CIVIC

DESIGN

EDUCATION

New roles and methods

BEN SCHOUTEN

OVERWIN SITUATION

"I AM the FIRST PROFESSOR OF PLAY... YES"

HOW IS A PART OF the FUTURE MADE?

CALCULATING MEASURES

GAMES IS PART OF the NEW CULTURE

HOW CAN YOU SHARE & INTERACT WITH INFORMATION

STORYTELLING IS PART OF OUR CULTURE

A SPACE WHERE YOU CAN MAKE A CONNECTION & PLAY WITH LIKE MINDED, SKILLED PEOPLE

Let's MAKE A

CITIZEN ORGANISED COLLECTIVE DE-CENTRALISED SOLUTIONS

ORGANISE the INDIVIDUAL into A COLLECTIVE

A MULTISTAKEHOLDER APPROACH DESIGNING IS VERY DIFFICULT...

DESIGNING the GAME is the POWER

PROBLEMS

REMOVING CONSEQUENCES

CHANGING the RULES IS ALSO PLAY!
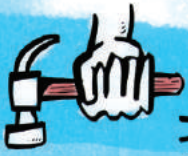
The GAMES WE DESIGN ARE FOR ALL PROFESSIONALS & INVOLVE ROLE PLAYING

CREATING A BOTTOM UP APPROACH CREATING PROBLEMS

HOW DO INSTITUTIONS LIKE I WA DEAL WITH the COLLECTIVE?

GAMES LIKE POKEMON GO ALLOWS OWNERSHIP & ATONEMENT

TO ESTABLISH

PARTICIPATIVE SOCIETIES
CREATING NEW CHALLENGES FOR the WATER SECTOR

YOU CAN WORK WITHIN A SAFE ENVIRONMENT to LEARN!

IT'S NOT ABOUT DATA it's about DYNAMICS

ALLOWING US TO PUT OUT ALL OF OUR CRAZY IDEAS through the ROLE OF SOMEONE ELSE

ITERATIVE DESIGN

CONNECT VISUAL & REAL WORLD

Introduction

This cahier is one of the outcomes of a nationally funded project in the Netherlands named Smart Technologies Empowering Citizens (STEC), an initiative targeting the Dutch creative industry with several industrial partners and NGOs.
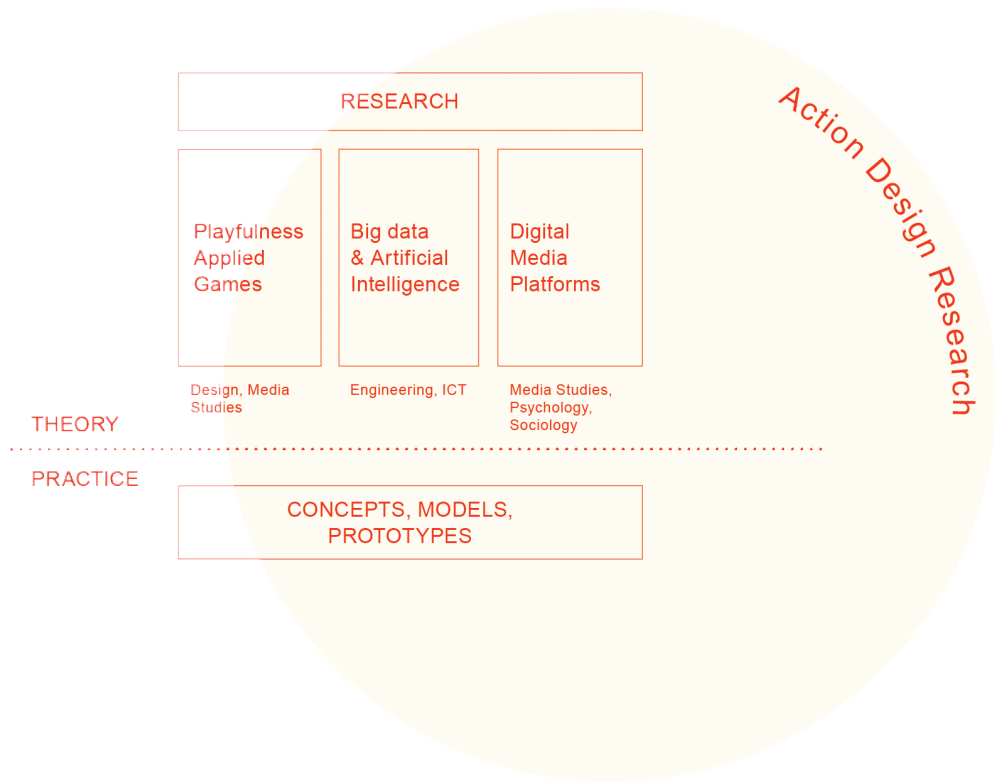
The goal is to better understand and operationalize how digital media technologies and social media platforms, big data, and serious games can empower citizens, while mobilizing and organizing them around collective societal issues such as climate change, social justice, energy transition, and local democracy. This cahier could be of interest to designers, students, experts, practitioners, and those interested in the role of design and design education.

STEC specifically addresses the interplay between digital technologies and **city making** – which is constituted by the processes through which cities are shaped by both top-down planning and bottom-up appropriation and social organization. In this project, we use a transdisciplinary approach, building upon **four thematic pillars** each of which represents a specific approach to design and empowerment. For the first, we looked at the role of social media platforms, for the second we looked at the role of play and games, and for the third we investigated the use of big data, artificial intelligence (AI) and responsible

CITY MAKING NEGOTIATING WITH OTHER STAKEHOLDERS, ROLE-PLAYING A CITY GAME ON URBAN PLANNING

RESEARCH

Playfulness
Applied
Games

Big data
& Artificial
Intelligence

Digital
Media
Platforms

Design, Media
Studies

Engineering, ICT

Media Studies,
Psychology,
Sociology

Action Design Research

THEORY

PRACTICE

CONCEPTS, MODELS,
PROTOTYPES

MATERIALS USED BY THE DESIGNER A PIECE OF 'PLASTIGLOMERATE', A HUMAN-MADE MINERAL WITH PLASTIC IN IT
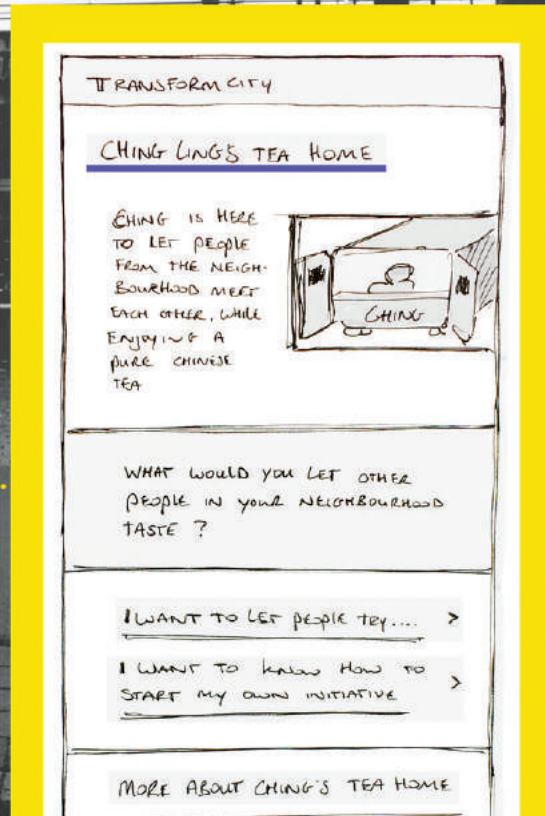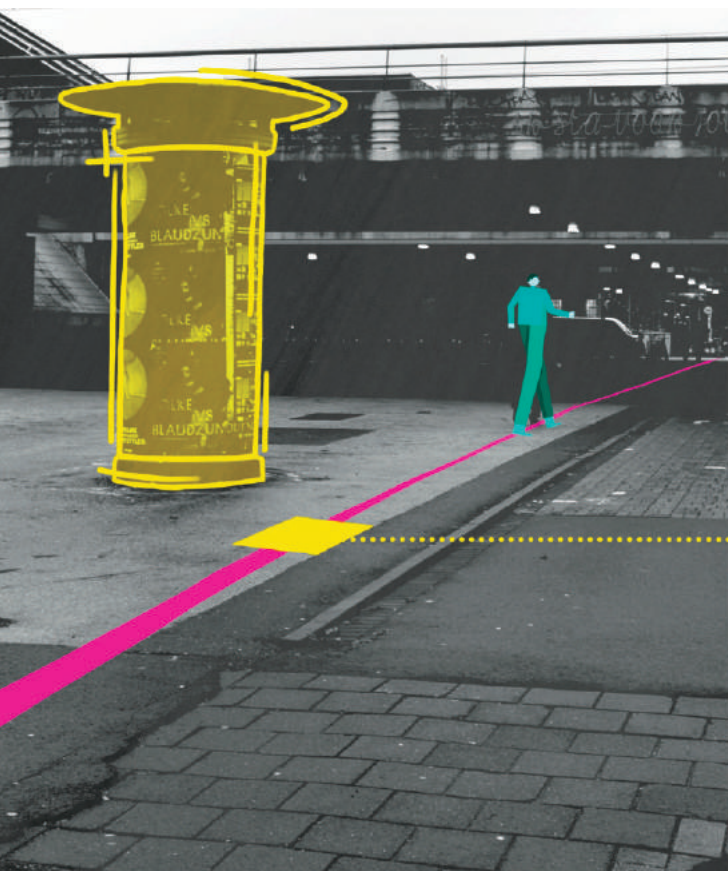
technologies, putting the focus on smart citizens rather than smart cities. A fourth overarching theme on design thinking informs the three thematic research trajectories with methodologies and synthesizes the findings into a comprehensive collection of design practices and strategies.

In this cahier we spend some time in understanding the role of the designer as a change-agent who is able to bring awareness to the aforementioned topics, and who can challenge the status quo in search for more inclusive and fair solutions. Moreover, we address the urgency to vehemently explore new possibilities of reimagining the future and build the skills to transform ideals, values, and beliefs into visions and strategies that could bring us closer to an alternative future.
Approaching this topic from an educational perspective is urgent, as we have found that the design process and the role of the designer have taken on new forms with consequences for the skills, competencies, and professional ethics of (future) designers. The **materials used by the designer** are currently different from what they used to be, from electronics or brick to process and facilitation, and capacity and community building. This form of design is often referred to as **Civic Design**.
As Gordon and Mugar have written in their book ***Meaningful Inefficiencies*** [1], civic design is about creating opportunities for citizens "to interact, form alliances, generate shared interest, and care for matters of public concern." In this cahier, we want to specifically address the ability of the civic designer to question her or his practices, align their values, and continuously adapt policies to changes demanded from citizens and consumers.

The complexity of current societal issues challenges design disciplines and their educational methods, and questions the skills with which new generations of designers should be equipped. For one, the designer's mandate changed from engineering solutions to collaborating in multiple stakeholder design processes, sometimes referred to as communities of practice, where research plays an important role, stretching-out longer-term relationships between universities, industry, and (local) communities.

A more **value-driven design** [2] approach could enable us to bring together the many voices of collective governance through an iterative and participative process that accounts for human values, such as privacy, fairness, and democracy, throughout the design process and shifts the discussion towards the lived experience of citizenship and how it can be embedded into new technologies. In combination with new design methodologies including **speculative design** [3] or playful interaction amongst others, such approaches can move from a problem-solving space to a more future-oriented discussion where technology can be positioned in relation to human desires, societal needs, future projections, and expected developments.

The task of rethinking design disciplines today seems to be not only directed towards understanding the sophisticated complexity of the techno-social fabric, but to also rethink the design discipline itself and the ways knowledge is constructed. The design process has become much more dynamic and inclusive (or so it should), and its knowledge base is not exclusive.

In this cahier, we explore the implications for design education through a series of interviews with design educators that are in the process of defining new educational approaches reshaping the role of design in society. For this, we invited Oscar Tomico (co-director of the Design for Emergent Futures Master's Program at Elisava, Barcelona), Eric Gordon (Visiting Professor of Civic Media at MIT, Boston), Madeleine Maaskant (Director of the Academy of Architecture, Amsterdam University of the Arts), and Kees Dorst (Professor of Design Innovation at the University of Technology, Sydney), to talk with us about their programs, methods, and approaches. Alongside the interviews, we present as case studies several projects and initiatives that are part of their educational programs.

Each of the interviews presents a specific vision and approach to civic design education which we structured using the following themes:

No more clients! Designing for the community is designing with the community

Inside and outside the school walls: towards communities of practices

Transdisciplinary Innovation as driver for systemic change

Re-shaping democratic institutions

The themes expose the complexity entailed in the relationship between design, designers, and communities by addressing concerns, challenges, and new opportunities for design education. Our intention is not to present these four opinions as definitive answers on what the future of design education should look like. Instead, we present the reader with the perspectives so she or he becomes (more) informed about the variety of takes and possibilities for alternative practices of design education, that are bottom-up, community based, transdisciplinary, that challenge the status-quo, and allow plenty of room for imagination, experimentation, and speculation.

A museum for the community [4]

Empowering young citizens to become city makers through play

Van Eesteren is a game that introduces serious notions of urban development in a playful way to children aged between 8-10. It was developed for the cultural-historical Van Eesteren Museum, dedicated to Cornelis van Eesteren's urban planning legacy in Amsterdam and how this has changed and is still changing over the years. Van Eesteren was a prominent architect and urban planner, in charge of many Dutch post-war urban development projects which were guided by his principles of light, air, and space. But he's best known for the iconic Amsterdam Extension Plan of 1934, which includes the Nieuw-West neighborhood where the museum is located.

To achieve better engagement with the local community, the museum's art education program collaborated with a team of designers from Amsterdam University of Applied Sciences, who began an iterative process of action design and research. Children from the neighborhood collaborated with the team and explored different tools such as an interactive table, laser beams and activities such as neighborhood walks including role-playing and prototyping. The process resulted in a combination between an outdoor activity in the neighborhood and an indoor activity inside the museum. The activities first introduce and explain the physical elements that create the urban spaces through first-hand experience and after that support the children in imagining their ideal city through a city-building game where they work with the

same elements they have previously observed. Van Eesteren's principles of light, air, and space are part of the game and they contribute to a better understanding of what people experience, desire, and prefer when it comes to the city they live in.

By physically manipulating objects that symbolize roads, bridges, houses, stores, blocks, vegetation, and cars, children build critical thinking skills and in-depth knowledge about urban development. They are faced with short term challenges such as connecting two roads to expand their row of houses, but also with long-term strategic thinking such as choosing a green space over building a store to preserve a healthy environment. This playful approach contributes to the empowerment of young residents because it encourages them to explore the notions of **city making**, being creative and active in relation to their neighborhood.

In this project, the team formed by digital design students and museum art educators developed a solution that connects the museum to the local neighborhood while empowering residents in their relationship with the urban environment. Although the initial concepts looked for a technological solution to the lack of local engagement with the museum, the participatory design process allowed the team to open the museum towards the community by developing something that meets the needs and values of the residents.

Van Eesteren Museum is a project of Master Digital Design, Amsterdam University of Applied Sciences 2019/20 by Leila Farhood and colleagues, coached by Lilet Breddels, Arjen Oosterman and Ben Schouten.

[1] Meaningful Inefficiencies

Gordon, E., & Mugar, G. (2020). Meaningful Inefficiencies: Civic Design in an Age of Digital Expediency. Oxford University Press.

[2] Value-driven design

Flanagan, M., & Nissenbaum, H. (2014). Values at Play in Digital Games. MIT Press.

Knobel, C., & Bowker, G. C. (2011). *Values in Design. Communications of the ACM*, 54(7), 26-28.

Friedman, B., Kahn, P. H., & Borning, A. (2008). Value Sensitive Design and Information Systems. *The handbook of information and computer ethics, 69-101.*

[3] Speculative design

Dunne, A., & Raby, F. (2013). Speculative Everything: Design, Fiction, and Social Dreaming. MIT press*.*

[4] Community

By studying the role of technologies and methodologies to empower citizens, we notice the notion of communities seems important. Of course, this cannot be set apart from the trend within our digital connected and networked society where groups of people organize themselves around topics that are important to them. More and more, these collectives can be seen as safe havens for people sharing the same ideas or values. The collaborative scale of communities has been identified by many other scholars in the context of participatory city making and highlighted by the educators we have interviewed for this cahier.

For years, these practitioners and researchers in disciplines such as Human Computer Interaction have argued that the computer has left the beige box on or underneath our office desks. Interaction with digital interfaces and online platforms has become part of our everyday lives, including the often-messy crossovers between the different activities and roles we take upon us. In turn, this has resulted in a call for a third wave of interaction design or human centered approaches that require designers to understand the full human being – and not just his or her needs as let's say an office worker. More

recently it has become apparent that these same digital media do not only provide convenient services enabling us to manage our everyday lives, but that they have grown into the de facto civic infrastructure that citizens use to put issues on the agenda, form alliances, and organize themselves.

Design with and for the community is an umbrella term covering community planning, community architecture, social architecture, community development, and community participation, all of which emphasize the involvement of local people in the social and physical development of the environment in which they live. Community design often represents the addition of moral and political content to professional practice.

And in turn, this has led to the introduction of new design approaches with labels such as digital civics, public design or civic interaction design. These do not take individual human beings and their transactions as their starting points, but rather look at the design of relations, with the notion of care as a central concept

Further reading:

DiSalvo, C., & Dantec, C. A. L. (2017). Civic Design. *Interactions*, 24(6), 66–69. https://doi.rg/10.1145/3137097

DiSalvo, C., Clement, A., & Pipek, V. (2012). Participatory design for, with, and by communities. *International Handbook of Participatory Design,* 182–209.

Change by critical reflection
## Contextual Notes

Ben Schouten, Co-founder of Master Digital Design, Amsterdam

Before diving into the four perspectives of this cahier with our interviewees, let us discuss some of the underlaying principles and concepts in the form of a Q&A with Ben Schouten.

You initiated the STEC research project and also founded the Master Digital Design program at the Amsterdam University of Applied Sciences. Could you expand a bit on these projects as a way of introducing the urgencies behind this cahier?

In our Master Digital Design, we think of design as an emergent process. Our students immediately start experimenting with real problems allowing the outside world to come in. We really wanted to take a studio model approach as a community of practice, where there's a focus on **humanistic design** [1] taking cultural, environmental, and societal implications into account. In our program there is an emphasis on dynamics instead of the mechanics of technology.

One of the core notions within STEC is **'action design research'.** Through this method we want our designers to engage with the societal context earlier. Debate with the direct stakeholders, to start creating with the community and provoking new solutions, from top-down to bottom up. From there on, as a program we start iterating with our partners around more complex topics oriented towards preferred or alternative futures, for instance with respect to circularity or sustainability. In this sense, our model of education is directly related to the wicked problems that are out there. It is a thematic approach. The urgency is there, and critical thinking is part of the studio model we use. Action design research seeks transformative change through a simultaneous process of taking action and building theory linked together by critical reflection. It is an iterative approach, thinking by doing held together by critical reflection. I think this is something we have been missing a lot in design, taking the responsibility for the consequences of the things that we build or construct. And now even more fascinatingly, industrial partners are in many cases sincerely interested in addressing these wicked problems...
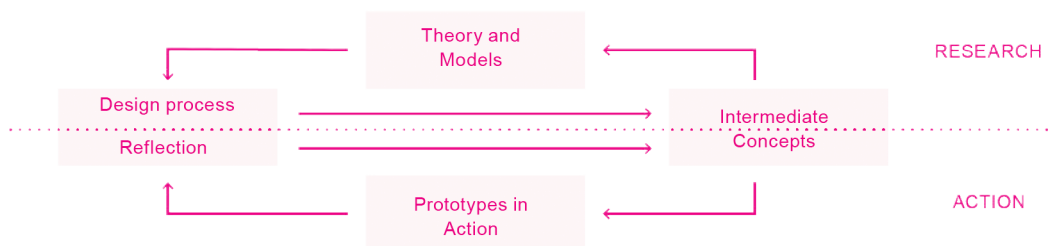
ACTION DESIGN RESEARCH TAKING ACTION AND THEORY LINKED BY CRITICAL REFLECTION

OOSTERWOLD IN ALMERE DRONE IMAGE OF OOSTERWOLD, A COMMUNITY OF SELF-BUILDERS IN ALMERE, THE NETHERLANDS

So, in our philosophy, we believe that research should not be simply left to researchers, it should be embraced by industry and institutional partners and result in longer relationships. A research question does not come only from industry, or from the university, but they jointly agree on a thematic research space. In short, in both the Master Digital Design and the STEC project we are interested in how design processes are being shaped, with value driven design and critical thinking as essential components.

When you talk about empowering citizens through design or students through a civic design education, it seems you are arguing for a smaller scale of design interventions – the individual with the agency to influence larger systems. Can you expand on this notion of scale in the context of civic empowerment? And how does it relate to society at large?

If you think about what democracy and its institutions need at this moment, they need to be scaled down to human proportions, creating ownership. The core idea of decentralization relies on readjusting the scale of an action, initiative, or intervention and relying on citizens to take the initiative on the things they care for. People should be able to govern their own ideas and from there on start taking action on the things they find important. This relates to the bottom-up design model of civic empowerment that we developed in STEC, that starts with enabling citizens to be heard, to be able to express themselves and to organize themselves with like-minded people on things that matter to them. But this can only work with a decentralization of governance structures at a different scale. If you look at many of the self-builder initiatives like **Oosterwold in Almere** [2] [that we looked into], that's what people do, they all have a sort of an idea, they dream about, they relate it to other people, and from there on, they start imagining and shaping a new reality, in this case a whole new neighborhood.

From top-down to bottom-up

From the perspective of decentralization, scale and civic empowerment, what new meanings and actualizations of community can emerge?

When thinking about communities the question of scale is essential. On what scale should we operate? The scale of the individual might be too small, but that of the world too big. In any case, if you think about what democracy needs, I strongly believe in the smaller scale and decentralization of (local) communities. There is also an argument of sustainability implied here. Within our platform society we can share practically anything – examples abound like Uber, Airbnb or even collectives that share tools, appliances,

Social science

Natural Science

Transdisciplinary

Humanities

Non-academic knowledge
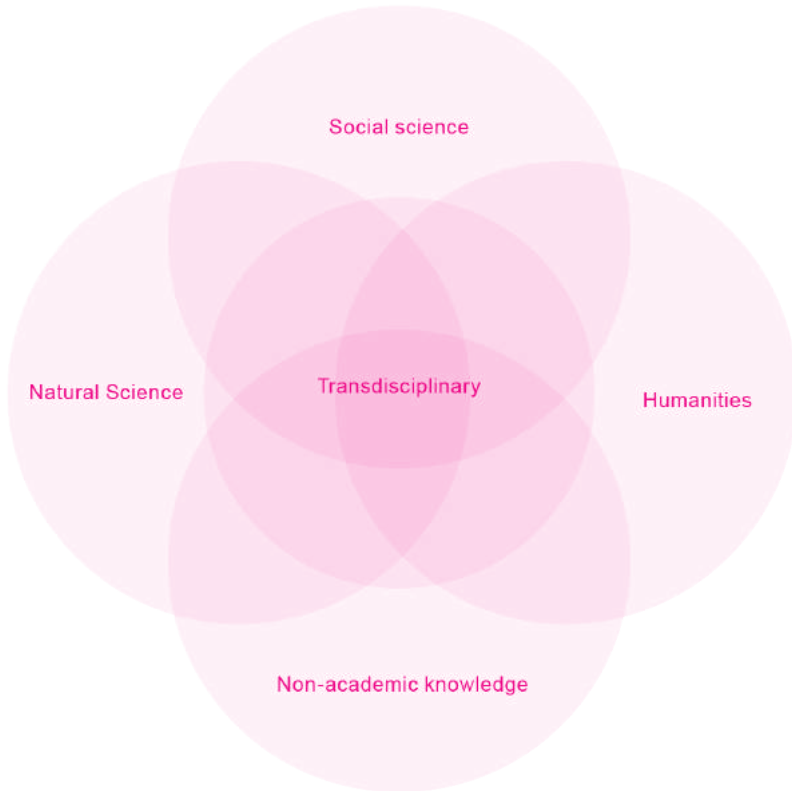
TRANSDISCIPLINARITY AGGREGATING KNOWLEDGE FROM DIFFERENT DOMAINS

transportation, etc. – but that does not bring us together. A community is something different than a group of people, it has shared values and meaning. In this sense I strongly believe in the role of communities as well as that our designers, our projects and services should support local initiatives. If you care and want to think about our future, you must share values and debate the way you think to create change.

To expand on this discussion about the various roles one designer can play, another notion that was very clear throughout the interviews is transdisciplinarity. It relates to the knowledge and practices that emerge at the intersection between disciplines, industries, and local initiatives. How do you see transdisciplinary approaches from the perspective of the master program you founded? And how do such approaches link to the notion of 'community of practice'?

There are two possible answers here. One the one hand there is **transdisciplinarity** [3] as the combination of disciplines. For instance, the humanities, social sciences or the natural sciences. We have seen that it is important because these mono-disciplines are in general not capable of solving the complex issues that we are currently facing as a society.

On the other hand, there is transdisciplinarity as part of the process of meaning making. If you want to create a rich context, you need to be able to listen and be open to ideas. This means that an expert or a single discipline alone, in many cases, cannot contribute to the solution of all, and that integrated new knowledge need to be created which is appropriate to the local community you're working for. In our educational model, different practitioners work together with students to learn on the basis of equality. In this sense, we create communities of practice. This is something that specifically Dorst and Maaskant address in their interviews in relation to the actionable knowledge that is created when students work in parallel with colleagues from industry.

FIELD VISIT AND COLLECTION OF ADVERTISEMENTS FROM THE BIJLMERMEER, SOUTHEAST OF AMSTERDAM, A MULTICULTURAL AND PREDOMINANTLY LOW-INCOME AREA

The Sandcastle Social Labs

How could the headquarters of a former bank be repurposed to benefit an entire local community?

When expats choose to settle in a low-income neighborhood, they open up the space for investment and economic growth, often leading to disbalance in social cohesion. However, the moment this investment is doubled by dialogue and cultural exchanges, new opportunities for social cohesion and community building could arise.

SandCastle is a student project that illustrates the methodology of **action design research** by constructing an iterative process of design and appropriation of a new neighborhood space. The process starts with a real estate agency as client, which offers a part of their development budget as well as the first floor of their building for pop up stores and a community space for the locals. The project approaches the socio-economic problem of gentrification in the Bijlmermeer area in Amsterdam, where an influx of new high-income residents in a low-income neighborhood potentially undermines social cohesion. The challenge for the team of designers is to improve acceptance and the public image of a former bank headquarters refurbished into a mainly residential building. Their approach is to involve the direct neighborhood that could be potentially served by this transformation and to make this an example for the entire area for future initiatives.

Through ethnographic methods such as interviews, workshops, cultural probes, and scenario building the team of designers worked together with members of

the community to identify what approach would bring a long-lasting change in their area. This can be seen as a positive example of power decentralization where decision-making takes place from bottom up, starting with individuals and members of an underrepresented community. This could not have been possible without a clear intention from the real estate company to open the process from the beginning and share their resources with the community.

Throughout the process, the residents have become aware of the opportunity of having a community space and at the same time of the responsibility of designing, managing it, and using it according to community values. In this way, the entire design process has been democratized by having a transparent and empowering negotiation process which ended in a community space that can be used for free by any resident if the activity proves of interest for all members.

Here, designers have used their expertise in digital tech to facilitate the ongoing design process and propose tools that can enrich the community experience. They designed a community platform that encourages online discussions and supports the management and use of the space through effective space reservation. In the end, digital technologies are part of an integral community space where online social interaction is combined with in-person community meetings and events that take place at the ground floor of a recently renovated building.

Sandcastle is a project of Master Digital Design, Amsterdam University of Applied Sciences 2019/20 by Gabriel de Castro Freitas and colleagues, coached by Lilet Breddels, Arjen Oosterman and Ben Schouten.

The same applies to the activation of local communities and circular economies through a multiplicity of bottom-up, local design practices and collaborations between local community organizations and institutions, as suggested by Oscar Tomico and Eric Gordon.

Let's talk from the perspective of the design student. What working in a community of practice means for a design student who is trying to navigate a particular challenge, say designing something to improve the quality of life in a neighborhood. As a student, it's nice to think that you will make the greatest impact. You have some expectations even before the project starts, but eventually students are faced with the reality that it's hard to create a lasting change. How do you see this challenge from the perspective of the student?

I think the designer has a specific role in the community, and that is to inspire and to invite. Through the interviews in this cahier, we see that there is a shared interest of designers working within local communities of citizens.

The question is now: what kind of role should the designer have? If the role of the designer is to serve the community, then what do you do with design as an autonomous discipline? Artists and to a lesser extent designers, strive for unicity and for personal identity and ownership of their work. They want to create something beautiful. And to be honest, I don't know whether it's too early to tell, but to me a designer should be someone who is knowledgeable. That seems to be an open question that provokes a lot of discussion at this moment. Many designers have a problem to become 'just a process manager', but I don't think students should include or exclude any of these thoughts, they should just be aware of them personally. For me design starts with creativity as well as an invitation to take part in the process of designing.

What we miss, is taking the responsibility for the consequences of our designs, the things that we build or construct

Futures implied, speculating about the future, what needs to change within the way civic design is taught?

This is something we are trying to address within our studio model of action design research. In order to create change we need to care for people and feel responsibility for the things we design.

Let's use the metaphor of designing an airplane. What we used to do was design the airplane itself, design its mechanics, but we didn't think so much where all these airplanes would take us to, literally and figuratively speaking. Now we realize that this short-minded vision causes problems in the longer run. We must rethink what we want towards a sustainable society, where we want to fly to, or at what cost. Certainly in a post-COVID time.

Another important thing that all of us who contributed to this cahier seem to share, together with Madeleine Maaskant, Oscar Tomico, Eric Gordon, and Kees Dorst, is that design is a joint effort. There needs to be more people who decide where we fly to next, or if flying is still relevant. It should not necessarily be just designers. Design is overrated anyway.

Promises, promises

A reality check/critique to contemporary 'smart' technology

The Winter School 'Promises, Promises' clearly illustrated the notion of a community of practice. The focus of the project was to highlight critical thinking and transdisciplinarity by bringing together a multiple of design practices and disciplines. The participants looked at new open-ended research spaces and outcomes that can potentially come with the approach of action design research. It was a four-day research workshop, open to students, architects, designers, urbanists, sociologists, artists, and critical thinkers, with the ambition to do a reality-check at the intersection of technology, architecture, and urban planning.

In previous decades, complex urban problems such as social justice, gender equality, climate change, and poverty have been placed by the tech industry into its existing predefined silo-based structure that until then had worked with notions of efficiency, usability, connectivity and productivity. Catering solutions for every municipal need, an entire industry has flourished by adding the prefix 'smart' to virtually anything.

In this context, this workshop invited to explore the complex and loaded interplay between the domains of digital technology and architecture, considering the consequences for civic design and urban management. To bring order to the complexity of these various technological promises, the participants of the workshop grouped their findings according to three temporal layers in which these promises have been developed and communicated. These correspond to the existing context in which an innovative technology appears (the premise), the problems it addresses, the services it provides and its predicted outcomes (the promise), and finally, looking back at the first two, the achieved goals and impact of that technology (the postmise). Their findings were grouped into a collective timeline that highlights the pitfalls of designing technology from a standpoint of naivety, lack of depth, inclusiveness, and meaning as well as the consequences of these approaches to the future of the cities often mis-labeled as 'smart', 'zero-emissions', 'circular', or 'green'.

The analysis of the participants was primarily structured around four different territorial scales: 'smart' building constructions, media elements and art installations, 'smart' urban planning as well as the disruptive new business models with global impact such as Airbnb, BlaBlaCar, Uber and WeWork.

Promises, Promises is a project by the Amsterdam University of Applied Sciences (MDD) and Archis/ VOLUME & Stephan Petermann/MANN together with the Sandberg Instituut, Academy of Architecture Amsterdam, Design Centre Amsterdam, and AmsterdamCreative Industries Network, January 2020, Amsterdam.

Premise

Promise

Postmise

[1] humanistic design

Deterding, S. (2019). Gamification in Management: Between choice architecture and humanistic design. *Journal of Management Inquiry, 28(2),* 131-136.

https://www.hva.nl/binaries/content/assets/hva/lectorale-redes/boekjes/lectorale-rede-prof.-dr.-ben-schouten.pdf

[2] Oosterwold in Almere

On former agricultural land in the Dutch Flevopolder, 'Oosterwold' is growing. Without urban plan and just a rule set to regulate, individual initiatives choose a location and start collaboratively to develop a road and infrastructure as needed. Organic urban development in which the plot owners decide, and the municipality supports. Caravans are used as temporary homes by families developing their new houses.

[3] transdisciplinarity

A transdisciplinary approach aims to generate new knowledge by combining that of different disciplines. As a result of a transdisciplinary process, 'a unity of knowledge beyond disciplines' is created, as explained by Basarab Nicolescu, physicist and founder of International Center for Transdisciplinary Research and Studies (CIRET).

Further reading:

http://ciret-transdisciplinarity.org/

transdisciplinarity.php

Hearn, G., Tacchi, J. A., Foth, M., & Lennie, J. (2009). Action research and new media: Concepts, methods and cases. Hampton Press.

Ferri, G., Hansen, N. B., van Heerden, A., & Schouten, B. A. (2018). Design Concepts for Empowerment through Urban Play. *Proceedings of DiGRA 2018.* In DiGRA 2018

Schouten, B. A. M. (2016). Playful empowerment, the role of game design innovation in participatory citizenship. *Serious Games: Second Joint International Conference, JCSG 2016, Brisbane, QLD, Australia, September 26-27, 2016, Proceedings, 1–3.*

Schouten, B. A., Klerks, G., Den Hollander, M., & Hansen, N. B. (2020). Action Design Research Shaping University-Industry Collaborations for Wicked Problems. *32nd Australian Conference on Human-Computer Interaction (OzCHI'20).*

No more clients! Designing for the community is designing with the community
Interview

Oscar Tomico, Co-Director of the Master's Degree in Design for Emergent Futures

Oscar Tomico is leading a design engineering program at Elisava School of Design and Engineering and a master program on designing for emergent futures in collaboration with IAAC and FAB LAB Barcelona. In our conversation with him we talked about designing for and with the community, contributing to a more circular society and more sustainable infrastructures. According to him, there is a lot of room for intervention in civic and engineering design to challenge top-down systems of production.

Can you say something about your endeavors in Barcelona? What are you doing with the relationship between civic engagement and change?

In Barcelona I'm working at two levels. One being that in our design engineering department we try to locate design on the socio-technical system of production. In peoples' lives the distinction between work and free times is blurred. Traditional design engineering is still focused on the design of things. But the important thing is that through the design of something, the process, and all of the infrastructure to make the design, that infrastructure can transform the city. This shift in thinking about design is important because it immediately opens up new exciting questions: which partners do you choose? Which materials do you work with? Who are the providers, who are the companies that work on the sub-products? Who is doing the selling, the repairs? All these things, even if they look completely separated from our experience of walking down the street, are an integral part of the urban fabric. The whole social technical system of production, when it becomes distributed, circular, open and participative is something that has the potential to transform the cities.

The word production is interesting. Can you elaborate a little bit on what you produce and how you produce?

A simple exercise we do on one of the courses is that we ask the students to redesign one of the products they've previously done. It doesn't matter what it is; a stool, a car, or a speaker. The idea is to make them reflect on the model of top-down production chain of extractive economies,

Small-scaled manufacturing within the city, instead of big scale industrial production

Our program is structured in four main conceptual tracks: Instrumentation, Exploration, Reflection and Application

in which people literally squeeze as much as possible from the person under them, as a way of getting as much money as possible. We aim to move towards a more horizontal model where everybody is almost at the same level, everybody can contribute and add value. We are still designing products, but the local production and local resources, the involvement of the local communities is what makes it sustainable, not just ecologically but also economically and socially. It becomes a design process that happens with the community, for the community. Talking about stakeholders and clients still resonates with the top-down production chain where someone demands, and someone executes. In our education, we are envisioning a design process where both parties collaborate. We can already see things changing. Nowadays, we see more design ateliers where they don't want to have a big scale industrial production, but instead small-scaled manufacturing within the city.

How do you train your students? What kind of values or skill sets are necessary to develop bottom-up design projects?

In the Design for Emergent Futures master program, the way that we look at design and design action is as a design intervention. We ask our students to get involved in the situation that they want to design for. At the beginning the process is abstract, it is about framing who you are and what you want to do and then you go down to reality to see the scale of the intervention: the scale of the planet, the region, the city, the neighborhood. By being in the context, you understand the things that work and don't work, and the things that need more support. And then by being a part of it, you start designing things and processes, and by involving others you create new relations to populate this empty space that is needed to make this transformation. At first, this intervention might be just a piece of paper that raises awareness. But if you continue a series of design interventions, you involve yourself in the process, with your interests and motivation. You are building the base, an invitation for something to happen, something that you truly believe in, and that you would like to have where you live, because you

also are a citizen in that place. Our education does not seek to train designers that sit behind a desk waiting for the telephone to ring: their studio permeates to their surroundings and the place where they live is the workspace.

Our program is structured in four main conceptual tracks: *Instrumentation, Exploration, Reflection and Application*. Through each of them the students develop literacy and skills within design areas. Instrumentalization is not just learning what is possible, it's really getting your hands dirty, into mechanics, 3d modeling, coding, and programming. The exploration track works like an eye opener, in which the students are confronted with various technologies shaping the world like bio-design, interaction design, but also blockchain and other new and advanced business models. The reflection track is about understanding and positioning yourself in relation to others, and in society.
We are also interested in breaking with the Eurocentric approach to design and informing students about bottom-up theoretical trends such as post-colonial design, through a series of guest lectures. The application track is crucial to the program. From day one, we ask them to pick up a fight, and to frame that project in relation to the weak signals they are seeing. We ask them to involve themselves personally and we give them enough time, from day one to the end, to let the project evolve and mutate and reshape itself based on what they are learning.

What kind of students do the program attract?

The common denominator in our students is people who want to change, who are not happy in the way their professional life is going: architects and designers tired of commercial practice, people from politics and economics wanting to do something else. What we want from prospective students is to be ready to shift from traditional user centered design to something that we don't even know what it is, yet. Let's call it design interventions, but already that places a label on something that is continuously evolving.

Organic Matters!

Rethinking the future and value of regenerative economy, organic matter and local production

Organic Matters illustrates how the methodology of design interventions can potentially activate an entire community. Laura Freixas, together with a few members of a neighborhood experimenting with circularity, explore the possibilities of implementing biomaterials in packaging. The project studies how regenerative materials, processes, and systems can be communicated and implemented in society through material explorations, consulting services, and innovative business models.

The project starts by working with the residents and businesses of a local neighborhood in Barcelona to understand the cycle of production and generation of biowaste, and map existing initiatives that later might become allies. In this way, a research question is iteratively formalized that will later be expanded and extrapolated to several strands of research and design interventions and application domains. By generating knowledge about regenerative resources, decreasing society's environmental impact and biomaterials, the project grows from a local exploratory initiative to one with a clear agenda and focus on circular processes.

This agenda relies on a local network of businesses, designers, experts, and likeminded individuals to contribute with their perspective of the topic of circularity. It creates a social and **process infrastructure** that supports continuous reflection on the current linear economic model and questions the values and processes it promotes.

The project approaches the systemic challenge of waste generated by linear economic production processes through a paradigm shift: it focuses on the value created by reused resources to society and the planet rather than the decreased damage they could potentially generate, with wiser disposal systems. However, the designer and researcher could not fully create this shift alone, they needed a community to reflect on their values, culture, and daily processes while closely collaborating on changing this narrative. By working together with the community or by being part of a community, the designer worked on building motivation at the same pace with generating knowledge and solutions.

Organic Matters is a project of IAAC, Institute for Advanced Architecture of Catalonia developed in the Master in Design for Emergent Futures 2019/20 by Laura Freixas Conde and coached by Oscar Tomico.

circular production process

Inside and outside the school walls: towards communities of practice
Interview

Madeleine Maaskant, Director Academy of Architecture, Amsterdam

Madeleine Maaskant is Director of the Amsterdam Academy of Architecture, a school with a tradition in educating generations of architects, urbanists, and landscape architects that are employed at various (spatial) design firms during their studies. We consider this example particularly relevant for this cahier because it provides a perspective on the design process where creative use of materials, technological, morphological, and spatial exploration interfere with the complex nature of the building process and the strict construction regulations. How internal freedoms at the school can be combined with external realities.

The Academy is known for valuing practice as much as school projects. Can you expand on how the Academy works and how this approach blends typical boundaries between education, research and practice?

At the Academy, we educate hands-on professionals, not academics. We train designers who gain a lot of practical experience by working for several years at various firms before leaving the school with their diploma.

Additionally, they are embedded in several networks via their teachers, their colleagues, and the several firms they have worked at. For example, by the moment they graduate students living in Amsterdam already know half of the people in the city working in the domains of architecture, urbanism, and landscape architecture. That is one of the advantages of studying at the Academy, being part of the network, which nowadays becomes more and more international through the students, their colleagues, and international teachers.

The field of architecture and design is changing rapidly. What is the position of the Academy towards the challenges the disciplines face for the future?

Design is very important in our education, but we do realize that research is becoming more and more important. We are currently shifting from a school of design to a school of design and research. At this moment, we are debating what this type of research should be. The classic image of the architect who designs something to be built is changing because architects

We don't have teachers on the payroll, everyone is a guest teacher

Many problems outside the walls of the school need integral solutions

nowadays have to take new roles in society. The Academy is reformulating its education strategy to train both designers who build and designers who take a stronger role in debates about what our future should look like. And that means having the skills and abilities to draw possible futures and contribute to that debate instead of the sole purpose of realizing buildings. This discussion applies to urbanists and landscape architects as well.

What does this strategy look like from a curriculum perspective? What activities do you focus on at the Academy to build this skill set among your students? And what are the topics that concern you at present?

For each discipline we have a research group: for architecture it is called Architecture and Circular Thinking. We are trying to make students aware that we must build this future in a circular way. It's about materials, but also about a mindset and an attitude. For urbanists the research group is called Future Urban Regions and for landscape architecture, it is High-Density Energy Landscapes dealing with energy transition. Looking at their research themes, we see they are all related to climate change in the way that we must rethink how we build and design in the Netherlands in the spatial domain. There is, as we all know, the huge problem of global warming. We believe that as a consequence everything related to climate change is going to become a bigger problem and therefore climate change, or climate crisis, is the biggest societal issue addressed by our design and research studios at this moment.

A big part of the program is interdisciplinary, although at the end of it, students receive a Master of Science degree in Architecture, Urbanism, or Landscape Architecture. And I think that's very necessary, even more and more so, because many problems outside the walls of the school need integral solutions. For this reason, for example architecture students must learn to think and research and design on the scale of an urbanist, or landscape architect and vice versa.

We have observed this growing trend to invite different disciplines and practices into the education process among many educational institutions, and the benefits of having multiple value systems contribute to a solution are clear. However, from the perspective of program management which resembles curatorial work, such an approach can be extremely difficult to maintain for an institution, so what is your secret?

Firstly, we are always discussing how we can invite other scholars into the discussion, and secondly, how they can play a role in educating the students. Here, we don't have teachers on the payroll, all (guest) teachers are coming from practice, willing to teach the next generation. Every year we have around 350 teachers coming in for lectures, design studios, research and sometimes for a longer program. We are free to invite newcomers to take part in our education. Additionally, the heads of the master's programs have a mandate for four, with a maximum of six years. After this time, we invite someone else which gives us the opportunity to bring in a new professional network and connections into the school.

In lieu of a conclusion for this section on communities of practice, can you present an inside look at a typical education activity at the Academy that blurs the limits between work, personal development and study?

If we're talking about the flow of ideas between student projects and the projects our students are involved in at the firms they work for, there is a strong interplay between inside and outside the walls of the school. There are many students who present their school design projects in the office. That happens often. They are present during lunchtime or at five o'clock and get feedback from their colleagues on their work. Additionally, they receive 60 ECTS annually for their work at the firm and therefore their portfolio is also assessed at the school. Sometimes, students can get the advice to look for another job, because there is not enough possibility in this firm to develop, or if there's a big disconnection between their work and their development at the Academy.

Liquid Land

A landscape architecture project

Liquid Land is a research through design project that explores the problem of accumulating toxic silt that narrows the canals of the Western Scheldt estuary in The Netherlands. This phenomenon threatens the already endangered remaining local species and at the same time it encumbers water transportation on the canal. Currently, the reoccurring process of silt accumulation is being controlled by occasional dredging, but this practice does not alleviate the living conditions for non-humans, and it only postpones the problems for humans.

In this context, Liquid Land proposes a design that stabilizes and binds the microparticles of toxic silt currently floating in the water into solid landscape elements. These new elements have the potential to stimulate biodiversity and create hospitable living conditions for many species, including the human. On one hand, the project proposes an innovative solution to the ongoing crisis of unsustainable exploitation detrimental to the natural environment. On the other, the project urges us to reconsider our relationship with waste, resituating the position of the human. If nature could reappropriate toxic silt and transform it into a new natural ecosystem, could we overcome our prejudices and outdates perspectives and find a way to coexist with it?

Designers working on such problems can't limit themselves to defining the problem and designing the solution, only to find out that a couple of problems were overlooked on the way. Moreover, the scale of the **landscape** is a good example of an ecosystem delivering integral solutions. Both process and strategy are part of the design at large, including more-than-human-design and taking responsibility for the future. This asks for a different humble attitude and different training, compared with the authored project approach we're accustomed to.

Liquid Land is the graduation project of Anne Nieuwenhuijs from Master Landscape Architecture, Academy of Architecture Amsterdam 2018. Her work was nominated for the AHK Graduation Prize.

WATER QUALITY SAMPLES TAKEN DURING THE RESEARCH PROCESS FOR A NEW ECOSYSTEM

Breskens aan zee   Borssele   Hoofdplaat   Boerengat   Scheldeoord   Eendragt   Hansweert   Waarde   Bath   Oude Doel

archeolo
v
parado
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contex
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field
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futur
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transfor
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Transdisciplinary innovation as driver for systemic change
Interview

Kees Dorst, Professor of Transdisciplinary Innovation, Sydney

If there is someone that has argued for transdisciplinarity then it is educator & designer Kees Dorst. He set up a faculty of transdisciplinary innovation at the University of Technology Sydney, including a bachelor of 25 disciplines and a master program targeting organizations as students. He attempts to innovate organizations; he thinks the group is the future, not the individual. We discussed with him the key notions behind his transdisciplinary approach to education.

How did the transdisciplinary adventure start? Why did you do it, what were the urgencies behind it?

The story probably started about 12 years ago, when I moved to Sydney. I was interested in new creative methodologies and in ways to look at problems differently. In Sydney I set up a **Research Center**[1] sponsored by the Department of Justice, which primarily deals with issues on safety and society.
I hire people to do projects, programs, and to teach, and of the about 25 people that work in the center, only two are designers. Within this process I discovered that in order to operate in the social domain you need a lot of knowledge of a variety of disciplines: psychologists, social workers, etc. Sometimes it was easier to

explain a little bit about design to people then the other way around; or to put it differently: to make designers capable of really taking on the complexity, value and knowledge of those other fields. Designers tend to want to get to the solution quite quickly. If we look at big social problems, design is not the only solution, it is a part of that. The solution is practices from all different kinds of disciplines coming together and combining. We need people that are much more fluent in going across disciplines.

How do you train the students to develop further this transdisciplinary way of thinking? What are the methodological tools?

One of the difficulties of transdisciplinary work is that disciplines define their own measure of quality. We don't want our students to improvise, we want them to really bring the knowledge and critical thinking they already know from their own discipline. **The Bachelor of Creative intelligence and Innovation**[2], brings together students from 25 disciplines from law to journalism; design to communication; architecture to nursing. The students follow this program parallel to their core degree. That means that they develop in parallel to their core degree in a transdisciplinary way of thinking.

The solution is practices from all different kinds of disciplines coming together and combining them

Transdisciplinary it's not about the collaboration of two disciplines that don't change, it is picking up separate practices and making them jump from one to the other. And hopefully, what might happen is that you've got two disciplines with a whole bunch of practices in the middle, maybe even a new discipline.

In our program we work with a four-layer-practice method. A practice is a way of doing an action, with a method, a principle and there's a value behind it. This four-layer-practice method seeks to combine and re-appropriate local methodologies from each of the disciplines that come together. First it is necessary to identify the disciplinary method. And there can be inspiration coming from that, where you can say: "Hey, we're all trying to achieve the same value, but we're doing it using different principles. So, we can learn from each other's actions, because underneath is the same kind of value." Through these transdisciplinary exchanges, students learn and combine methods of their own disciplines to achieve actions guided by the same set of values. In the process, a new inspired transdisciplinary community is being built, which is very rich because of all the practices that are behind it.

Can you tell us about the master program for organizations? What are the ideas behind it?

Our master program is called **Master of Creative Intelligence & Creative Innovation**[3]. Officially it is not for individuals, but for organizations. This is this way for various reasons. Firstly, a masters in Australia is something that people do when they are out in practice for some years. People who do this program are in their 30s & 40s. Secondly, through my experience with the graduates from the bachelor, I also realized that being transdisciplinary on your own in an organization is very tough. What organizations actually need is an ecosystem of innovation containing several people that think in this way. Those people have to be across the whole organization, because

innovation is a relay in initiative, it goes from one to the other to the other until it gets realized. So you need to infect the whole organization a little bit with this. The master program becomes a very interesting process because people bring so much from their career, expertise, and experience, and they're very good at exchanging that between them. The masters become an open space where people create networks and become a community, and a very interesting one because it crosses many different organizations and is purely based on inspiration. Our role is to guide them in that process with some methods. What the organization gets is an 'innovation ecosystem': inspired people inside that know how to work together and exchange practices. For instance, we had people from the Royal Australian Bank giving advice to transport people on how to think about the flow of money and people through society, and how they think that's going to run in the future. Those are the little gems that start to appear in the program.

It seems that your bets are on the collective rather than on the individual: groups of disciplines, organizations... What kind of work do you do with these social organizations?

The idea that education is focused on individuals is a little bit out of date, in a transdisciplinary space. You actually need groups of people to start working together. In terms of civic empowerment, I haven't worked that much with the citizens themselves, my focus has been more on institutional organizations. I needed the expertise from those organizations to do this transdisciplinary work better.

At the moment we are working with a water organization from Melbourne called **Thriving Communities Partnership (TCP)**[4]. 10 years ago they realized that if certain communities of people can't pay their water bills, they must be really vulnerable and in a lot of trouble, because not paying your water is the last thing you do. TCP went and created this coalition of about

If we look at big social problems, design is not the only solution

600 different organizations by now, all doing work with people in vulnerable positions. At the moment, TCP is doing a project called the 12%. There's 1% of the population with not enough income to access health services, etc. But if you look just statistically at people's incomes, 13% of the population is really poor. What's happening with the 12%? Who are these people? It's surprising how little we know about these things in society.

With Thriving Communities Partnership, we are looking at how these 600 organizations can shift to be more citizen centric, because right now, they are sponsored by big organizations, and not understanding this approach. Therefore, the focus is on the organizations and creating projects with and between them. In this process the voice of the citizen is very hard to get to. Even though you know them as citizens, it's not that easy to see what they really need and what would really help them in the future to get over this vicious circle of vulnerability, often going on for generations.

One of the things we have been doing is to look at big data. Through analyzing this data, you might be able to recognize issues like **domestic violence**[5] as a pattern of behavior. For instance, looking at the phone bills that are controlled by one of the family members. If this is a pattern on a bank account, maybe something's happening there. Maybe one of the partners is siphoning off all the money. You might recognize people might be vulnerable in that sense, which is often an expression of general vulnerability, like violence in the house. The question is: how do you deal with that? And how do you deal with that ethically? Because you can't just base that idea on some data pattern and intervene when you are not sure that anything has happened. On the other hand, if you look at research on domestic and family violence, people tend to start reporting that to the authorities, after very serious incidents. People wait incredibly long and that's not good for anybody. The earlier we intervene the better.

Designing Out Crime

Exploring crime, safety and wellbeing in relation to technology and social sciences

Designing Out Crime is an unconventional design and research lab because it is formed not only by designers and experts from the Department of Community and Justice, but also by researchers from the University of Technology Sydney (UTS). With a transdisciplinary approach where academic research is constantly informed by industry practice, the lab explores the issues of crime, safety, and wellbeing in relation to technology and social sciences. TKYF is one project of the design lab that deals with the issue of overconsumption of alcohol among young adults in the context of generational conflicts and violence. The Thomas Kelly Youth Foundation (TKYF) is an organization started by the grieving family of a teenager who died after being attacked by a young adult who had been drinking heavily in a popular public space.

The different organizations started to collaborate on defining a clear path to engage with the local community and open a space for reflection and concrete measures around the typical challenges that young adults face in a critical moment for their development. After many rounds of discussions and workshops, the two entities co-created a 10-year program that builds on expert knowledge from academia and practice to engage the community in activities that build more awareness of the complexity of young adult life. Informed decision-making, unsafe habits and behaviors as well as a broader understanding on societal challenges are being tackled by a program that encourages young people to develop initiatives that empower them and prepare them for adulthood.
As we can see from their approach for TKYF, the guiding principle of this design startup is that

sometimes design does not necessarily result in a final product, but in an ongoing process. After investigating a complex societal problem, the team understood that a singular design intervention could not address it in its complexity and instead, proposed an entire infrastructure that in time would build capacities for society to understand and heal it.

The Designing Out Crime partnership exists to create knowledge and impact that contributes to the safety and well-being of NSW communities. It is a collaboration between the NSW Department of Community and Justice and the University of Technology Sydney that brings collective expertise, knowledge and capacity to these issues.

crime
safety
technology &
social sciences

[1] **Research Center Designing Out Crime**

http://www.design-innovation.com.au/
designing-out-crime

[2] **The Bachelor of Creative Intelligence & Innovation**

https://www.uts.edu.au/future-
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[3] **Master of Creative Intelligence & Creative Innovation**

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[4] **Thriving Communities Partnership (TCP)**

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Re-shaping democratic institutions
Interview

Eric Gordon,
Director Engagement Lab, Boston

Eric Gordon is a visiting professor in the Department of Comparative Media Studies at MIT. He is also a professor of civic media and the director of the Engagement Lab at Emerson College in Boston. For him a crucial task of civic design is to make sure the design project has the human, institutional, and infrastructural ability to persist. In our conversation with him we talk about the challenges in design education, the future of democracy, and how design can help.

What are the current challenges you see in civic design education?

For me, the primary challenge is a kind of transactionalism that happens within the current structure of universities. The primary structure of student time is the semester; either structured by the need of the temporal nature of the course, or because it's potentially connected to a funded research project. The design project necessarily has an end, and the incentive mechanisms are not in place to maintain any of the things that happen during the design process. What often happens is that faculty and students will interact with the community and raise expectations. After the semester is over, they leave and often the community is not left any stronger, but potentially weaker because time has been invested, and there wasn't a lot of return on that investment.

In this sense, there's a lot of harm that can happen in designing education.

What needs to change?

I think we should be asking the question: why design? Why are we even doing this and to whose benefit is it? To the benefit of the faculty for publications? Is it the benefit of the students for a degree? The community should be the main concern of design, but sometimes that value alignment gets messed up. Design practices should try to reorient that and center the community and establish an agenda that makes sure the design intervention can persist. If those things aren't considered, you may be creating technology for interventions in a civic space, but you're not doing civic design, as far as I'm concerned.

In my book **Meaningful Inefficiencies**[1], we outline a series of practices that are involved in civic design in order to create a kind of human infrastructure of care to allow the civic design projects to persist and have a social impact. One of these practices is *network building*, which is essential to creating that resilient infrastructure, and it is the work of the designer to do that. The second practice is *holding space*, which is

Well, if design isn't capable of bringing change, I don't know what design is

The community should be the main concern of design

the public space as the mechanism for people who are part of the design process to be able to communicate freely and openly. That again, is the work of the designer. The last one is persistent input, which refers to the effort that takes to create the context wherein and after the semester, the people with whom you are designing can continue to work.

This is the labor involved in civic design. And it's often not the sexy stuff. Sometimes it's a boring conversation, or a late-night text message to a partner who just needs to cultivate some trust with you as a collaborator. This is the stuff that needs to be taught within design education, that often is not.

How do you prepare students to cultivate these principles of interaction?

Firstly, we avoid having students interact with communities in the first semester of their education. This becomes a time to learn some of these principles of interaction, prior to doing the work of design. The students practice design, but they do it in a laboratory setting. In this time students also identify, what are the necessary structures that need to be put in place? How do you track your progress and measure success? The first semester has three core classes: a civic design seminar where all these principles are introduced, a participatory methods class where they learn the values of methodology, specifically around participatory and co-design methods. The third is a design studio where they learn various design techniques. In the second semester they connect with their partner and begin to do the work. The string of the interactions is all facilitated by the faculty and staff. That provides me as an educator a little bit more comfort knowing that I'm not putting students in potentially bad situations.

Can you elaborate a little bit on what partners you have?

We work with different kinds of partners. Recently we have been working with organizations which are targeting particularly vulnerable groups amongst the youth. For instance, governmental sectors focused on addiction and recovery, as well as public media stations. These are the kind organizations I was referring to earlier that require relationship building. But beyond that, there was also a lot of responsibility and working with the direct stakeholders, in this case a quite vulnerable youth. We proceeded very carefully in making sure we were equipping the students to be able to do the work. We also put a considerable effort into making sure the partner trusted enough in the students' ability to do that work. That trust was not necessarily only built between the partner and the students, but between the partner and the faculty. That was an important part of that relationship. Ultimately, when the program is over the question becomes: does the university and/or the faculty have the resources required to sustain that relationship?

It seems implicit in your program, a certain awareness of social issues. Is there, in a way, a political agenda implied in the program?

It's difficult to talk about political agendas, especially in the United States right now, because it's so polarized. With this program we try to locate civic design within principles of democracy. Although we can have different understandings of democracy and the values associated with the term; there is an underlying presumption that in democracy every individual has the equal opportunity to participate in public life. In this sense, there are values that need to be explicit in this work. Civic design has to articulate values of equity, care, and justice to then be able to cultivate the conditions that would allow for outcomes to take place that enhance the democratic situation. I think that within the field of civic design we have

an opportunity to redraw some of the political ideologies through a value proposition of democratic struggle. I'm very sensitive about taking a particular progressive agenda and applying that to civic design education. But that said, if we say that the progressive agenda is equity and justice, I would say, well, that's not a progressive agenda, that's just democracy.

How do you relate your methodology of design to an implementation of civic and ethical values, yet as a future-oriented practice?

For us the object of civic design is the transformation of democratic institutions. One of the arguments we make in *Meaningful Inefficiencies* is that civic design is the design of publics. It's the design of what that looks like in the future. Right now, democratic institutions are generally in crisis; governments are in crisis; news organizations are in crisis; universities are in crisis. That crisis emerges from people just not believing in its relevance anymore. Part of what needs to happen within the practice of civic design is restructuring those institutions. What we need to be thinking about is, what does it look like to reorganize government practice such that it aligns with this set of values? What is the design intervention that could achieve that? Here we're moving away from the traditional sort of civic tech discourse. The app isn't the thing itself that can fix things, it's the human infrastructure around the app that matters more than anything else. The future of any kind of democratic system around the globe is going to require a rethinking of what those institutions do and how people trust them.

Do you think design is capable of that, or are we overloading students with lots of responsibilities?

Well, if design isn't capable of it, I don't know what it is. Objects and systems evolve, whether they're intentionally designed. The question is, do we want to intentionally design this transformation? Or do we want to just let it evolve? That's where design becomes particularly important. Design is intentionality applied to the future. But futures happen with or without design. I think it's important for us to remember that.

Make the Breast Pump Not Suck

Exploring and raising awareness of the socio-economic reality of breastfeeding in the United States.

The MIT methodology can be illustrated by the ongoing 'Make the Breast Pump Not Suck' social hackathon which addresses the topic of care as a prerequisite for designing systems, technologies, and services that contribute to social justice. It consists of a participatory design event that explores and raises awareness of the unjust socio-economic reality of breastfeeding in the US through a systemic approach that uses the breast pump to open the innovation space for a much broader societal issue: the lack of time, resources, and support for parents to naturally breastfeed babies.

Parents are encouraged to care for their children at the event, while participating in society (work life, social life, family life). By designing new technologies, care is then taken out of the usual context society places it – through specifically designated jobs such as social work, medical care, first-responders, etc. – and displayed out in the open at the MIT Media Lab; a high-tech space that is atypical for nursing babies and playing with infants. Playful, diverse, and informal spaces in combination with storytelling activities and a general openness of the researcher contributes to this successful shift.

From the feminist Human Computer Interaction and Participatory Design perspectives used in this project, we learn that we can use the process of designing technologies for particularly vulnerable social categories (LGBTQ+ parents and women of color), to imagine and explore social policies infrastructures that are inclusive, diverse, and contribute to preferable futures.

Make the Breast Pump Not Suck is a project of Massachusetts Institute of Technology, Boston 2019.

Feminist

Human Computer Interaction

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" this is mine → responsibility
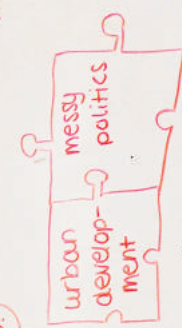→ to be part of process

how to create ownership? — in neighborhood

what are the needs of the person that should take ownership ??

where do you be the owner of? } Shared ownership

can you create ownership if someone has no problem/need/issue?
→ perceived ownership

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• clash of the st...

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engagement is not a constant thing

politics is messy model → pict...

" I have a problem, so you should take ownership "

Complexity (smaller → dependent... of part...)

→ also goes for some of the other concepts

⑤

urban develop-ment | messy politics

how do they fit together? / conc

What are the *characteristics & perspectives per cahier
* & scale
* stakeholders
* situation *context

what is the lens per cahier?

Collectivos
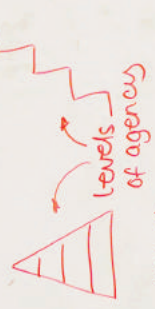
complexity

levels of agency

AGENCY
professional participation (highest level)
the people the
...ls to create themselves
sense of agency → trust
...maturgy

believe celebrate ownerships

ability to change something
you are ready / want to do it?
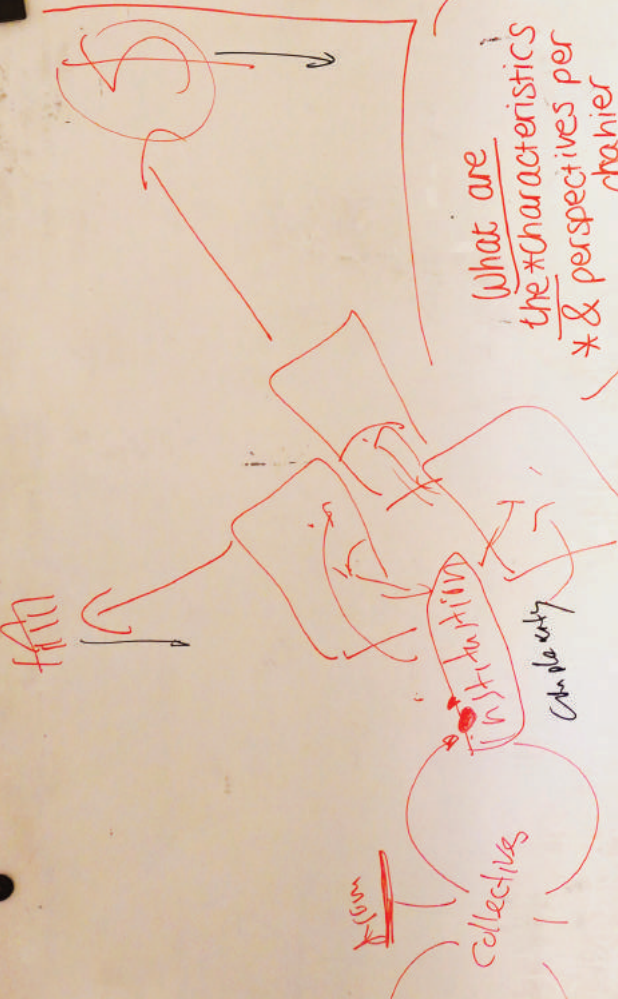
⇧ HOW TO ?!
SCALE ?!
is it a general thing for all cahiers?

create it?

Back to the future, a fictional round table discussion

In this cahier we addressed civic design education from different perspectives: designing with and for the community, networked and transdisciplinary communities of practice, the role of civic design in the re-shaping of our democratic institutions, and the possibility of bottom-up, future-oriented design practices. Using a lens of educational practices, we introduced some of the possibilities of civic design to come. We presented the role of the designer as that of a change-agent who is able to bring awareness when continuously challenging the status quo in search for more honest, inclusive, and humble solutions.

Still, there is no final answer to how and what these practices could contribute to design education in general. The aim was to emphasize the urgency for civic design practices that are grounded in the struggles of today, as well as understanding it as a bottom-up practice, without ever losing sight of the fact that design is meant to inspire, invite, and to imagine worlds that are not here yet. We want to conclude this cahier with a round-table presented as a fictional dialogue in which we unpack the common threads between the different forward-looking perspectives on design education.

That makes the difference between a smart city and a smart citizen, a smart citizen can change, a smart city can only optimize

...I noticed that one of the things that we did not entirely address in the interviews was the notion of future-oriented practices of design education. I counted the number of times that 'futures' appears in our cahier – just 18 times – from emergent futures to speculative design. Ultimately, it is about the values that underlie the future. Yet, it seems like we disagree on that.

Alternative or speculative futures

...The notion of speculative futures is a top-down approach and there is an element of power involved. I think 'alternative presents' is a better concept. It's inherently routed to society and to the people, but it has this little twist. An alternative present is a parallel reality which wouldn't be there, if you hadn't been provoking it. So, it's a bubble of the future in the present.

...Creativity plays an important role, true. You should, as a starting point, begin to create and think outside of the box and play with this idea to grasp its impact. Driving away from the things that we know; you must also think of the things that are not out there, yet.

...An alternative, or rather preferred future should always allow space for the inclusion of other voices, an invitation for dialogue, imagination, and creativity.

...Sure, but we still have to deal with wicked problems such as climate change and social justice, etc. Top-down or bottom up, one way or the other these two have to come together, an idea must institutionalize itself. How can design inform at an institutional scale; where these two approaches come together.

...Nowadays, inclusivity is introduced as a remedy for stagnant ways of working. That is nice and that is useful, but that also offers no guarantee of the outcome being effective, fair and balanced. You may even wonder whether design (education) is capable of delivering that at all.

...I think the growing interest in urban futuring comes from the fact that we don't believe in simple solutions and techno fixes anymore.

Responsible technology and design

...Although our media allow us to dream, tell stories, and visualize, we don't know how to handle it, it is comprised of such unrestrained technology. This awareness should be part of the curriculum in design education, it requires critical thinking and reflection plus a clear understanding of the designer's limitations.

...Well, let's take an example to discuss that: just a few years ago, TU Delft was working on a project about enlarging the port of Rotterdam in a more sustainable way. The usual way of undertaking such a task is by optimizing all kinds of things: how many square meters and trucks do we need, how many vessels will arrive, what's the maximum admissible CO_2 level, how many people will be working in this area... Instead of optimizing what can be done, they wanted to create stories by asking people about what they want their neighborhood to look like and how they want to live in it. In this case, as designer you start a conversation with the community and develop a storyline in which you discuss together what kind of measures you want to take and what kind of dreams you want to realize. Only from there on do you begin to calculate the effects through imaginary and speculative design and see if that makes sense.

...I think design is more of an approach than a profession.

...In this cahier, civic design is about the way we structure our society with the community at the center. If you make it big, civic design should focus on philosophy, democracy, and the way institutions work together. If you make it small, it is just raising the awareness of the students to listen, care, and be nice and not only the students but all citizens.

Design and education

...I agree. What we want the designer to do is actually what we want a citizen to be.

...We see that students have problems facing the responsibilities that design asks of them.

...The responsibility that design has now been granted with is non-proportional and maybe not even realistic. The assumption that the designer will solve the problems requires some rethinking.

...From what we have been discussing so far, it seems that working with alternative presents and preferred futures, you name it, can help designers to engage with communities and inspire, connect values, and transform mindsets.

...I would like to advocate for imagination and creativity rather than solution optimization; a process in which all stakeholders can be involved, bring their expertise and put things into the relevant context.

Critical thinking

...Civic design is an opportunity for citizens to interact; to generate shared interest and to care for matters of public concern. Important are the stories, the rituals, and the dramaturgies that support these values. Civic design can help create ownership and overcome the sense of powerlessness. That's the sort of self-determination, which is necessary for the future(s).

...What connects us all in this cahier is a philosophy or dream about what civic design could bring about. Eric Gordon talks about the goal of civic design as a contribution to democracy through the re-shaping of its institutions. Kees Dorst takes it even further by including all organizations and industry as part of a larger transdisciplinary-networked community. Madeleine Maaskant talks about communities of practitioners. There is an implicit promise of being equal, honest, humble, and caring towards others.

Smart Technologies Empowered Citizens (STEC) is a research project that explores the use of design to enable and empower citizens to act, choose and make decisions in a series of different application domains. By doing so, STEC adds to the growing body of design research and examples on bottom-up initiatives of citizens shaping their own future, referred to as civic design.

This cahier is part of a series of publications, design probes, models and theory. The partners from different domains spanned a mutual research space and were selected from complementary domains such as healthcare, education and urban planning. They spanned a multi-disciplinary problem space for our research, including grassroot organizations, agencies and industry.

Together with a grant from the Dutch government this resulted in a budget of 1.2 M Euro for four years (2018-2022).
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Eindhoven University of Technology, Department of Industrial Design
Amsterdam University of Applied Sciences, Play & Civic Media
University of Amsterdam, Media Studies

Consortium Partners

Play the City
Transform City
One Architecture
IJsfontein, Playful Learning
Philips
KPN

Associate Partners

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Martijn Kors p. 44

Kees Dorst is professor of Transdisciplinary Innovation at the University of Technology Sydney's TD School. He is considered one of the lead thinkers developing the field of design, valued for his ability to connect a philosophical understanding of the logic of design with hands-on practice. He has written several bestselling books in the field – 'Frame Innovation' (2015) 'Designing for the Common Good' (2016) and 'Notes on Design – How Creative Practice Works' (2017). He is a member of the Advisory Group for the UN Development Program, overseeing the creation of platforms around the world to achieve the UN Sustainable Development Goals.

Madeleine Maaskant is the director of the Amsterdam Academy of Architecture, Amsterdam University of the Arts. After winning the biennial Europan competition in 1996, she (jointly) founded the architectural firm Maaskant en van Velzen Architecten, with which she was affiliated until 2010. Maaskant has been board member of Europan NL and the Jaap Bakema Foundation and has sat on a number of committees, including the Architecture committee of the Creative Industries Fund NL, as well as being a member of various juries, including those for the BNA Best Building of the Year, Golden Pyramid, Europan, the City of Amsterdam's Zuiderkerk Prize and the Rotterdam Architecture Prize. She has taught at various architectural study programs over the course of her career. From 2010 to 2015, she was responsible for the Building Department of Natuurmonumenten (the Society for the Preservation of Nature in the Netherlands) and chair of the board of the Archiprix Foundation, the alliance of higher education institutions in the fields of architecture, urbanism and landscape architecture. She studied Architecture at Delft University of Technology from 1984 to 1990, and graduated with honors from the Master's program in Architecture.

Eric Gordon is a visiting professor in the Department of Comparative Media Studies at MIT. He is also a professor of civic media and the director of the Engagement Lab at Emerson College in Boston. His research focuses on the transformation of public life and governance in digital culture, specifically looking at the context of equitable and creative "smart cities." For the last ten years, Professor Gordon has explored the role of play and creativity in civic life, looking at how game systems and playful processes can augment traditional modes of civic participation. He has served as an expert advisor for local and national governments, as well as NGOs around the world, designing responsive processes that help organizations transform to meet their stated values. He has created over a dozen games for public sector use and advised organizations on how to build their own inclusive and meaningful processes.

Oscar Tomico heads the Industrial Design Engineering Bachelor's Degree at Elisava, co-directs the Design for Emergent Futures Master's Program in collaboration with IAAC, and is also assistant professor at the Department of Industrial Design at Eindhoven University of Technology. His research revolves around 1st Person Perspectives to Research through Design at different scales (bodies, communities and socio-technical systems). Ranging from developing embodied ideation techniques for close or on the body applications (e.g. soft wearables), contextualized design interventions to situate design practice in everyday life, or exploring the impact of future local, distributed, open and circular socio-technical systems of production.

Ben Schouten is professor emeritus of Playful Interaction at Eindhoven University of Technology, department of Industrial Design as well as Lector Play & Civic Media at the Amsterdam University of Applied Sciences (HVA). He founded the Master Digital Design in Amsterdam and until 2020 worked as its scientific director. His group focuses on play and design for social innovations, citizen empowerment and culture. He is a member of the advisory board for ERC Synergy Grants as well as for the Dutch Creative Industry Fund, responsible for E-culture. He (co) authored 5 books and 100-plus publications at the intersection of play, games, participatory design and citizen empowerment. He has created multiple games within the domain of health care, education, urban planning, focusing on playful empowerment.