, in art and culture. Large technological universities, which are developing the information and communication technologies we all use, have realized that they can never simulate the complexity of day-to-day life in a laboratory, while this everyday context is decisive for the acceptance of their work. Therefore, MIT, EIT, the European Commission and also NWO now accept the concept of the 'Living Lab' as a research methodology, in which researchers co-create, explore, experiment and evaluate with residents and other local actors (Feurstein et al 2008). However, as a resident, one is in no position to critique the work that is being conducted because the researcher is in charge. In design practice, current methodologies like agile, scrum and others, which originate in the software business, are regularly used for 'nudging' human behaviour in innovation processes to make 'fast and smart participation' possible. However, these methodologies do not respect the time that it takes to understand the complex social relations and information architectures in which their products and processes have to function. Again, because the designer is in charge.[5]

In culture, research into complex human experience has been taking place for centuries, in different ways and in different types of organizations. For example, artists create things and place them on the street and observe what occurs. Also in certain cultural productions, people create something with scientists and artists and stakeholders; then they set this before the general public to respond, to critique or neglect. In the concert venue Paradiso, in the 1980s, we formulated this as Public Research, open and for all involved who wished to be involved, in contrast to academic research that was hidden inside labs, and which did not respect the complexity of human experience, in my perception at the time. Even today, the Waag Society still uses this term to indicate the need to open up the lab and place the technology on the street, so that 'the people' can comment, reflect, critique, decide and adapt.

Critically, public research fundamentally challenges the relation between the expert and the lay person, assuming that this relation should be an equal interaction rather than a hierarchical one, for science and technology to develop in societally beneficial ways. Thus, when engaging in public research, one has to leave the ivory tower of science and engage with the public and with experts from other fields. In my opinion, this makes research stronger, more relevant and better suited to communicate and contribute to societal change. In the social sciences, 'thinking about doing' or 'thinking about one's actions' is called reflexivity. The social sciences are concerned to offer reflexivity, yet seldom take the step to design solutions and engage with public research. While in the engineering sciences, analyses are often the start of a research trajectory, in the social sciences analysis is often the result of a study. When building bridges between research and policy, such bridges can be constructed with design.

Design, as a way of thinking and a way of problem solving, is indispensable as a field of expertise in the city. Design, like artistic research, can offer radical realism, non-conceptualism and contingency (Borgdorff 2012). Design allows for bridging the gap between different processes; it allows for the participation of people with different skills of literacy, and it allows for the exploration of possible solutions. Design can nurture diversity and inclusion. Design, as a discipline, can interact with the building and maintenance of complex systems. As such, policy making can be considered as a design discipline.

In the next 5 years I hope to contribute to more interaction between the social sciences here at the Amsterdam Institute for Social Science Research and design as a discipline and as a methodology for understanding social dynamics in the urban context of Amsterdam.

Urban Experience

Fig. 4 Fragment installation 'A mirror woman', by Kimsooja 2002. In Kimsooja Unfolding, Vancouver Art Gallery 2013.

In English, the word 'experience' is distinct from the German word 'Erfahrung', or Dutch word 'ervaring'. The English word 'experience' refers to sensations and occurrences while the German 'Erfahrung' and the Dutch word 'Ervaring' refer to a more complex emotion , both in the sensorial world and in the more cognitive world. My understanding of this was inspired by the filmmaker Alexander Kluge, who developed a specific concept of experience in relation to public sphere, in which 'Erfahrung'/experience emerges when sensations or 'Erlebnissen', or 'belevenissen', are contextualized and can be acted upon. At the time, Kluge and his colleagues in the Frankfurter Schule, were concerned with the fact that so many people had embraced Nazism during WWII, and asked themselves how they could design communication to make such 'brainwashing' impossible in the future. Their conclusion was that personal sensations (Erlebnis and beleving) needed to be positioned and reflected upon from a historical context. As result of dialogues with others, reflection is then triggered and experience is formed, upon which people can act (Negt & Kluge 1990, Berkers 2014). Understanding experience as the result of a process of reflection that people act upon requires specific design and methodologies for triggering such reflective processes (Kluge 1979).[6] It is important to remember that the notion of reflection as intended by Alexander Kluge is a broader concept than is allowed by reflexivity, as applied in the social sciences. For Kluge, reflection is as much an artistic practice, as a scientific practice, and a societal practice.

Reflection, as key element of the urban experience, is the result of how people fulfil the role of witness, and subsequently bear witness to each other. Being and bearing witness involves this moment of judgement that is the result of a thought process, be it more reflexive, or a clash between intention and realization, or even an experience of flow (Grin 2006, Nevejan 2007, Csikszentmihalyi 1997). The process of witnessing is characterized by three

dynamics: address-ability, response-ability and clarity of subject position (Oliver 2006). When discussing what has occurred, when giving testimony, one has to be able to address this testimony to a person who is willing to accept the 'response-ability', and share the burden of the responsibility of the testimony, as it were. Furthermore, when giving testimony, one needs to be in the position to do so. A carpenter cannot bear witness to being a fisherman, for example. When I am witness to you, or you are witness to me, we share perceptions and our understanding of these perceptions. In this sharing, we become authors and possibly even define outcomes in relation to each other. Being and bearing witness is a process in which our deep humanity is challenged and inspired. It sets the tone for the social structures we build and the outcomes we hope for and fight for.

For many centuries, being and bearing witness was connected to sharing time and place. Technology now offers unprecedented possibilities for formatting our presence with each other independent of time and place. Design, from 2D to 6D, deeply affects how we bear witness to each other in new, emerging online and offline realities. The network society is challenging the dramatic and rhetorical style figures of communication that we have previously known. Witnessing is a very physical act, because witnessing is inscribing a situation with your body, as is argued by Abishek Hazra, an Indian artist who participated in one of my earlier studies, *Witnessing You* (Hazra 2008). In the maturing network society, fundamental questions about the nature of physical communication, embodied knowledge, and tacit skill in relation to online networks, are increasingly more urgent.

Consequently, I developed the YUTPA framework (an acronym for 'being with You in Unity of Time, Place and Action') to better understand how trade-offs for trust and truths are made, and how people are, and bear, witness to each other in these new IT configurations. In my dissertation, I argue that by merging online and offline realities, not only dimensions of time and place are challenged, but also dimensions of 'relation' and 'possibility to act' are profoundly affected (Nevejan 2007). I also argue that being and bearing witness to each other in mediated presence offers different opportunities, dependent on the exact YUTPA configuration in a specific context. I subsequently explore whether a robot, such as the Sony AIBO dog, can participate in such a witnessing dialogue. In my opinion, this is not the case. When engaging in a conversation with a robot, processes of attribution and identification can offer pleasurable interaction with that robot, as is the case with any big-eyed, stuffed animal for a child. AI robots do not yet allow for understanding subjective historical reflections that may lead to specific personal

actions, which may subsequently culminate in revolutions, or freedom struggles, or in building a shed together, or deciding to take care of a neighbour.

The early 20th-century Jewish philosopher, Martin Buber, makes a distinction between Thou and 'It' (Buber 1970). I have freely translated this as 'You, I know, and who I am in relation to' and 'It, I do not know, and which is mere information to me'. This distinction aids understanding of how we are witness to some and how we are not witness to other moments of time. When I see a person that I know being attacked, and I understand the context, I will intervene. Whereas when I do not know this person, and I do not know the context, it is difficult to do so. Differing YUTPA configurations will allow for different kinds of witnessing, and different kinds of trade-offs for trust and truth.

Therefore, we require more rigorous research into the potential and threats of these new configurations for trust and truth, in order to better understand these psychological and sociological processes in the context of the wider city and society. Is it possible and desirable, for example, to address people or machines that you do not know? And is it possible and desirable to offer response-ability to people that you do not know? Further, how can one be sure one understands the position of a person (or a machine) in a country far away that one does not know? Actually, is it possible at all to communicate physically-embodied knowledge by means of mediated communication? And how are traditional values like solidarity or shared beliefs affected by these new possibilities? Finally, what kind of reflections and experiences can and cannot emerge from specific technological interactions?

The city itself offers a specific YUTPA configuration. People in the city share space, in which location-based online communication also plays a role of significance. For centuries, different forms of mediated communication have been integrated into architecture and now ICT technology is adding to this palette significantly (Gullstrom 2012). However, people in the city are in each other's proximity and can affect what transpires in a physical manner. In a city, urban experience can offer a sense of engagement with people you may not know. New forms of shared space are emerging in many cities around the world, and a new understanding of this shared online and offline space has been studied from different perspectives (Ostrom 2015, Harvey 2012, Lessig 2002, Castells 2015, Stavrides 2018). However, these 'commons' are also challenged by global financial practices, which in concurrence with privatized ICT networks, can undermine cities profoundly, as we explored in the municipal conference, *Flying Money*, earlier this year.[7]

By studying the work of numerous inspiring authors and conducting experiments, I have come to the conclusion that physical proximity is funda-

mental to local knowledge systems; it is fundamental to being, and bearing, witness and to establishing trust and truth. We experience the city in each other's presence. Proximity, including the distant proximity that emerges because of transportation networks, is a fundamental quality of urban experience. With proximity, trade-offs for trust and truth become clear, new ideas are challenged and solutions are invented or created. Ultimately, the question here is how strangers in a globalized networked city can actually bear witness to each other, and establish a base line of trust.

Tuning Rhythm

Fig. 5 Fragment cover City Rhythm, logbook of an exploration, by Caroline Nevejan & Pinar Sefkatli 2018

In 2013, I was invited to participate in a study about social safety in a neighbourhood in The Hague (Den Hengst, De Jong & Nevejan 2014). Figures on crime had decreased, but other figures revealed an increased feeling of lack of safety, as reported by residents. We used the YUTPA framework to establish how trade-offs for trust were taking place in this neighbourhood, and we found notable results. Close to home, people like to meet others in reciprocal ways and like to create moments of significance together, but they do not like to interact too much. They do not want to do anything to ensure safety, they simply want to be safe. The most striking result that we found is that sharing rhythm, without having to make any extra effort, creates an initial mutual sense of trust. Activities such as arriving at school every day at around the same time, walking the dog, taking the same bus in the morning, trigger people to say hello and to notice one another. A first step towards being and bearing witness to each other has thus been taken.

Rhythm has been studied over the centuries in philosophy, anthropology and the arts. Aristotle was among the first to write about the subject. The Dutch philosopher Marli Huijer has explored studies into rhythm of the last 2000 years (Huijer 2012). Huijer comes to the conclusion that rhythm is es-

sentially the variation in a pattern in a given structure. Rhythm is crucial to human beings. Breath, heart, and movements are all rhythm based, for example. Rhythms are also foundational to aesthetic experience; our senses notice rhythms that we are not even aware of, yet they influence us profoundly. Smell, taste, sound, touch and even eyesight affect our moods and even the capacity with which we can perform. Also, when engaged in rhythm, one may feel as though free energy is available. Jogi Panghaal, a designer from India, explains that his research with indigenous communities indicates that rhythm is fundamental to any movement of craftsmanship and that these movements are essential in the direct transmission between master and apprentice (Panghaal 2008). It is readily noticeable that when involved in a mechanical task, human beings are easily tired. But when engaged in the same task when a song is sung, or a rhythm is struck up, people do not experience tiredness for a much longer period of time.

Astronomers that execute the Fourier analysis on distant planets to detect life, argue that rhythm is life itself. Sentient beings, all life forms, are subject to rhythm and create rhythm themselves. Furthermore, territories and ecologies are rhythm based. The sun, the moon, the tides and the seasons define ecologies in their core. In any ecology, diverse rhythms operate. In this diversity of rhythms, in any combination of rhythms, there is a moment when they will unite in a first beat. The flower that blossoms, the bee that lands. Both coordinate independently and have distinct and diverse rhythms, yet they are meant to synchronize, to meet at least once in their lifespan, so that the flower is fertilized and the bee gathers honey.

Rhythms include spatial rhythms, temporal rhythms, emotional rhythms, and rhythms in actions. Tuning, balancing, matching, and sharing rhythms are dynamics that one can find in nature and also in human societies. As human beings, we are part of nature, we are part of these ecologies, and in this sense the paintings by Lorenzetti I referred to earlier, point to a truth we cannot deny. We are rhythm-based as human beings and we have to respect this, as Lorenzetti argues.

Rhythm is foundational for communication between people and between people and their environment. When people meet, rhythm plays a role of significance. For example, research by Satinder Gill indicates that human beings attune to each other before they actually engage in conversation (Gill 2017). This attuning takes place via breath and movement. Gill also argues that such attuning is a requirement for any knowledge exchange between two experts. When out of proximity, the knowledge transfer of the character of a specific colour, for example, will not succeed (Gill 2000).

Following a year of seeking funding and partners to facilitate this study, in 2015 we finally embarked with six Dutch cities on an exploratory study entitled *City Rhythm, exploring rhythm as a methodology for enhancing social safety in a neighbourhoo*d (Nevejan, Sefkatli, Cunningham 2018). The participating partners included the Amsterdam Institute for Advanced Metropolitan Solutions, colleagues from TU Delft and Wageningen University, thirty civil servants, ten artists and one tabla player, two start-ups, and the Amsterdam Institute for Health and Technology. We spent many hours not understanding one another, a special quality that one needs to nurture in this type of ground-breaking and interdisciplinary research project. As a result, we designed a methodology for developing a rhythm perspective on social issues in a local context, and we developed a conceptual language for considering rhythm within the large datasets of neighbourhoods. The City Rhythm data model is now defined by beats, base rhythms and street rhythms, which we explored with CBS open microdata from the six participating cities in areas of 500 square meters. Preliminary results indicate that it is possible to identify different base rhythms – like atmospheres – for social safety. Over the next five years with dr. Scott Cunningham and the statistical department of the municipality of Amsterdam, and facilitated by a research grant from the Netherlands Organization for Scientific Research (NWO), we will explore how rhythm can effectively be applied in the physical and social realm in relation to the data context, to enhance the sense of social safety in the specific borough of Amsterdam Zuidoost.

After realizing that nature and human communication are rhythm based, one wonders how it is possible that rhythm as a design space is used so little in current municipal policymaking and local systems of governance. In architecture and in urban design, rhythm as an aesthetic is certainly an important factor of evaluation. However, rhythm is not considered as a design space as such. Rhythm is a disciplining factor in schools, hospitals, in the military, in religious communities, and in totalitarian regimes as well. The performance of daily tasks, the interaction between different stakeholders, and moments of performance and synchronization, define a specific culture. Thus, what are the rhythms of a smart democracy?

Towards the end of his life, Thomas Kuhn considered communities of practice, and came to the conclusion that it is necessary to recognize each other's spatiotemporal trajectory to be able to develop shared concepts, out of which language can emerge (Kuhn 2000). Only recently, because of the rhythm research that we have been conducting, have I begun to grasp the meaning of this fundamental statement. If I recognize how the other moves through time and space, we can develop shared concepts and language can

then emerge. If I recognize your rhythm, we can be witness to each other, develop a shared language, and engage to reflect.

Urban Reflection

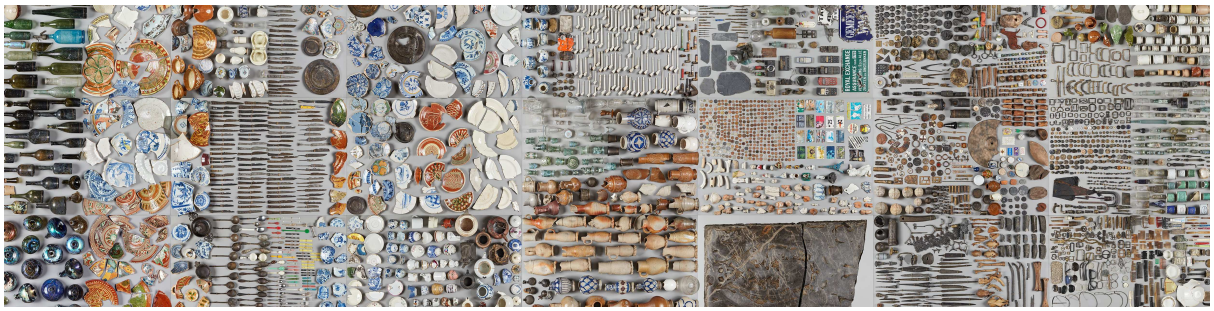

Fig. 6 Fragment of display North side metro station Rokin in Amsterdam, with archaeological finds about the themes consumption, communication, recreation, and personal artefacts. The display is made by the Department of Monuments and Archaeology of the Municipality of Amsterdam. Photos are made by Harald Strak.

Reflection is a word that has several meanings. It may literally refer to mirroring an object, to a thought processes, to an emotional process, to representing something. Urban reflection can also emerge in the urban proximity of the shared space, in which people bear witness to each other. Urban experience, according to previous definitions, must include 'urban reflection' to contextualize the many sensations that network cities offer. Such urban reflection can only occur when people bear witness to each other, which only takes place when the rhythms between those who reflect are attuned.

Urban reflection can be understood as a 'collaborative authoring' of urban experience (Humphreys & Jones 2006). The word 'author' implies independence, to act in one's own way, to locally coordinate within the given context of the 'whole'. The word 'collaborative' suggests stakeholders, experts and others that are engaged, who together are the author of what will subsequently take place. As an outcome, the urban experience offers a shared vision and trajectory of actions for 'future events'. Authorship also includes the acceptance of responsibility, and the fact that this takes place in relation to others, makes processes of transformation more resilient. It places the diversity of people at the heart of development, and requires designers and policymakers to think in terms of dynamics and meta-design. It facilitates people to act individually. The concept of the city as a 'collaborative authoring of outcomes' permits new perspectives on design processes and policymaking for urban development. In the collaborative authoring of outcomes, stakeholders,

experts and those that are engaged, each play a role (Fung 2006).[8] Power relations deeply affect such authoring and trigger cultural dynamics of empowerment, understanding and compassion. The more diverse the participants, the better the outcome (Surowicki 2005).

How can technology contribute to these processes of authoring of outcomes? How will artificial intelligence, in particular, be part of this collaborative authoring of outcomes? Robots and systems can learn, can simulate thinking, can weigh up different stakes. Reflection, as prediction and evaluation, is a fundamental dynamic of AI (Steels & Brooks 2018). What kind of reflection will AI offer the collaborative authoring of our cities? What kind of contribution will it offer to the urban experience? If anything, societal AI must nurture and stimulate diversity. In the rhythm studies, we worked with tabla master Sirish Manji Kumar, who explained how many different rhythms can all be played at the same time, provided they share the first beat, the one. Possibly, AI can significantly contribute in this regard. Often, in human society, we have a very rudimentary understanding of difference and diversity, even though we attune to each other without even noticing (Gill 2016). Could it be that AI may help us to find a shared first beat between the many different rhythms a city offers?

In design research, cities are understood as landscape, as emergent architecture, and as a complex system (Samson 2010). There are many ways to orchestrate reflection (Benammar 2004). Design interventions for creating authorship, facilitate people to speak from their own expertise, from their truth.[9] How can we identify urban reflection as a daily practice that informs how we shape our city together every day?

It should already be possible to identify urban reflection in Amsterdam. In this regard, several things come to mind. Firstly, the best and most effective source of urban reflection, I argue, is the humour in the streets of Amsterdam. The Yiddish humour of Amsterdam was once proverbial. Humour reflects dynamics in a city: social economic developments, gender, race and class, attitudes and opinions that people possess, subcultures that emerge or clash. Humour is specific to a culture at a given moment (Kuipers 2015, Hebdige 2012). Also, humour can create the space in which reflection can take place. Because we all laugh about the political landscape, we can have a conversation beyond known opinions and points of view. In public settings, humour contributes significantly to urban reflection and is an integral part of shared urban experience. However, humour is very culturally sensitive, and it sometimes seems that in times of polarization, it is rapidly losing ground.

Another practice of urban reflection is the contact between neighbours, and friends and family, who share an urban environment on a daily basis.

Their conversations can be inspired by mass media, or religious gatherings, political messages and social media communication. Discussing these expressions with friends, colleagues and family, or watching others comment on certain expressions of others, contributes to a practice of shared reflection. In such communal conversations, norms and values are exchanged, which involve discussion of what is positive or negative action. They are a form of public-private reflection, and contribute to the urban experience of those involved.

Even occasional gossip or small talk contributes to urban reflection. For example, for many years on the Nieuwmarkt there was an 'Oma Kip' (Granny Chicken), as she called herself. She had a mobile shop at the entrance of the Zeedijk, where drug dealing was rife at the time. The daily chatter around her mobile chicken shop concerned the safety situation and all the drug-related issues a great deal of the time. The presence of Oma Kip not only made that part of the Nieuwmarkt a safe place, she also insisted on approaching addicts in a friendly manner, saying 'they are people too' to anyone who enquired. Her attitude and small talk triggered numerous reflections on the humanity of addicts among the many who bought poultry at her stall. For many people today, small talk happens in the different social networks in which they participate. Do these interactions trigger refection? And if so, can the social networks play such a role of Oma Kip in our streets?

Also, art, architecture, fashion and other cultural expressions affect city life profoundly. Aesthetics contribute to urban reflection, sometimes elegantly and sometimes in confrontational ways. They are part of the identity of the place, and they also have the potential to trigger reflection. The sense of beauty, the sense of pleasure, the sense of tension or challenges one perceives give a perspective on daily sensorial events that urban dwellers have to experience every day. However, to have the 'Erlebnis' or 'belevenis' of beauty is not yet reflection. It needs to be contextualized by personal experiences, or by other cultural expressions, and even by history. Different cultural agencies continually create objects, platforms, new practices, communities and events that trigger reflection and inspiration. For example, Willem Velthoven (Mediamatic) and Huda Abi-Fares (Khatt Foundation) developed a program for modernizing the Arabic font between Arabic calligraphers and Dutch designers, arguing and showing that design is an agent of cultural progress (Abi-Fares 2017). Until recently, only religious fonts for the Arabic language were available. Then together with art students, they created 'El Hema', 'Arabizing' a familiar Dutch store to question how Dutch people view Arab things, people, customs and languages (Said 1995). The newly developed fonts

went viral in various Arab cities and around the world and are used to this day.

For Kluge and his colleagues at the Frankfurter Schule, the most important context – and condition – for an Erfahrung, is history. To understand the history of your family, of your street, of your city gives meaning to life. Understanding what the Second World War meant for the inner city of Amsterdam, for example, and the many people who were killed in death camps, is an awareness that creates a deep urban reflection. As do the annual memorial on Dam square, the monuments that school classes take care of in many neighbourhoods of Amsterdam, and the celebration of Keti Koti, to remember the day slavery was abolished in the Dutch colonies of Surinam and the Antilles. Or, for example, the archaeological display cases in metro station Rokin, which exhibit 10,000 objects that have been excavated from the river Amstel, and tell the story of the many centuries of Amsterdam (Gawronski 2018).[10] The telling of a personal story, the rituals of remembrance, and the objects that generations before us have thrown into the river, all contribute to urban reflection profoundly, and therefore to the city's future.

It appears that urban reflection is actually a rich practice in which many people are involved. The various elements above all give perspective to personal experiences that people share. The sharing of these experiences is part of navigating everyday life and has implications for how people understand and engage with the world around them. Urban reflection, its cultures and subcultures and the dynamics with which these are born and die is the basis upon which people act and shape the city together. Urban reflection leads to a collaborative authoring of outcomes, offering everyone who participates the opportunity to be author of their own street, school, or organization.

The question is how a municipality can participate in this process. Can municipalities listen? Can municipalities be and bear witness? Can they attune their rhythm to those of the people? Also, we need to invent and agree upon frameworks for justice in the network society. For example, laws on privacy are now the centre of attention for many governing bodies, but many more issues will arise.

In Conclusion

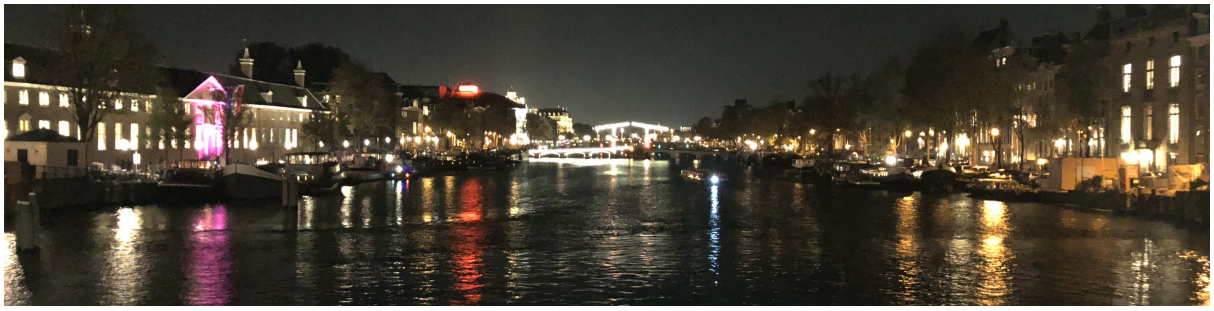

Fig. 7 The river Amstel, 3 November 2018, 20.00 PM, Photo Caroline Nevejan

In the coming years, we will build the Designing Urban Experience Research group (DUE) and focus on the issues that I have raised in this inaugural speech. Five PhD candidates have already begun their research. They are architect Pinar Sefkatli, who is already a research assistant in City Rhythm, and is part of the next phase of the Rhythm research with NWO. Architect Afaina de Jong examines how architecture and design can contribute to the empowerment of people through the design of shared space. Artist Debra Solomon considers how future urban ecology can be formulated and designed when human beings are not at the centre of such a design. Industrial designer Ino Paap explores how tacit and embodied knowledge can be communicated in online environments. And political scientist Aysegul Binali examines how a child's agency can be enhanced in crisis situations and international conflict.

As Lorenzetti had already shown six centuries ago, the good city rhythms of nature and the seasons and ensures that justice rules. Amsterdam is a city that was born in a storm and has been defined by the sea's tide for centuries (Gawronski 2018). Amsterdam as a smart city needs to rediscover its rhythm and build experience upon which we can act and survive Amsterdam's next existential storms. Clearly, the speed and scale of technology affect our networking city deeply and we need to consider how we can influence the local impact of global developments so that we can prevent the tendencies that undermine, and nurture those that are beneficial for the people and the ecology of Amsterdam. Possibly, the next storm is already approaching, but without taking the time to reflect together, we will not discover that until after it has struck. If we do want to design 'the good government' in the 21st century, I have argued here, this will need to be reflective and diverse – and rhythm based.

Words of thanks

I would like to thank the chair/rector of the University of Amsterdam, the dean of the faculty of social sciences, the academic director of the Amsterdam Institute for Social Science Research (AISSR) and the municipality of the city of Amsterdam for the confidence you have all given me. During my studies, and during my work in the different cultural and scientific contexts I have been active in, I have come across all of you present here. My dear colleagues, professors, students and teams, you have inspired me, confronted me, and protected me. I thank you all.

My family, my kin and my friends, thank you for sharing your lifetimes with me; I am happy that we can be and bear witness to one another. Also, I thank my father, my uncle and dear friends who have passed away.

I thank my love, for your rigorous and sensitive perception, for our daily laughter and passion through everything.

On this occasion, I would like to give a special thank you to my mother. I am very happy that you are here with us. This special 'thank you' is for you, and for your mother, and her mother and her mother, and to my daughter, Alex, and potentially her daughter and her daughter and her daughter. And a special thank you to my sisters, and their children, who we laugh with, and survive the rocky road of life together. It is a very special feeling in this academic context to stand in line with all these women who I do not know, before me and after me, and who I share the care of our daughters and mothers with. This care includes the nurturing of how we think and feel, and survive and enjoy our sense of wellbeing in the different situations that we find ourselves in. I thank you for the richness of your ways of feeling, the thoroughness of your ways of thinking, and for the courage to dare to know and to share this with me over time.

Ik heb gezegd.

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