



40
years of
v2_

40
years of

founded 4 September 1981

V2_

**Exploring
infinite
possibilities
and breaking
technology open**

•

40 years of V2_

by Arie Altena

The link between art and technology has stood at the centre of V2_'s activities for forty years, and one question has been asked over and over: How does technology change art and society? These two things were true at the beginning, and they remain true today. Over four decades, V2_ has grown from an artists' initiative in a squat in Den Bosch into a renowned "Lab for the Unstable Media" in the heart of Rotterdam. In 2000, *Book for the Electronic Arts* traced the development of a new full-fledged art form through a look back at V2_'s first (almost) twenty years. Now, twenty-two years later, this naturally gives rise to the question of how art and technology practice differs today from how it was back in 2000, or 1990, and, most of all, how current practice relates to society and social issues. These questions cannot be answered without mentioning how technological advances have profoundly altered society over the past four decades.

•

I will start with a blunt attempt to describe the "structure of feeling" artists worked in back then versus the situation they find themselves in today. Between 1980 and 2000, what prevailed was a sense of the new technologies' promise. There were many: personal computers, the internet, AI, VR, mobile technology, GPS, driverless cars, increasingly tiny chips, self-learning systems, robotics, track and trace, virtual money, genetic engineering and so on. While not yet in wide use, the new technologies promised to radically change society. This was a big reason why artists occupied themselves with them.

They were enthusiastic about the new possibilities and wanted to explore them playfully and critically. Since 2000, not many truly new technologies have actually emerged. During this period, the world has been fundamentally changed by the use of technologies that have become entrenched in social structures and processes and are now near-invisible parts of daily life. Artists face the challenge of responding to all this, whether in large or small ways. Meanwhile, it has become painfully obvious that the way human beings have used technology to reshape the world is seriously damaging the atmospheric conditions we depend on and has reinforced inequality and exploitation. So the big question today isn't how we can use technology to reinvent the world, once the central issue in electronic art. We've already done that. The question now is how human beings can change our relationship to everything we're connected to, including everything the modern era subdivided into separate domains: nature, culture, technology, politics, law, history, geology and so on. In 2022, this question casts its shadow over every practice.

•

In 2000, V2_ published the *Book for the Electronic Arts*, an overview of its first (almost) twenty years. With plenty of photographs, a book-length essay by Arjen Mulder and Maaïke Post, and in-depth interviews with people like Dick Raaymakers and Woody Vasulka, it samples and situates electronic art up to the turn of the millennium. The approach is deeply rooted in media theory, and plenty of attention is paid to com-

munication and interaction, but the book's central theme is transformation through technology. Technology, the introduction argues, is also a mentality, and it creates its own social environment. When you reread the book today, what is striking is its emphasis on the emancipation of technology as an independent actor in art and society. Electronic art specifically highlights the active role technology plays, often doing so in a highly physical way, and this was a subject that had received little attention until then, certainly in art.

Raaymakers, for example, made various works designed to let technology speak. In the *Ideophones* installations, he hooked speakers up to themselves in a closed loop so that they transmitted only their own sound. In the performance *Intona* (1992), enacted at V2_, he made microphones speak and then silenced them by dousing them with acid, immersing them in boiling water, piercing them, and so on. Stelarc fused technology with the human body – something that in those days took place mainly in the context of cyborg dreams – and his highly physical performances emphasized technology's agency. Seiko Mikami developed several interactive installations with the V2_Lab that surrounded human beings in technology, as was typical for the time. Ulrike Gabriel's work with VR also took human-machine interaction as its starting point and invited visitors into a technological world.

•

For young artists, working with new technology in those days was refreshing. A world had opened up in which everything was still possible: there were no fixed models or ways of working yet, there was no vocabulary, and the technologies were not yet embedded in social structures. In a 2017 interview, Alex Adriaansens, one of V2_'s founders and its director until his death in 2018, recalled how the wave of new technologies that burst forth in the 1990s created a feeling of freedom and infinite possibilities in art. "We were interested in technology's open aspect," he said, "its openness and its instability. How technology changed the relationship between people, and also production processes. Technology made everything unstable." In those days, V2_ invited not only artists but also scientists and engineers to reflect on subjects such as the relationship between human beings and machines, and between art and machines. They envisioned new worlds and experimented with things like networked communication, as Roy Ascott did in *Telenoia*. They also sketched darker scenarios: themes of surveillance and technology's erosion of privacy were cropping up in V2_'s programming by the early 1990s.

Of course, the technologization of society was already under way by the time V2_ appeared on the scene, but the art that examined it occupied a well-hidden niche and, with some exceptions, couldn't count on much exposure. The idea that technology, with its software, algorithms and protocols, played a decisive role in shaping society had not yet widely taken hold. The

artists working in this arena were definitely interested in the subject, however, and to address it, they exhibited machines with voices of their own. Meanwhile, the new digital technologies were still surrounded by a utopian sense – generally, and in art specifically – that a better, more democratic society might be on the horizon.

•

One way of tracing V2_'s development is to look at the successive Dutch Electronic Art Festivals (DEAF), which took place every few years beginning in 1994. They succeeded the Manifestations for the Unstable Media, the last of which, *The Body in Ruin* (1993), focused on technology's effects on the body. 1994's DEAF took the theme of *Digital Nature*, starting with the idea that in a technological world nature had become artificial. DEAF 1996, *Digital Territories*, considered the interaction between cities and computer networks as a social, cultural, economic and political space, tying in with the exponential growth and promises of the World Wide Web. 2000's *Machine Times* focused on the subject of time and technology. In 2003, DEAF examined the artistic and political implications of working with large amounts of digital data. Interactivity, a recurring motif, was explicitly named in the theme of the 2007 festival: *Interact or Die!* DEAF's programming frequently sought connection with insights from the fields of biology and evolutionary thought. In 2012, *The Power of Things* shed light on "the causal power of nonliving matter," heavily influenced by the "new materialism." The final DEAF, 2014's *The Progress Trap*,

cast a highly critical eye on innovation thinking and the technology-linked faith in progress that dominated economic policy at the time. The exhibition examined how it felt to be trapped in the unrelenting pursuit of progress, and how to escape.

And if you go through V2_'s archive looking for subjects like immersive environments and ecology, you'll notice a remarkable continuity. Themes you wouldn't expect to see much of until after 2010 crop up as far back as the early 1990s; ecology, for example, appears in the form of an interest in the biological aspects of interaction and the technologization of nature. And the creation of immersive environments recurs throughout V2_'s history, from the interactive installations of the early years through the VR explorations of the mid-1990s and the experimental multiuser 3D environments to Marnix de Nijs' *Ghosted Views* in 2018. This thematic continuity conceals a variation in V2_'s approach and its artistic, technological and social positioning over the years.

•

For the first decade of the 21st century, the focus remained firmly on technology itself. The research areas, projects, events, and DEAFs were concerned with things like the creation of immersive environments, working with data and databases, and the artistic investigation of augmented reality, wearable technologies (such as Anouk Wipprecht's *Pseudomorphs* (2010)), and even biotech. These explorations of technology in-

cluded scrutiny of its social aspects. What did its use mean for society? How did it affect human behavior; how would we change? But technology was always the starting point. A good example is Rotterdam artist Marnix de Nijs' interactive installations, for which he developed the software and hardware in cooperation with V2_. *Physiognomic Scrutinizer* (2009–2010), for example, used biometric software to match visitors' faces to a database of famous and infamous people, as a humorous (but no less confrontational for that) reminder of the effects of the implementation of biometrics. Although artists' experiments with network technology and 3D environments did help get everyday citizens used to new technologies, contributing to their general acceptance, few projects took this as their starting point or objective. Defamiliarization (in the sense of *ostranenie*), disruption, questioning, provocation and criticism were at least present in the background of artists' explorations, if not at their heart.

•

As the 21st century progressed, the focus on technology was abandoned in favor of an approach that considered social issues first. In 2013, V2_ supported the development of Tuur van Balen and Revital Cohen's work *75 Watt* (2013), which looked at the geopolitical context of fragmented industrial labor, particularly in relation to the mass production of electronics, and the biopolitical condition of the mass-producing human body. The work was shown in the exhibition accompanying *The Progress Trap*. V2_ also coproduced Melle Smets and Joost van

Onna's *The Turtle* (2014), which brought the economic and ecological context of innovation discourse into focus. Smets and Van Onna followed the trail of wrecked cars exported to Ghana, built a car there out of recycled western materials with the help of local mechanics, and then imported it back to Europe. During the same period, V2_ also supported Renzo Martens' Institute for Human Activities. Martens, who addresses present-day colonialism in controversial ways, exhibited chocolate sculptures at V2_; the organization also provided technical and production assistance for the project. Cecilia Jonsson's *Iron Ring* (2013), a product of V2_'s talent development program, arose out of the artist's investigation into the possibility of forging a ring out of iron ore extracted from grass grown on heavily contaminated soil. Jonsson compels the viewer to look differently at ideas of technological progress, circularity, and the promises of various green innovations and pollution-fighting methods. Similarly, the crowdsourced *Critical AI Manifesto* (2020) project was designed to show not the glorious future that lay in store thanks to the application of machine learning but the shortcomings of such a vision.

•

In the big exhibitions staged at V2_ from 2016 to 2021, all of which focused on the effects of data, the political overtones became increasingly pronounced. For example, *Data in the 21st Century* featured the V2_-coproduced project *Opening the Books* (2016), by Informal Strategies (Geert van Mil and Doris Denekamp). The duo ordered politically activist books from

Amazon and then returned each volume accompanied by a poster showing a political statement taken from the book, thus disseminating messages about workers' rights to Amazon employees where the company strictly forbade it. *The Gig Is Up* (2017) was a critique of platform capitalism and the gig economy. *To Mind Is to Care* (2020), along with the eponymous V2_ book, focused on the importance of caring-for in various spheres. In 2021, the exhibition *Reasonable Doubt* looked at how technical systems establish concepts of justice and equality, and the real-world effects: unequal treatment and racism. In 2022 and 2023, V2_ will continue along this track in ongoing projects and forthcoming collaborations, including one with Mimi Onuoha on algorithmic violence and one with the Cameroonian philosopher Achille Mbembe, who is working on a "Library of the Incalculables."



An increasing emphasis on the political and social effects of technology doesn't mean that amazement at what technology is capable of has ceased. It can still be seen in works such as *Camera Lucida* (2004), by Evelina Domnitch and Dmitry Gelfand, and Nicky Assmann's installation made of soap film, *Solace* (2011). Projects that sit closer to biotechnology evince a critical curiosity. They include those produced in partnership with the art-science group SymbioticA and the Center for Genomic Gastronomy, like the *Art Meat Flesh Test_Lab* (2013), which looked at fact and fiction around advanced food technology. Amazement and critical curiosity both underpin the work of

Driessens and Verstappen, including *Pareidolia* (2019), in which an AI learns to recognize faces in grains of sand. Artists are still motivated by enthusiasm about what people can do with technology and by an impulse to make something that brings about a change in another, evokes a feeling, provokes an action, or raises thought-provoking questions. These are always socially embedded: what kind of change? What kind of feeling? Which action; which questions?

•

The shift that has taken place has been a move away from enthusiasm at the possibilities of *new* technologies towards enthusiasm for breaking open the ones already embedded in society, in order to discover secret alternate routes and explore untapped possibilities that can lead to unexpected outcomes. Again and again, we can discover that technology can be used for purposes very different from those it was created for. Sometimes the result is beauty and amazement; more often, fundamental issues are raised for discussion. If technology was once seen as “open” to artists, today the prevailing idea is that it is a black box that you have to break open so you can see how it works, and only an assembly after all. The parts can be assembled in different ways, programmed differently, and used for different purposes. But those who seek to do these things will encounter a host of issues to do with entrenched human habits, accepted defaults that have political and legal consequences.

•

In 2022, V2_ will continue to focus attention on technology's real effects on the world and human beings. In a sense, *Reasonable Doubt* and *Data in the 21st Century* didn't do anything different from what V2_ was doing thirty or forty years ago. It's just that these days the point is rarely to cheerfully or provocatively celebrate technology's potential; instead, the emphasis is on pointing out its excrescences and undesirable effects.

2000's *Book for the Electronic Arts* described the field of electronic art using the terms *machine*, *media*, *art*, *interface* and *network*. More than 20 years later, words like *algorithm*, *politics*, *ecology*, *relationship* and *intertwinement* might be more useful. Today, what predominates isn't explorations of human-machine interaction and experimentation with new technology but the examination of technology's social and ecological repercussions and its impact on everyday life in a world in trouble. The importance of experimentation may be even greater today than it was 25 years ago. Now more than ever, we need radically different visions, an activation of the imagination, a renewal of ideas and relationships.

As we now know, being disruptive was always an article of faith for the innovators of Silicon Valley. If electronic art was once caught up in the rush of technologies that caused disruption and instability, today it prefers to focus on their undesired effects, on the exclusions, damage and pain they cause. Confronted with social and technological changes, artists who

work with technology feel compelled to examine the consequences of those changes, to propose alternatives and reclaim the ability to act in the technological sphere. V2_ continues to raise serious questions about technology's impact, just as it did thirty or forty years ago. Today, with our lives more entwined with technology than ever before, reflecting on that impact has become even more essential.

This article is based on information available on V2_'s website, v2.nl. A PDF of Arjen Mulder and Maaïke Post's *Book for the Electronic Arts* (V2_/De Balie, 2000) is also available there.

Arie Altena is web and archive editor at V2_Lab for the Unstable Media, and the author of *Wat is community art?* (2016). He co-edited a number of books for Sonic Acts, which include his interviews with various artists and musicians. The most recent of these is *Time to Listen, Space to Experiment, Reflections from Re-Imagine Europe 2017–2021* (2021).



<https://v2.nl/events/telenoia>

TELENOIA
•
ROY ASCOTT
1992

Telenoia was a two-day event at V2_ in 1992 with Roy Ascott, a pioneer of cybernetics and telematics in art. Apple, Amiga and MS-DOS computers installed at V2_, were connected to telephone lines and exchanged images, sounds and texts with artists and organizations all over the world, while the public was able to participate from home via modem and fax. It was one of the artistic experiments with communication over computer networks that predates the World Wide Web.



<https://v2.nl/archive/works/intona>

INTONA
•
DICK RAAIJMAKERS
1992

In the performance *Intona*, performed at V2_ in October 1992, Dick Raaymakers silenced microphones in twelve different ways, investigating the role of this device in the production of sound. Raaymakers takes technology not as a means to achieve a certain artistic effect, he exactly explores the active role of technology.



<https://v2.nl/archive/works/perceptual-arena>

PERCEPTUAL ARENA

•

ULRIKE GABRIEL / BOB O'KANE

1994

The work *Perceptual Arena* by Ulrike Gabriel and Bob O'Kane is an early example of the artistic exploration of Virtual Reality. The installation was shown in 1994 as part of the first Dutch Electronic Art Festival. It was an interactive environment in which the visitor wearing VR goggles while using a data glove could mould and manipulate objects in an empty space. In 1999, as an artist-in-residence project at V2_, the concept was further developed into the installation *Memory Arena*.



<https://v2.nl/events/ping-body>

PING BODY

•

STELARC

1996

In Stelarc's performance *Ping Body*, his body movements are not caused by his own nervous system but by pinging randomly at thirty Internet domains. Stelarc performed the work during the Dutch Electronic Art Festival in 1996. It is a good example of the artistic interest in the fusion of body and technology of that era.



<https://v2.nl/archive/works/gravicells>

GRAVICELLS
•
**SEIKO MIKAMI AND
SOTA ICHIKAWA**
2004

Gravicells by Seiko Mikami and Sota Ichikawa is a responsive audiovisual environment, which produces a visualization and sonification of the force of gravity acting upon the visitor. It was shown at the Dutch Electronic Art Festival 2004. It is a prime example of the artistic experimentation with interaction between the movements of a visitor, and generated images and sounds in a spatial installation.



<https://v2.nl/archive/works/camera-lucida>

CAMERA LUCIDA
•
EVELINA DOMNITCH AND
DMITRY GELFAND
2004

Evelina Domnitch & Dmitry Gelfand's *Camera Lucida* converts sound waves into visible light by employing sonoluminescence. It was on show at V2_ in 2007. As a work of art, it explores a physical phenomenon that is not yet fully understood.



<https://v2.nl/archive/works/physiognomic-scrutinizer>

PHYSIOGNOMIC SCRUTINIZER

•

MARNIX DE NIJS

2009

Marnix de Nijs' installation *Physiognomic Scrutinizer* uses biometric software to match visitors' faces with a database of famous and infamous people, as a humorous but no less confrontational reminder of the impact of biometrics. During Museum Night 2009, the work was on display at the entrance to V2_.



<https://v2.nl/archive/works/pseudomorphs-dress>

PSEUDOMORPHS
•
ANOUK WIPPRECHT
2010

Anouk Wipprecht's *Pseudomorphs* are 'tech-couture pieces' that change in appearance as ink streams through them. They were developed in 2010 during a Summer Sessions residency at V2_. At the time the artistic exploration of wearable technology was an important theme within the technological arts.



<https://v2.nl/archive/works/solace>

SOLACE
•
NICKY ASSMANN
2011

Solace is a cinematic installation by Nicky Assmann that explores the mental process and physical activity of seeing. A handcrafted apparatus – partly developed in coproduction with V2_ – creates a monumental soap film. Through precise lighting the visitor can watch the iridescent colours and fluid motion of the membrane, while gravity slowly gets a hold of it, until inevitably the fragile film bursts. It was on show at V2_ in 2013.



[https://v2.nl/archive/works
/herbarium-vivum](https://v2.nl/archive/works/herbarium-vivum)

HERBARIUM VIVUM
•
DRIESSENS&VERSTAPPEN
2013

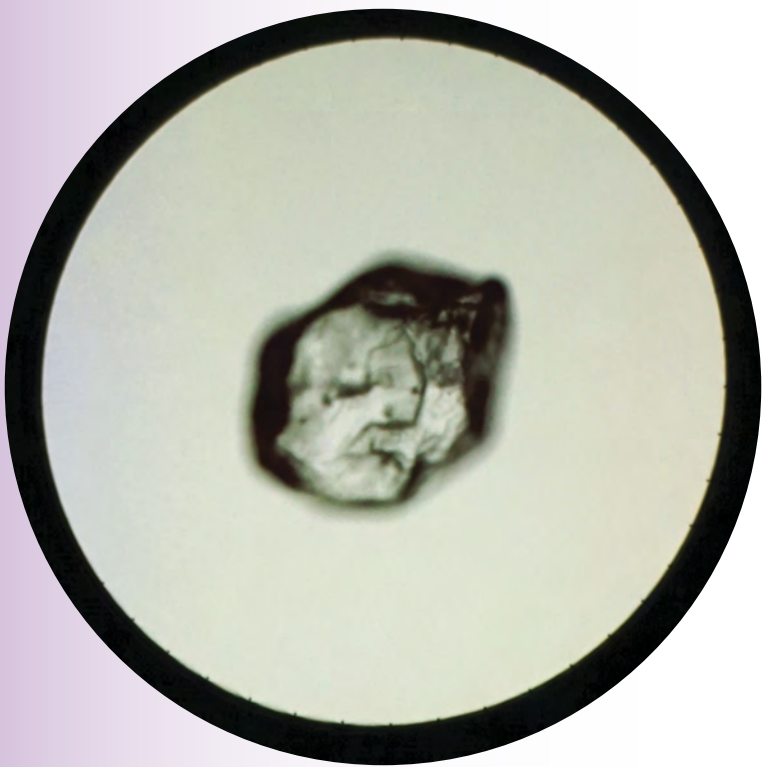
In *Herbarium Vivum* different crop plants are growing in an extremely limited space: inside a frame that is almost 2-dimensional. In this way, the plants will finally resemble their own representation in herbaria and botanical illustrations. It is a work by Driessens & Verstappen, who research different forms of growth, and self-organization in nature and technological systems. *Herbarium Vivum* was developed in 2013, and was on show at V2_ in 2018.



<https://v2.nl/events/turtle-1-the-sequel>

TURTLE 1
•
MELLE SMETS
AND JOOST VAN ONNA
2014

In 2014 Melle Smets and Joost van Onna followed the export of car wrecks to Ghana. Out of recycled Western materials they produced *The Turtle* together with local car mechanics. The project was a co-production of V2_ and was shown during the Dutch Electronic Art Festival 2014. It is a fine example of a work that questions generally accepted ideas of innovation.



<https://v2.nl/archive/works/pareidolia>

PAREIDOLIA
•
DRIESSENS & VERSTAPPEN
2019

In *Pareidolia* by Driessens & Verstappen facial detection is applied to grains of sand. When the machine finds a face in one of the grains, the portrait is photographed and displayed on a large screen. The work was on show at V2_ during Museum Night 2020, and is a good example of the application of AI in the arts.

V2_Archive

LATEST ADDED WORKS

An Invitation To DANCE



An Invitation to DANCE was a research project by Noud Heerkens.

Gravicells



"Gravicells" (2004) is an installation by Seiko Mikami and Sota Ichikawa. It was shown at DEAF04.

The Daily Climate Show: Willemskade

The Daily Climate Show: Willemskade (2021) is a work by Kirill Zakomoldin.

Fragments

Fragments (2021) is a work by Leo Scarin.

Portrait Of Meta-Citizens



A Whisper In Hagley Woods



Pare.

Dries

Ciclo

Ciclos
Jeisson

Site

Sites
worl

<https://v2.nl/archive>

V2_'s archive provides a way of tracking the evolution of the field of art and technology. As of December 2021, the website contained descriptions of more than 1,300 events organized by V2_ over the previous forty years, along with about 600 longer accompanying texts (essays, lectures), almost 1,000 works of art and other projects exhibited at V2_, and more than 1,600 biographies of artists, speakers and others. There are also links to hundreds of videos, ranging from full recordings of events to brief interviews with artists; hundreds of scanned program booklets and article PDFs; and thousands of photographs. The archive continues to grow daily, with each addition to the website and every activity V2_ undertakes.

No unequivocal picture can emerge from an archive like this one. Its diversity and size make that all but impossible. Can a single story of the evolution of art, technology and society even be told? There are many stories to tell, and each one has a different emphasis, examines specific aspects, focuses on particular interests. And all these years later, it isn't always clear which projects were vitally important at the time and which were

side projects. An archive invites research, browsing and the discovery of connections. You can use it to construct or underpin a directional narrative, but you'll also find material that qualifies or contradicts that narrative.

An archive is brought to life through use. The V2_ archive does not yet represent a history; it possesses the potential for history to be written. It simply contains the things that were preserved, for whatever reason. An item might have been considered important, or it could have gotten left in a cupboard or a computer folder that kept getting copied over the years. No archive can ever be complete. More documents, or different ones, could always have been kept; more photographs taken; more social media posts saved. Artworks and events could have been documented differently, perhaps bringing different aspects to the fore. Every researcher needs to have a sense of what is or might be missing. Without interpretation, an archive is nothing more than a loosely ordered database that could have been ordered some other way. Every archive, then, has its bias. The chief bias of this one is that it only contains information

about projects organized by and at V2_, including the Dutch Electronic Art Festival (1994–2014). Some events are extremely well documented; others, which may have been more important, less so. The material likely to be most relevant for students, artists and others with an above-average interest in art and technology has been made available on the website. V2_ possesses even more digital material, including video footage, in computer folders organized by year, and the seriously interested can inquire about particular resources that might exist, for example on the hundreds of additional miniDV tapes or in the boxes of flyers and other documents.

V2.nl
v2@v2.nl



V2_Lab for the Unstable Media
Eendrachtsstraat 10, 3012 XL Rotterdam
the Netherlands

Publisher: V2_, Rotterdam

Design: Joke Brouwer

Translation: Laura Martz

Photography: Jan Sprij (Ascott, Raaijmakers, Gabriel / O'Kane, Stelarc, De Nijs,
Domnitch & Gelfand, Wipprecht, Mikami & Ichikawa); Teun Vonk (Smets / Van Onna);
Driessens & Verstappen (Driessens & Verstappen); Christiaan van Doesburg (Assmann)

This publication is part of the V2_research into forty years of art and technology

With thanks to
Stimuleringsfonds Creatieve Industrie, Gemeente Rotterdam, Netwerk Archieven Design en
Digitale Cultuur

© 2022 V2_ and Arie Altena

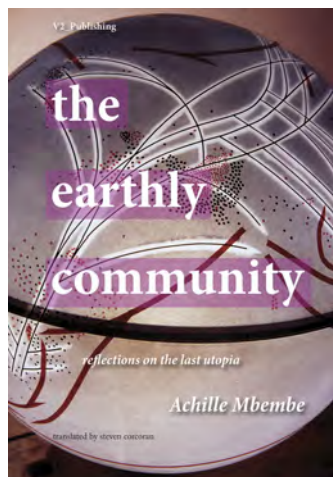
stimuleringsfonds
creatieve industrie



Gemeente Rotterdam

netwerk archieven
Design en Digitale Cultuur

Also published by V2_

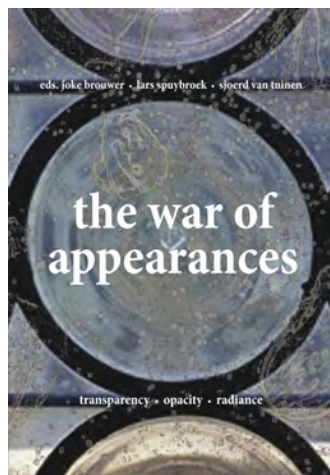


DICK RAAYMAKERS



A MONOGRAPH

Ajien Mulder and Joke Brouwer (eds.)





v2.n1