

Introduction to the Exhibition

STRATEGIES OF NEOGEOGRAPHY IN RECENT MEDIA ART

by Boris Magrini

COUNTER-MAPPING AND MEDIA ART

The exhibition *Shaping the Invisible World* takes a look at contemporary artists' use of cartography as a tool by which to reveal the world's hidden realities, be they geographical, political, or social. The exhibition stems from the desire to examine how recent artists have managed to combine a poetic approach with a critical discourse regarding the practice of cartography, particularly cartography that uses digital tools. The origins of the exhibition were, first and foremost, the various practices known as counter-cartography or critical geography, studied in particular by the exhibition's co-curator Christine Schranz in her research (Schranz 2020). Geographers and researchers have revealed the subjective and partial character of every map since the second half of the 20th century, underlining that every representation of the world, or part thereof, can actually be manipulated in order to satisfy the economic or political interests of those who finance and promote such initiatives. A science that has its origins in antiquity, cartography has been a tool of power for many years, as has been well demonstrated by Jerry Brotton, for example, in his popular book that traces the history of cartography (Brotton 2013).

Both the criticism of prevailing geographic and cartographic research and the desire for alternative, bottom-up, and collaborative approaches to visualizing local realities have given rise to a movement that is generally referred to as critical or counter-cartography. This movement uses the practice of creating alternative maps or questions traditional representations of geo-political realities. We might consider geography to not only concern the description of territories, but also that which involves the study of the set of social, political, and economic events that take place in certain territories. A critical approach to this phenomenon involves a questioning of traditional geography and of both the methodology

and the tools used to analyse socio-political and economic contexts by the establishment.

Cartographic tools themselves, as well as data visualization methodologies, have also changed profoundly in recent decades. A great change has taken place in this field with the advent of digitalization and interconnectivity. Geographic Information Systems (GIS), the Global Positioning System (GPS), and the development of high-resolution satellite imagery have all revolutionized the representation of the world and the study of geo-political realities. If these technologies have allowed for a democratization in the exchange of information and in the creation of maps and representations of the world and its realities, then they have also placed these tools in the hands of a few private companies.

It is precisely in the analysis and questioning of these tools, tools on which contemporary cartography is based, that the artists in the exhibition *Shaping the Invisible World* base their works, rather than critiquing cartography itself as a science. It is no coincidence that the artists who are most interested in spatial representation and data visualization today will usually have their work be accompanied by a reflection on the problem of the monopoly of digital data, the question of displaying sensitive data, the existence of little-known satellite systems, or the use of data collected from alternative sources. A critical and distrustful spirit towards the authorities who have a monopoly on today's cartographic tools, be they political, academic, or corporate, has now become the dominant attitude on the part of artists who can be associated with both the methodology and, above all, the ideology of counter-cartography.

QUESTIONING TRADITIONAL CARTOGRAPHY

The concepts of critical cartography and counter-mapping have revolutionized our way of thinking, reading, and creating representations of geo-political information. These movements have refused to consider map-making – and any other representation of the world and its realities —as a univocal and objective science. This does not mean that they reject its usefulness, quite the contrary, but they do claim that each map shows only a partial reality, insisting that different maps can and should be created in opposition to one-sided representations.

The main figures of this critical stance have revealed the limits of traditional geography. In a paper originally published in 1971, the famous geographer David Harvey affirmed that:

“There is a clear disparity between the sophisticated theoretical and methodological framework which we are using and our ability to say anything really meaningful about events as they unfold around us” (Harvey 2016: 17-18). Harvey asserted the need for a revolution in the science of geography on the basis of this exact discrepancy, between the academic tools of analysis of the world and the need to intervene in the world. Following that particular train of thought, geographer and cartographer John Brian Harley not only stressed the always-subjective nature of any geographical survey, but also how it is often driven by opportunistic interests and as a means for the ruling authorities to justify their actions. According to Harley, cartography is an elaborate fiction, one developed and maintained by those in power in order to control and subjugate minorities: “Maps are preeminently a language of power, not of protest” (Harley 2002: 79).

The criticism advanced by those involved in counter-mapping approaches has made it possible to question the institutions that produce mapping tools and the prejudices that are involved in both the creation and distribution of information. Moreover, it has allowed the development of new, more democratic strategies for the representations of the world. These new ways of making cartography, understood here in full, involve the potential visualization of processes that are either rarely explored or the visualization of processes that are known, but which need to be expressed with alternative points of view.

DIGITAL TOOLS AND NEOGEOGRAPHY

Without any doubt, digital tools have paved the way for the development of cartographic research outside the traditional fields dominated by the state, academia, and private companies. This has resulted in a multiplication of individual initiatives that are often labeled as ‘experimental geography’, as exemplified by the many projects collected in a book edited by Nato Thompson, Jeffrey Kastner, and Trevor Paglen (Nato/Kastner/Paglen 2008), or in the equally compelling work published by Janet Abrams and Peter Hall (Abrams/Hall 2008). This phenomenon can be partly linked to practices developed by artists who make creative use of tools such as GIS, GPS, and satellite imagery.

The concept of experimental geography, or neogeography, has often been used to describe Trevor Paglen’s approach, who has developed his artistic work on the basis of the use of methodologies and tools that are close to geography, but which are used for alternative purposes. For instance, his well-known Limit Telephotography series, which shows otherwise inaccessible buildings through the use of extremely powerful telephoto lenses. Paglen combines strategies of observation of the territory – or in this case through methodologies that are akin to astronomical observation – with a critical discourse of institutions of power, such as military or

surveillance buildings. His project, *The Other Night Sky*, conversely, uses data collected by an international public of amateur satellite observers to calculate the orbits of satellites and to photograph them.

Reflections on the putting into orbit of satellites to reveal territorial data, a phenomenon that has revolutionized the practice of cartography, is also found to occupy the center of the work of artists such as Quadrature and fabric | ch. Both of the aforementioned artists create works that make visible the existence of satellites, their trajectory, and their activities. With their works, the artists make us aware of the massive presence of these instruments in orbit, whether they are satellites used for the operation of GPS, for the observation of atmospheric and ecological phenomena, or if they are satellites that are used for military purposes. Quadrature's *Supraspectives* and *Satellite Daylight* by fabric | ch raise questions about the problem of surveillance, but moreover about the hegemony and the use of data that these systems generate.

James Bridle is equally well known for his research into digital tools related to land observation or to navigation, such as GPS, geolocation software, drones, and surveillance cameras. His critical view of technology, and the need to develop a greater level of technological literacy among the population, was emphasized in his famous publication *New Dark Age* (Bridle 2018). His interactive *Rorschmap* and *Roschmap Street View* allow kaleidoscopic compositions to be created from online digital Google maps. The artist exploited this approach again in his work *Catch and Release*, which raised the issue of generating big data in the study of biological and ecological phenomena, among flamingos in his specific case. The artist had access to the Tour du

Valet's huge database, which includes sightings of over 600,000 individual birds. The artist emphasizes the intricate problem of collecting, visualizing, and making sense of data in the study of complex phenomena by combining satellite images with sentences from the database.

ALTERNATIVE MAPS AND VIRTUAL WORLDS

While the digital tools used for data collection and visualization have had an important impact on the practice of cartography, an equally fundamental paradigm shift has taken place with regards to the consideration of the objectivity of each data visualization. Laura Kurgan, who is both an artist and an exemplary data visualization researcher, stresses the subjective character of each map, stating that, "The spaces that maps try to describe can be ideal, psychological, virtual, immaterial, or imaginary - and they are never just physical" (Kurgan 2013: 16). She concludes that, "we need to learn how to agree and disagree with those arguments, to challenge the interpretations made of images that are anything but objective or self-evident" (Kurgan 2013: 26). Laura Kurgan's work is a renowned illustration of the integration of counter-cartography into an artistic context and she has had a significant impact on many artists who currently adopt similar strategies. Kurgan's maps are an example of how a critical and creative use of data analysis and visualization tools allows for a different reading of social and political realities.

Similarly, the artists' group bureau d'études (Léonore Bonaccini and Xavier Fourt) has created a multitude of alternative maps in order to make visible the political and, above all, the economic realities linked to capitalist and colonial market logics (Holmes/Lomme/bureau d'études 2015). Both Kurgan and bureau d'études have shown how the exercise of visualizing data, which is already known but which is organized differently from the dominant discourses,

enables a different understanding of the realities that are being analyzed and illustrated.

Artists such as Kurgan, bureau d'études, and many others among whom we might mention Forensic Architecture, have succeeded in developing cross-cutting projects that are exemplary for several reasons: they use a transdisciplinary approach to create visualizations and analyses of phenomena that would remain largely overlooked or which would be analyzed in an unfair and discriminating way by the regimes in force in the places studied; they use a typical counter-mapping approach because they exploit data collected not just by the authorities, but also by the population; finally, they all synthesize scientific rigor and artistic language in order to reach a wider audience. Put otherwise, their analyses become objects of aesthetic-artistic contemplation and, thus, assume an emblematic and moral level that goes beyond the specificity of the events discussed. These strategies underline how the adoption of neogeography or counter-cartography research in an artistic context can be not only satisfying from an artistic point of view, but also from an informative, epistemological, or even a political one. Many theorists have questioned traditional geography and stressed the importance of alternative forces in the construction of the representation of the world. Artists, in turn, appropriate counter-cartography strategies, even though they often do not work in a strictly scientific or academic field, and can certainly contribute to the different construction of a representation of the world. In this sense they operate as neogeographers.

An example of a freer, but equally compelling approach, is that of the artists Esther Polak and Ivar Van Bekkum who appropriated Judith Butler's concept of performativity of genres and Speech Acts from the philosophy of language and applied these concepts to their investigations of the territory and urban spaces. Their approach has been exemplified through their workshops City as Performative Object, but also in the 'Walking Essay' by Esther Polak

through Google Earth (Polak/Van Bekkum 2017). They have produced several videos using Google Earth and Google Street View, often combining their recordings with tools such as GPS and binaural microphones. Google Maps is now among the most widely used but also discussed and criticized GIS and web mapping tool. In their work, which makes a creative use of Google Maps and Google Earth, Esther Polak and Ivar Van Bekkum skilfully mix geolocation tools, GIS, and web mapping to develop a reflection on the inhabitation of public space, the question of privacy, but also the discrepancy between the lived reality of a place and its digital representation. If Google Maps is still criticized for its monopoly on web mapping, and for the fact that the process of mapping and data collection is not fully transparent or publicly accessible, this means that the majority of today's population use a tool whose accuracy or correctness in the data creation process cannot be verified. Google Maps presents further problems related to the fact that it is proprietary software – contrary to open-source projects such as Open Street Maps – and to the fact that it tracks the user's history. The works by Esther Polak and Ivar Van Bekkum that do make use of Google's various web mapping and GIS raise the question of the supremacy and integrity of these tools and services.

There are also digital maps beyond these functional tools. Some video games are an example of software offering digital recon-

structions of entire cities. Can we consider such software, even though it was created for entertainment purposes, as digital maps? Is the question of whether they are accurate or not a relevant one in such a recreational context? The artists Total Refusal (Robin Klengel & Leonhard Müllner) have created a performance within the virtual world of *The Division* (Ubisoft, 2016). The online video game presents a realistic and detailed digital reconstruction of Manhattan, evidently adapted to the post-apocalyptic scenario of the video game. The artists coordinated a tourist walk named *Operation Jane Walk* – inspired by the worldwide series of *Jane's Walk* city tours – in order to discuss the urban planning and building choices of the virtual universe. After all, if millions of people play these games every day, immersing themselves in digital reconstructions of existing cities, their experience of the virtual spaces partly replaces the real experience. The question of who is responsible for how this experience is represented may be as important as the question of how Google Maps retrieves and calculates the data on which it bases its web mapping.

The Artist Fei Jun has gone one step further, creating an interactive game in which the public can even build fictional worlds from ordinary objects rendered in 3D. In his installation *Interesting World*, users can not only create their own worlds, but also visit and modify other users' creations. With this work, the artist underlines the idea that the representation of a world is always an exercise in negotiation between various points of view.

These examples show that critical geography is a territory that lends itself to exploration, not just by scientific researchers and geographers, but also by artists and people from different horizons. If it is true that cartography is not simply an act of reproducing the world, but also an act of modeling perceived realities, then artists must contribute to the construction of such a world. Artists manage to propose representations of the world that are nevertheless essential for an equally critical discourse on existing realities through a freer and more creative approach.

ECOLOGICAL ACTIVISM, FICTIONAL SCENARIOS, AND ARTIFICIAL INTELLIGENCE

The term counter-mapping is often associated with revolutionary, bottom-up projects, produced by NGOs opposing the maps produced by authorities who often pander to the economic interests of multinationals. Counter-mapping projects often have an ecological reason and purpose. It is no coincidence that the struggles for the recognition of environmental catastrophes go hand in hand with the work of visualizing such disasters. If those responsible for the damage caused to the land or to the environment, whether government authorities or private companies, have an interest in concealing or minimizing the data about such damage, then it is often the minorities who have to fight to have the facts recognized. Counter-cartography and ecological activism, therefore, naturally stand together.

In this respect, the work of Persijn Broersen & Margit Lukács is particularly interesting. Their video *Forest on Location* and video sculpture *Shvayg Mayn Harts* are both a documentation and a memorial of the Białowieża forest in Poland, a national park. The site has also been a UNESCO World Heritage Site since 1979. Although the forest is a protected heritage site, the Polish government approved the logging of trees, justified by the presence of a parasite. The Białowieża forest, which the artists recorded by means of photogrammetry and reproduced by means of a video, a 3D reproduction of a trunk, and then combined with a popular song performed by the Iranian singer Shahram Yazdani, becomes the territory in which issues are confronted. These issues include the opposition of cultural and economic interests, the need to preserve a territory and its biotope, and profit-making through deforestation operations.

Both the visualization of macroscopic environmental problems and the visualization of microscopic phenomena, such as the problem of air pollution, can be part of a mapping project of the territory, as the work of Studio Above&Below (Daria Jelonek and Perry-James Sugden) demonstrates. The artists make use of augmented reality to render visible the imperceptible changes in air quality in different environments. The use of AR technology seems particularly effective in conveying information with an intuitive real-time visualization process in their installation *Digital Atmosphere*.

Virtual reality, rather than augmented reality, is the technology used by Jakob Kudsk Steensen to address issues of land representation and environmental challenges in his installation *Primal Tourism*. Using digital tools, but also multiple cartographic sources and historical documents, the artist has faithfully reconstructed the island of Borabora, but introduces a science fiction scenario, namely the vision of a future in which global warming has partially submerged the island, making it uninhabitable. The possibility offered for the user to explore the island in a virtual universe, but also to learn about its history through interactive documents scattered in the corners of the island, is in the end another example of possible counter-mapping, realized here with cutting-edge technology. The science-fiction scenario clearly compromises the reading of this impressive digital map as a reliable tool, but at the same time extends the concept of data interpretation, which also occurs in the most rigorous cartography, as mentioned previously. The artist emphasizes the subjective character of digital tools in specific in order to investigate the

effects of digitalization on our perception of nature and on our understanding of geopolitical constructs

An only seemingly more objective speculation of future scenarios is proposed by Tega Brain, Julian Oliver, and Bengt Sjölén in their work *Asunder*. They programmed a supercomputer with a machine learning-based software for the prediction and resolution of future climate catastrophes. Once again, the visualization of future data combined with the production of fictional maps is an exercise that extends far beyond the usual counter-mapping practices. The work is, in fact, an ironic commentary on technological solutions to environmental problems.

The examples proposed in the exhibition *Shaping the Invisible World* illustrate this freer and yet no less important approach. Artists demonstrate that a map is never an exact replica of the reality being represented by assuming the freedom to exploit digital tools for the representation of the world, or a part thereof, or even to create fictitious representations. Nevertheless, this representation is an equally necessary vehicle for the discussion of facts.

SHAPING THE INVISIBLE WORLD

The exhibition *Shaping the Invisible World* brings together a selection of artists who exemplify the recent assimilation of ideas and strategies from counter-cartography to neogeography. The artists' work can be defined as an attempt to develop a fragmentary, but still free and liberating, view of the world. These artists create different narratives and question the representations defined by conventional, authoritarian, governmental, or dominant private companies. What also distinguishes them is the use of different technologies and different tools of representation, including augmented reality, virtual reality, artificial intelligence, and interactive video games. However, as Laura Kurgan has pointed out, "there is no such thing as raw data" (Kurgan 2013, 35), there is no such thing as an objective representation of the world because the collection of any

kind of data is already an interpretation. Hence, the work of artists who collect, create, and arrange new data to form a partial illustration of the world can be regarded as a valid contribution to the representation of the territory and of its multiple realities.

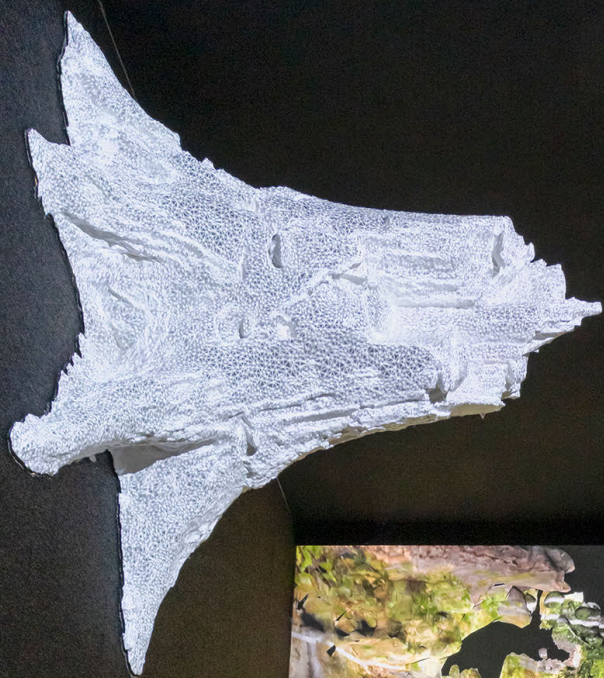
As a closing remark, we can conclude that the feeling of distrust towards the dominant authorities responsible for the existing tools of representation and geo-political analysis is often shared by artists working in the field of neogeography. Yet, what the artists add to counter-cartography is an alleged freedom in the use of representation tools, not simply in just representing different topics, thereby highlighting hidden realities and visualizing information in a different way. The examples discussed show that artists, thanks to the poetic freedom they have at their disposal, can develop strategies that go beyond the existing possibilities of counter-mapping. The use of performative approaches, the creation of fictitious and virtual universes, or the exploitation of technologies related to digital geography are also examples of practices for a possibly less rigorous, but nevertheless relevant, discussion of geographical issues. The map is a representation of the world; in a broader sense, it is a representation of what is happening in the world, of the population, and its multiple realities. The map is both an instrument of representation and knowledge. It is also the result of an observation, but also a projection and a vision for the future. Through their visionary works, artists who use new media and technologies that

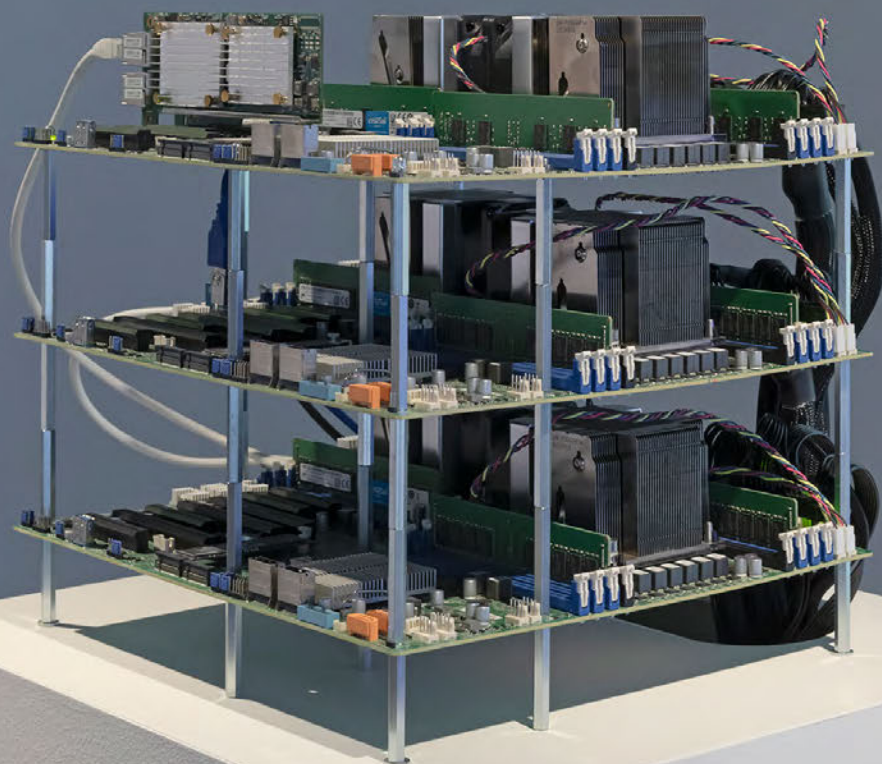
are close to the tools used in counter-cartography contribute to questioning perceptions of reality that are often the result of manipulation for political or economic purposes. Their contribution is now more necessary than ever, particularly at a time when information control has become a flagrant and perfidious political tool.

→VIDEO LINK

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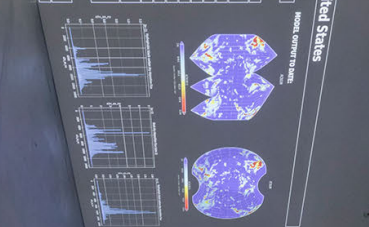


CASE NAME:
Silicon Valley, United States

DATA ATTRS:
MODEL STATUS:

CASE DATA:
Location: 37.58 N, 122.54 W
Area: 1,200 sq km
Population: 7.75 million
Density: 6,458/km²
GDP (2015): \$680.5 billion
GDP: 15.65 metric tons per capita
Average temp: 55°F
Annual Precip: 45 in
Annual Wind Speed: 12 mph
Timezone: Pacific Time
Country: US

Community Data System:
2.11
Model Period: 2000-2030









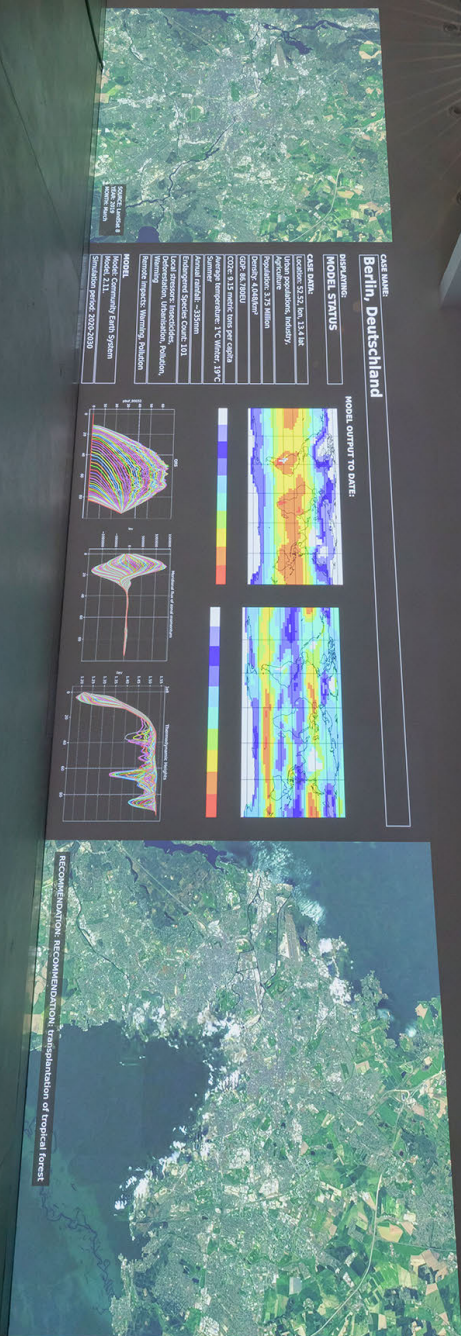
















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Persijn Broersen & Margit Lukács, Forest on Location, 2020 and Shvayg Mayn Harts, 2018, installation view “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof



02

Tega Brain, Julian Oliver and Bengt Sjöln, Asunder, 2019, installation detail, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof



03

Fei Jun, Interesting World installation, 2019, installation view, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof



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Fei Jun, Interesting World installation, 2019, installation detail, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof



05

Quadrature, Supraspectives, 2020, Installation detail, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof



06

fabric | ch, Satellite Daylight, 47°33'N, 2020, installation view, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof



07

Exhibition view, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof



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Total Refusal, Operation Jane Walk, 2018, Installation view, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof



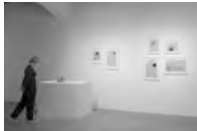
Exhibition view, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof



Quadrature, Satelliten, 2015, installation detail, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof



Exhibition view, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof



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PolakVanBekum, The Fortune, 2018, installation view, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof



PolakVanBekum, The Mailman's Bag, 2015, installation view, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof



Exhibition view, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof



Jakob Kudsk Steensen, Primal Tourism, 2016-2020, installation view, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof

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Trevor Paglen, *Circles*, 2015, installation view, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof



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Tega Brain, Julian Oliver and Bengt Sjöln, *Asunder*, 2019, installation view, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof



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Studio Above&Below, *Digital Atmosphere*, 2020, Installation view, “Shaping the Invisible World – Digital Cartography as an Instrument of Knowledge”, 2021, HeK (House of electronic Arts Basel), Photo: Franz Wamhof

