The Power of Virtual Maps

Ahlert, Moritz

THE POWER OF VIRTUAL MAPS

Moritz Ahlert

Maps have always been instrument of power. They have always been a significant instrument of government and domination. In antiquity, in the Middle Ages, and in the Modern age alike, rulers have used maps to further their political agenda and to enforce their sovereign power. Maps are proven instruments for reflecting statistical data, and the history of the map is, therefore, also closely associated with the founding of nation states. In the mid-18th-century, the nation state took a growing interest in measuring its own territories, and in surveying its population. With its topographical divisions into states, these became the main protagonists in cartography. By providing iconographic national outlines, maps increased identification with the nation state – thus allowing geopolitical borders to become fixed in people's minds. Maps served as instruments of military defence, in military campaigns and in propagandizing national identities. Until only a few decades ago, maps were exclusively produced by nation states, frequently in a military context.

Discourse of Critical Cartography

The map is and was an instrument of disciplinary and sovereign power, as Foucault would have defined it.[1] From the late 1980 onwards authors like John B. Harley, Denis Wood, and Jeremy Crampton[2] have taken a critical look at the ways in which maps function, and have explored the current perception of maps. They have come to the conclusion that maps are not objective, neutral graphic representations that endeavour to reflect the real world as accurately as possible. Instead, cartography is governed by rules that are ›scarcely‹ questioned. Formalisms such as simplifying, distorting, secrecy, centralizing and hierarchizing have always been determining factors in cartographic praxis.[3]

A particularly interesting and tension-filled relationship between power and counter-power can be noted in the maps produced by the transnational cor-

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1   *Michel Foucault:* Überwachen und Strafen. Die Geburt des Gefängnisses. Frankfurt 2014.
2   *Denis Wood:* Cartography is dead (Thank God!). In: Cartographic Perspectives (2003), Vol. 45, p. 4–7.
3   These themes are widely discussed in the ›critical cartography‹ discourse, principally by English-language authors. In the late eighties, authors began questioning the conventional reading of maps, attempting to expand the limited discourse of academic cartography, which was largely restricted to technological aspects. For the proponents of critical cartography, geographical knowledge is composed of a large number of social, economic, and historical forces. They take the view that knowledge is inseparable from power, and therefore interpret maps as social products that not only reflect social power structures, but also reproduce and consolidate these structures.

Ill. 1: Googles ubiquitous Maps as a current example, Photo: https://www.facebook.com/MuseumOfInternet/photos/

poration Google (Ill. 1). This poses a question: How are power relationships expressed in the cartographic praxis and representation of Google Maps–specifically, in terms of the previously mentioned strategies of simplifying, centralizing and hierarchizing? The advent of Google's Geo Tools began in 2005 with Maps and Earth, followed by Street View in 2007. They have since become enormously more technologically advanced.

Google's virtual maps have little in common with classical analogue maps. The most significant difference is that Google's maps are interactive – scrollable, searchable and zoomable. Google's map service has fundamentally changed our understanding of what a map is, how we interact with maps, their technological limitations, and how they look aesthetically. Thanks to Google, maps are more ›ubiquitous‹ today than ever before, and, with the widespread use of smartphones, are influencing users' patterns of behaviour. By using maps as a form of synaptic real-time networking, smart digital devices are creating a novel form of hyperlocality, a situation in which things and users are interconnected and can be localised, and in which the physical world fuses with the virtual world. Google's Geo Tools have become the nerve centre and logbook of this world order.

Order through Platform in urban space

At an early stage, Google put in place specialized programming interfaces called APIs which allowed the programmers of other web tools to combine their data with Google Maps and to geo-reference it, known as map-mash-ups. It was the opportunity offered by the mash-ups that first made possible the emergence of new economic models, such as large parts of the digital Shared or GIG Economies. In this fashion, Google Maps makes virtual changes to the real city. Applications such as ›Airbnb‹ and ›Carsharing‹ have an immense impact on cities: on their housing market and mobility culture, for instance. There is also a major impact on how we find a romantic partner, thanks to dating platforms such as ›Tinder‹, and on our self-quantifying behaviour, thanks to the ›nike‹ jogging app. Or map-based food delivery-app like ›deliveroo‹ or ›foodora‹. All of these apps function via interfaces with Google Maps and create new forms of digital capitalism and commodification. Without these maps, car sharing systems, new taxi apps, bike rental systems and online transport agency services such as ›Uber‹ would be unthinkable. An additional mapping market is provided by self-driving cars; again, Google has already established a position for itself.

As mentioned Google Maps has led to novel displacements and overlapping of physical and virtual spaces. In this context, simulation techniques are used not only to generate virtual worlds, but to form realities and to intervene in physical spaces.

We can safely say that digitalization has opened up the mapping sector, which was once dominated by the state. Instead of leading to increased democratization, this has resulted in fragmentations. Economic interests appear to have replaced state and military interests: Google uses its maps to open up new markets, to collect more data[4] and to profit from the online platforms which use Google Maps as their basis.

With its Geo Tools, Google has created a platform that allows users and businesses to interact with maps in a novel way. This means that questions relating to power in the discourse of cartography have to be reformulated. But what is the relationship between the art of enabling and techniques of supervision, control and regulation in Google's maps? Do these maps function as dispositive nets that determine the behaviour, opinions and images of living beings, exercising power and controlling knowledge? Maps, which themselves are the product of a combination of states of knowledge and states of power, have an inscribed power dispositive. Google's simulation-based map and world models determine the actuality and perception of physical spaces and the development of action models.

To echo the words of Agamben: »today, it seems that there is not a single instant in the life of an individual that cannot be formed, contaminated, or-

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4   The collection of data in order to efficiently deploy personalised advertising content is the basis of Google's business model.
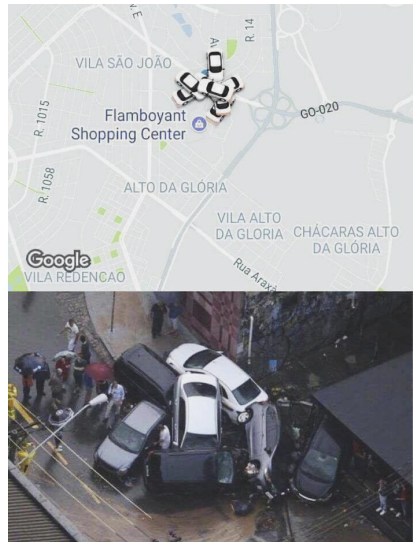
Ill. 2: Dividual Maps, Photo: https://www.face book.com/MuseumOfInternet/photos/

dered or controlled by dispositives – in the form of maps«.[5] Deleuze writes: »In the societies of control, it is no longer either a signature or a number that is important, but a code: the code is a password«. Individuals have become »dividuals«: masses, samples, data, markets, or »banks«.[6] He cites Guattari's vision in which a dividual *map*[7] becomes the control material (Ill. 2):

> »Felix Guattari has imagined a city where one would be able to leave one's apartment, one's street, one's neighbourhood, thanks to one's ›dividual‹ electronic *map* that raises a given barrier; but the *map* could just as easily be rejected on a given day or between certain hours; what counts is not the barrier but the computer that tracks each person's position – licit or illicit – and effects a universal modulation.«

Surveillance

The digital map of today is an instrument of the surveillance and control dispositive described by Deleuze and Guattari. Every click in the net, every step in space is recorded and registered. Everything that moves around – goods, information, communication, capital, and consumers – is tracked. According

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5   *Giorgio Agamben:* Was ist ein Dispositiv? Zürich 2008, p. 29.
6   *Gilles Deleuze:* Postskriptum über die Kontrollgesellschaften. Frankfurt 2004 [1972], p. 258.
7   In German, the word »Karte« also translates as »map«.

Ill. 3: Pokémania, Photo: https://www.facebook.com/MuseumOfInternet/photos/

to Zygmunt Bauman, »every human being is a wandering hyperlink«.[8] The digital map co-writes, tabulates, and increasingly removes the blank spaces of our ›private life‹. The everyday negotiations of our lives are cartographed by a succession of new digital techniques and applications. With the smartphone, if not before, »communication ›coincides‹ with control«.[9]

Zygmunt Bauman describes how once solid and fixed surveillance relationships would become increasingly more flexible and mobile, and would expand into areas of life in which they previously played only a marginal role or no role at all. Baumann adopts Deleuze's rhizomatics to show that surveillance in »control societies« does not grow in a treelike and ordered way but spreads rhizome-fashion.[10]

»The new forms of surveillance« would »depend on data processing« and would »have long since left the framework of the disciplining discourses described by Foucault«.[11] They effected »a new transparency, in which not only state citizens as such, but every human being in all areas of everyday life [could be] continuously monitored, observed, tested, evaluated, judged, and sorted into categories«. »In a fully one-sided way. While every detail of our everyday life is becoming ever more transparent to the organizations that

8   *Zygmunt Bauman/David Lyon:* Daten, Drohnen, Disziplin. Ein Gespräch über flüchtige Überwachung. Berlin 2014, p. 21.

9   Ibid.

10 Ibid., 15.

11 Ibid., 24.

observe us, their activities are increasingly opaque to us.«[12] The power relationships of today, on the other hand, are, according to Bauman, ›post-panoptic‹:

> »Electronic technologies which are [made use of] by power in the rapidly changing and mobile organizations of our present day, […] make solid walls and windows largely ›superfluous‹ (apart from ›Windows‹ and ›firewalls‹, of course, their virtual phantoms). Additionally, they enable very different forms of domination; not only do these no longer have any clear connection to prisons, they are also frequently characterized by being exceptionally flexible and, in the media and shopping, actually frequently go hand-in-hand with fun and entertainment.«[13]

The fashionable phenomenon of the summer of 2016 was the location-based app Pokémon Go, a project by the Nintendo videogames company and former internal Google start-up Niantic, headed by the Google Earth inventor John Hanke. This summer, this augmented reality app led to hysterical mass movements, caused lethal accidents, but, first and foremost, had users hooked catching monsters, like here in the video in Taiwan (Ill. 3). Pokémon Go gamifies the real urban space, making it a virtual arena. It is based on a modified Google map. Pokémon Go brought users into places of the disciplinary society declared by authorities to be unsuitable places to play, such as prisons, schools, hospitals, barracks and military training areas, or former concentration camps. Owners of matured Pokémons virtually occupied contested territories and defended them against other players, ›obliging‹ them to move and cover ground.

Pokémon Go has entered tech history as the most profitable smartphone game of all time, with a daily take of over two million US dollars from so-called in-app purchases. More profitable, although it cannot be recorded in numbers, is the switching on of location sharing, the tracking of the »mass body«, the inscribing of its »serpentine movements« on Google Maps. Movement data allows the coordinates of the base map to be improved.

Google analyses the individual surroundings of users based on GPS and geo data. Additionally, the map steers users in a targeted way. In Japan, it steered them to fast food restaurants, where a so-called Pokestop was inscribed into the map in front of every McDonald's branch. With Pokémon Go, Google dramatically shows that it is able to steer large currents of customers, and how it can function as an instrument of social control through virtual techniques of marketing. With this game, Google is testing something that will probably be commonplace for all sorts of maps soon. The recipe for Pokémon Go's success lies with the individual play and user experience. It will be interesting to see how the knowledge gained from this will translate into the everyday

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12 Ibid., 15.

13 Ibid.

functions of the normal ›dividual‹ Google map, with the goal of working towards a still more efficient control situation.

Pokémon Go can be described as a map monster with a liberal appearance. Inscribed into Pokémon Go are the codes of a ›dividual control material‹. Deleuze writes in the postscript that the serpent is the animal of the societies of control.[14] The serpent is conquering space through movement. »The coils of a serpent, of a snake are even more complex.«[15] In the context of Pokémon Go, Deleuze's serpent looks like ›Pikachu‹.

Moritz Ahlert
www.moritzahlert.de
info@moritzahlert.de

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14 *Deleuze*, as in fn. 6, p. 258.

15 Ibid., 262.