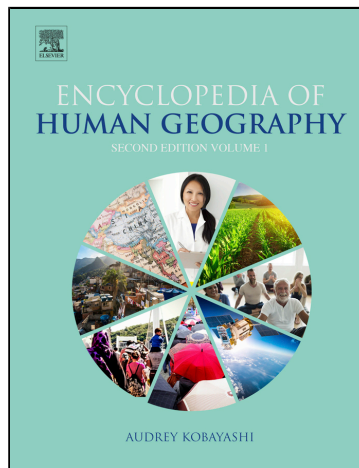


Provided for non-commercial research and educational use.  
Not for reproduction, distribution or commercial use.

This article was originally published in International Encyclopedia of Human Geography, 2nd Edition, published by Elsevier, and the attached copy is provided by Elsevier for the author's benefit and for the benefit of the author's institution, for non-commercial research and educational use, including without limitation, use in instruction at your institution, sending it to specific colleagues who you know, and providing a copy to your institution's administrator.



All other uses, reproduction and distribution, including without limitation commercial reprints, selling or licensing copies or access, or posting on open internet sites, your personal or institution's website or repository, are prohibited. For exceptions, permission may be sought for such use through Elsevier's permissions site at:

<https://www.elsevier.com/about/our-business/policies/copyright/permissions>

From D'Ignazio, C., 2020. Art and Cartography. In: Kobayashi, A. (Ed.), International Encyclopedia of Human Geography, 2nd edition. vol. 1, Elsevier, pp. 189–207. <https://dx.doi.org/10.1016/B978-0-08-102295-5.10510-4>

ISBN: 9780081022955

Copyright © 2020 Elsevier Ltd. unless otherwise stated. All rights reserved.  
Elsevier

## Art and Cartography

**Catherine D'Ignazio**, Department of Urban Studies and Planning, Massachusetts Institute of Technology, Cambridge, MA, United States

© 2020 Elsevier Ltd. All rights reserved.

### Glossary

**Dérive** A term coined by the *Situationist Internationale* to denote a mode of experimental behavior or way of passing through urban spaces. In practice, *dérives* are often ways of walking that attempt to research, through direct observation and/or individual experience, diverse facets of the spatial environment.

**Détournement** A term coined by the *Situationist Internationale* to denote a process that involved removing cultural signs and media elements (painting, literature, film, words, and gestures) from their original context and recontextualizing them in a new context, often for the purposes of social and political critique.

**Psychogeography** Entails the study of the precise laws and specific effects of the geographical environment, consciously organized or not, on the emotions and behavior of individuals. Independently, and slightly differently, defined by the *Situationist Internationale* and urbanist Kevin Lynch.

In the last century, and especially in the last 40 years, artists have made maps, subverted maps, performed itineraries, imagined territories, contested borders, charted the invisible, and hacked physical, virtual, and hybrid spaces in the name of cartography. Numerous names have been suggested for various strains of this intersection: "psychogeography," "locative media," "experimental geography," "site-specific art," and "counter cartography."

Locating the intersection of art and cartography in the last 100 years does not mean that one should ignore the achievements of artists such as Vermeer (Fig. 1) or works like the Vatican's *Galleria delle Carte Geografiche*, commissioned by Pope Gregory XIII. But prior to the 20th Century, maps were in the background of paintings, and paintings were insets or illustrations on maps. Art and cartography related to each other via visual cues like insets and tiny representations that made the separation between each distinct.

It is in the early 20th Century, directly after a wave of globalization (1870–1914), that artists began to engage seriously with cartography in numerous ways. Indeed, globalization plays no small part in the contemporary spatial turn of the arts, equally as cause, artistic subject matter, and the professional condition of a field characterized by rapidly proliferating international biennials,



**Figure 1** *The Art of Painting* by Johannes Vermeer shows the seventeen provinces of the Netherlands as well as the decorative function that imperial maps served in upper-class residences in the 17th Century, 1667, Vienna, Kunsthistorisches Museum.

conferences, and art fairs. The accelerated accumulation and circulation of capital, conflict, and people around the globe is a phenomenon that required (and is still requiring) diverse societies to develop visual and cultural mechanisms for articulating their relationships to the whole world—a world which, economically and informationally speaking, is already right in their backyard.

There are *three mapping impulses* that, against the backdrop of the social and economic changes to everyday life wrought by war and globalization, cut across the 20th and 21st Centuries and characterize contemporary art–map practices. These are loose groupings with numerous overlaps, not rigid categories. The artists chosen to represent these impulses are several out of a field of many hundreds of practitioners across the last 125 years. The article focuses primarily on artists and artworks that engage with Western and European traditions in cartography

1. *Symbol saboteurs*: Artists who use the visual iconography of the map to reference personal, fictional, utopian, or metaphorical places.
2. *Agents and actors*: Artists who make maps or engage in situated, locational activities in order to challenge the status quo or change the world.
3. *Information mappers*: Artists who use cartographic metaphors to visualize informational territories such as the stock market, the Internet, or the human genome.

### Symbol Saboteurs: Artists Who Use the Visual Iconography of the Map to Reference Personal, Fictional, Utopian, or Metaphorical Places

As a result of advances in printing and image-reproduction technologies, by the late 19th Century, maps and globes had become affairs of everyday life in Western nations. Atlases, such as Blackie's *Imperial Atlas of Modern Geography* (1860), were standard fare in children's education in the late 19th Century. The classroom globe served to instruct pupils as to the shape of their nation and its role in an all-encompassing geopolitical space. In the first half of the 20th Century, touring maps sponsored by advertisers accompanied the rise of the automobile. Between the 1920s and 1960s, over 5 billion maps were given away at United States gas stations alone. In the early 21st Century, with the increasing availability and accuracy of civilian geographic information system (GIS) data, online services such as MapQuest, OpenStreetMap, and GoogleEarth offered free, searchable databases composed of millions of satellite map images. Denis Wood estimates that 99% of all maps have been made since 1800.

The ubiquity of the map as a means of locating one's place in relationship to the rest of the world created a unique opportunity for artists to exploit cartography's language, symbols, and strategies. Political boundaries became iconic shapes, legible visual markers of identity and belonging that were ripe for artistic distortion, subversion, and reimagination.

An early example of the symbol saboteur impulse can be seen in Mark Twain's "Map of the Fortifications of Paris," a map that went viral in 1870s American newspapers. In this woodcut, Twain is referencing the Prussian invasion of France, which was covered widely in United States news. Twain's map is a crude, backwards-printed wood cut with Paris in the center surrounded by three shapes labeled "Fort" and a house icon labeled "Farm House." The Erie Canal, Omaha, and the fictional place "Podunk" are also on the map. Here Twain is satirizing newspapers' emerging practice of publishing attractive but uninformative maps in conjunction with military news. Just how *uninformative* and *unattractive* does a map need to be in order for the public to question its authority?

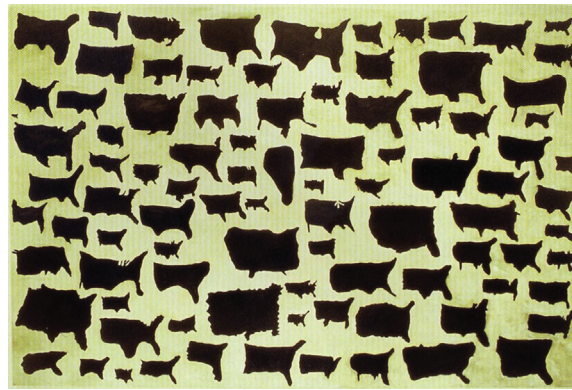
Raoul Haussman's *A Bourgeois Precision Brain Incites World Movement* (1920), also known as *Dada triumphs!*, is another early example of a symbol saboteur at work. In this piece, the artist claims the entire world as the empire of the short-lived Dada movement. The movement was informal and internationalist in organization. Its period, roughly 1916–23, coincided with World War I and rejected capitalist logic, efficiency, and esthetics in favor of celebrating chaos, destruction, and: *antiart*." In *Dada Triumphs!*, the letters "DADA" stretch across a map of the world at the top of the photomontage. In an absurd, utopian gesture, Haussman uses the recognizable shapes of the continents and the authoritative power of naming these shapes to appropriate the entire Northern Hemisphere under the international empire of a tiny art movement. The title and territorial ambitions of the imagery suggest a call to revolution, but the revolution appears to have happened in the name of nonsense. Nevertheless, this act of imaginary conquest calls attention to the naming conventions of cartography and the way that a map makes a world.

Contemporary artist Nina Katchadourian works directly with printed maps in order to subvert and distort their iconography. In her cutout map series, she removes everything except the roads from maps of *Austria* (1997; Fig. 2), *Finland* (*Finland's Longest Road*, 1999), and the New York Subway system (*Handheld Subway*, 1996). These works leave a fragile, messy tangle of paper behind, disrupting both the legibility of the map and our tendency to conflate the map's symbols with reality. Rather than referring naturalistically to the roads it represents, the resulting object points back to its material origins as a designed, constructed, and printed artifact, subject to transformation and dissent.

Given the ubiquity of maps in educational settings, national boundaries alone provide rich iconic sources for artistic interrogation. In the case of the United States, there are numerous refigurings of the United States shape, as it is commonly understood on the geopolitical Mercator projection classroom map. For example, in 1991, Kim Dingle asked Las Vegas teenagers to draw their country, and then she painted the results (*United Shapes of America, Maps Drawn by Las Vegas Teenagers*; Fig. 3). Through their similar but slightly different bulges and appendages, the teenagers' drawings indicate the ubiquity of the country's shape in our imagination of place. At the same time, the multiplicity of suggested shapes challenges the notion of right and wrong representations of place.



**Figure 2** *Austria* (1997). Reproduced with permission from Nina Katchadourian.



**Figure 3** *United Shapes of America. Maps Drawn by Las Vegas Teenagers*, by Kim Dingle, 1991.

Likewise, in artist Minkee Bae's participatory workshops about *Uninformation Mapping*, attendees collect "bad" maps of Seoul, Korea, and use GIS software to combine them and map them back to precise coordinates. The result is a geographically correct but visually insane map and video (2017; [Fig. 4](#)).

There is also a rich history of artists who use the language of maps to chart emotional, interpersonal, or imaginary territories. These artists use the symbology of the road map or geopolitical map for metaphorical purposes; as methodology for locating the individual subject within vast psychological, interpersonal, territories; and/or to draw geographical parallels between the vastness of the Earth and the scope of the human psyche. As far back as 1772, there is a map of love (*New Map of the Land of Matrimony*, Artist Unknown; [Fig. 5](#)) that depicts the "Ocean of Love," "Bride's Bay," and the "Land of Matrimony." Contemporary works in this vein include 40 maps by Wim Delvoye, which allude to human anatomy and reference imaginary territories such as "Izuch," "See of FioXanilla," "Gnody," and "Gulf of Doj" (from *Atlas I*, 1992; [Fig. 6](#)).

Finally, there was an explosion in the late 19th and 20th centuries of cartographies of literary landscapes, such as Tolkien's Middle Earth and Faulkner's Yoknapatawpha County. In more recent years this has expanded to televisual landscapes, such as those found in *Game of Thrones*.





**Figure 4** *Uninformation Mapping & Video* by Minkee Bae and workshop participants, 2017.

### Agents and Actors: Artists Who Make Maps or Engage in Situated, Locational Activities in Order to Challenge the Status Quo or Change the World

In the 20th Century, particularly during the destruction, chaos, and geoscrumbling of World War I, avant-garde artists began not only to take on the iconography of the map but also to envision themselves in the roles of mapmakers, which is to say, capable of leveraging the authority of the map to change the shape of the world.

The Great War left millions dead, caused the disintegration of four empires, created new nations, such as Yugoslavia and Czechoslovakia, granted independence to others (the Baltic states, Canada, etc.), and brought back old nations, such as Poland. During this redrawing of national borders, Tristan Tzara, a central organizer of the Dada art movement, wrote that the world had gone insane and that the artist makes fun of insanity. Dada reinforced the project of the artistic avant-garde that had begun more than 50 years earlier: to envision new futures, political utopias, and radical spiritual alternatives to the existing order. In their professed ideals, avant-garde projects valorize the new, critique-established forms (of art making, politics, governance, culture, and class), while seeking to unify or transform art and “everyday life” in varying degrees. In their numerous manifestations since Dada, avant-garde projects have consistently been absorbed by the art establishment and upheld as examples of fine art while simultaneously being critiqued as symbolic, bourgeois, homogeneous attempts at social change and revolution.

The artists discussed as “agents and actors” pick up on the avant-garde project to leverage culture for social change. They use cartography from the standpoint of critical cartography, which is to say that they are aware of the power of maps and leverage that authority strategically in order to reshape the world from a social, political, or cultural standpoint.

Artists using maps in their work in the first half of the 20th Century often used them to critique or comment on war, inequality, and other geopolitical realities. For example, Dada artist Hannah Hoch made use of maps in her photomontage works that combined photos, illustration, and typography from mass-media sources. Hoch’s *Cut with the Kitchen Knife Dada through the Last Weimar Beer Belly Epoch of Germany* (1919–20; Fig. 7) inserts a cutout map—of European countries that planned to give women the right to vote—in the lower-right-hand corner of the work among icons of industrial modernization, leaders of the Weimar



**Figure 5** New Map of the Land of Matrimony, Artist Unknown, 1772. Courtesy of Map Collection, Yale University Library.



**Figure 6** Atlas I (detail). By Wim Delvoye (1992).





**Figure 7** Cut with the Kitchen Knife Dada through the Last Weimar Beer Belly Epoch of Germany by Hannah Hoch (1919–20).



**Figure 8** Europe After the Rain I by Max Ernst (1933).

Republic, and images of modern women, such as poets and athletes. Max Ernst's *Europe After the Rain I* (1933; **Fig. 8**) depicts an abstract European shape destroyed by war. Likewise, Picasso makes use of found maps and wallpaper in *Women at Their Toilette* (1938; **Fig. 9**), where a collaged woman is depicted wearing a dress made of continents. Critics have read this piece as an allegory for the world at the edge of World War II.

Contemporary figures continue this tradition of geopolitical commentary, critique, and recuperation. For example, Margaret Pearce created a map called *Coming Home to Indigenous Place Names in Canada* (2017), a large-scale printed map that shows only place names for the landscape contributed by First Nations, Métis, and Inuit communities. Lize Mogel's project, *The Privatization of War* (based on research by Dario Azzellini; **Fig. 9**), geographically maps relationships among more recent wars in Iraq and Colombia, the private military contractors hired to fight them, and the countries, often poor, from which these mercenaries are recruited. On this stark, black-and-white map, territory is represented by segmented cells occupied by corporations. The intent

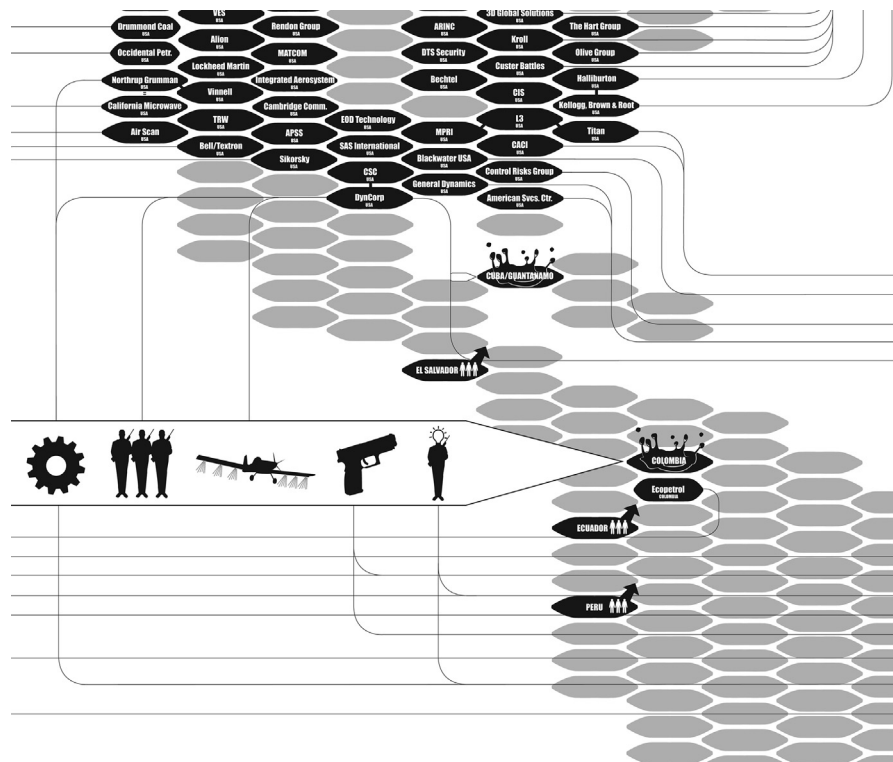


**Figure 9** Women at their Toilette by Pablo Picasso, 1938.

of the map is journalistic: to educate the public about the geographic flows of capital and labor involved in the United States–Iraq War (Fig. 10).

In a similar vein, Joyce Kozloff, who has a distinguished career using cartographic strategies in her artwork, created the project *Targets* (2000; Fig. 11) that consisted of a large, walk-in globe wallpapered with detailed paintings of US military maps of numerous “enemy” countries such as Sudan, Libya, and Cambodia. Not only does this work problematize cartography as a tool of conquest and domination, but *Targets* (see Fig. 11) also engages critically with a history of life-size globes at international exhibitions—from Wylde’s Globe at London’s Great Exhibition in 1851 to the Unisphere at the New York World’s Fair in 1964–65. Where the latter globes are meant to delight viewers with a visible world, Kozloff’s globe intimidates with its large-scale, all-encompassing threat of military violence.

But activist mappers of the last 100 years also use humor, inversion, and play to denaturalize cartography and to strategically provoke their audiences. The *Surrealist Map of the World* (1929; Fig. 12) depicts the world with many imperial powers missing (noticeably, the United States, France, Canada, and Great Britain). Easter Island is bigger than Australia, Paris belongs to Germany, and the Middle East is entirely absent. Joaquín Torres-García’s *América Invertida* (1943; Fig. 13) became an icon for the School of the South. It shows the South American continent inverted, with the southern tip at the top of the map and the equator at the bottom in



**Figure 10** The Privatization of War (2007). Reproduced with permission from Lize Mogel and Dario Azzellini.





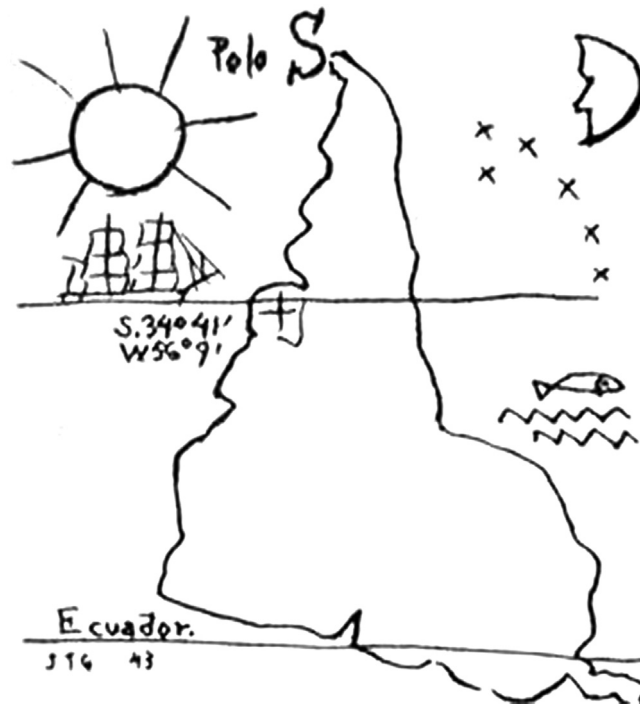
**Figure 11** Targets by Joyce Kozloff, 2000. Courtesy: DC Moore Gallery, New York.



**Figure 12** The *Surrealist Map of the World*, anonymous, 1929.

a gesture in defiance of North–South hierarchical relationships: “the North is now below,” declared Torres-García. *América Invertida* (see Fig. 13) set a course for numerous other artists, geographers, educators, and others to question the default orientation and projection of the world map, notably Buckminster Fuller’s *Dymaxion AirOcean World Map* and Jasper Johns’ 1967 painting of the same title.

Fluxus maps had an additional political twist in that they called on the viewer/reader to “complete” the mapmaking actions. Yoko Ono created several versions of *Map Piece* that consisted of instructions such as “Draw a map to get lost” (1964) and “Draw an imaginary map of your dreams” (2001). An early version in 1962 called on readers to draw an imaginary map and use it to navigate actual streets in an actual town. *Map Piece* resonates with the contemporaneous practices of the *Situationist Internationale* (SI). Drawing on this work in *You Are Not Here* (2006; [Fig. 14](#)), a collaborative project created by Thomas Duc, Kati London, Dan Phiffer, Andrew Schneider, Ran Tao, and Mushon Zer-Aviv, a guide leads tourists on walking audio tours of the war-torn Baghdad through the New York City streets. Participants use maps printed with New York streets on one side and Baghdad streets on the other. In this case, the Fluxus poetry of using one place to navigate another is infused with political urgency, that is to say, the



**Figure 13** Joaquín Torres-García's *América Invertida*, 1943.



**Figure 14** *You Are Not Here* by Thomas Duc, Kati London, Dan Phiffer, Andrew Schneider, Ran Tao, and Mushon Zer-Aviv, 2006. Participants use the double-sided map with Baghdad tourist locations on one side and New York City streets on the opposite as they make their way by foot to the Baghdad, Firdos Square audio tour site. Reproduced with permission from the creators.

need to understand experientially the scope of human destruction for an era of drone warfare, where images of remote wars resemble video-game consoles.

Even though they did not produce much in the way of maps, it was the SI—a group spawned by late-Surrealism that broke away from the French Lettrist movement—that arguably had the most significant influence on map practices to come in the next 50 years. Guy Debord, leader of the SI, coined the terms “psychogeography,” “*dérive*,” and “*détournement*” to denote critical spatial practices that could be put to use by an individual in encountering and changing the rationalized, urban environment and the “society of the spectacle.” Together with Asger Jorn, Debord created *The Naked City* (1957; Fig. 15), a map of Paris that envisioned its spaces in relation to psychogeographic energies, attractions, and repulsions. But the SI gave up creating art around 1962 and, thereafter, dedicated its energies to explicitly political projects, playing a key role in the French demonstrations of 1968. The key contribution from the SI, in relation to cartography, politics, and art, is that they set the stage for “mapping” as an activity that was “performed” through the individual human body in action in public spaces such as streets, parks, and plazas. Not only were artists taking on the role of mapmaker, but they were also taking on the roles of the surveyor, the photogrammetrist, and the data collectors, albeit in iconoclastic, idiosyncratic ways.

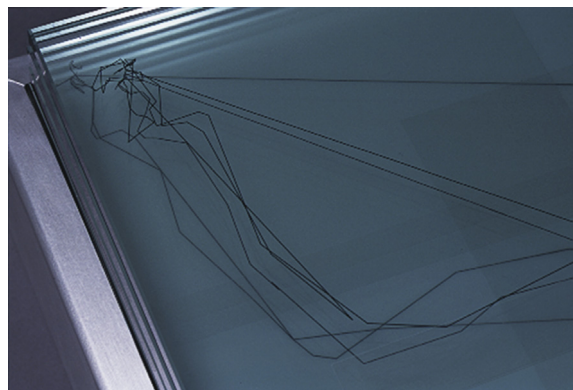


**Figure 15** *The Naked City* by Guy Debord and Asger Jorn, 1957.

While many of the performative, activist cartographic practices that have followed the SI have multiple influences and operated without knowledge of the movement, many of these can be conceptually linked to the original questions that the SI posed about the individual or collective body encountering social and political space. These projects range from meditative to the explicitly political and concern not only urban space, but also suburban, rural, and uninhabited landscapes. One trajectory that persists today is the impulse to map “the radically specific”—the very small, the hyperpersonal or the overlooked facets of the environment. Richard Long’s art practice (late-1960s to present), for example, consists of solitary, multiday walks in locations around the world. He considers the walks “sculptures” and documents them via short phrases, photographs, and gallery installations using natural materials that measure the individual’s temporal presence up against a vast landscape.

Likewise, in Teri Rueb’s *Choreography of Everyday Movement* (2001; Fig. 16), dancers carry global positioning system (GPS) receivers during the course of their everyday activities. Each person’s daily movement created a real-time drawing on the web. The artist later printed these drawings on acetate and stacked them between sheets of glass, overlaying 1 day on top of the next so viewers could see how a particular person’s daily itinerary through the city had changed. In recent years, this trajectory of the radically specific has led to year-long research projects to map a single city block in New York City (*One Block Radius* by Glowlab, 2004, Fig. 17), a map of pumpkins on porches in the neighborhood of Boylan Heights, NC (*Boylan Heights pumpkin map* by Denis Wood, 1982, Fig. 18), a map of silent places in London (*Silent London*, Simon Elvins, 2005, Fig. 19) and a map of swimming pools in Los Angeles (*Big Atlas of LA Pools*, Benedikt Groß & Joey Lee, 2013). In their own quiet way, these projects make a political case that challenges the authority, embedded value system, and perceived utility of the map by displacing our attention to things that are definitively small, everyday, and personal.

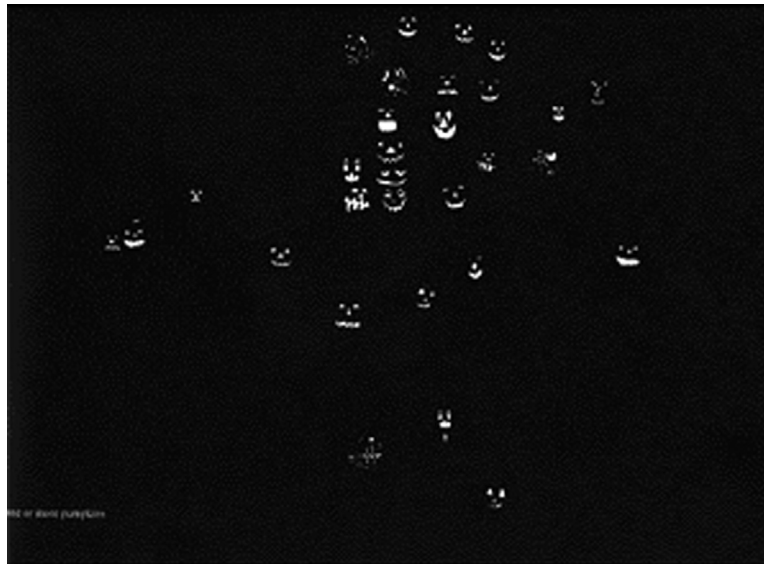
A second contemporary trajectory influenced by the Situationists might be called “experimental geography,” a term coined in 2002 by Trevor Paglen, artist and geographer and the title of an exhibition curated by Nato Thompson for the Independent Curators International (2008). With an explicitly social and political orientation, these projects pick up on the Situationist’s use of performance and on Fluxus strategies of participation to map the complex territories of a globalized, informationalized world. Paglen’s own project consists of a long-term, multifaceted investigation into the Central Investigation Agency (CIA)’s “black world”: a shadowy underworld of secret prisons, illegal torture, and classified operations (Fig. 20). Exhibitions of his work display artifacts



**Figure 16** *Choreography of Everyday Movement* (2001). Reproduced with permission from Teri Rueb.



**Figure 17** *One Block Radius* by Glowlab (2004). Reproduced with permission from Christina Ray.



**Figure 18** *Boylan Heights pumpkin map* (1982). Reproduced with permission from Denis Wood.



**Figure 19** *Silent London* (2005). Reproduced with permission from Simon Elvins.

collected on his investigative journeys around the world: signatures of people who do not exist at particular places, logos of false companies with fake addresses, and photos of planes that are not supposed to be where he finds them. Paglen's work challenges the notion, popularized since GoogleEarth, that the whole world is now visible, mappable, and knowable. He charts precisely those geographic places that are deliberately hidden from the public eye.

Other projects interrogate land use, ownership, inequality, borders, and diasporic notions of identity and belonging. In 2006, Lauren Rosenthal created a new atlas of the United States entitled *Political/Hydrological: A Watershed Remapping of the Contiguous*





**Figure 20** Control Tower (Area 52), Tonopah Test Range, NV (Distance ~20 miles), by Trevor Paglen, 2006.

*United States* (see Fig. 21) that reimagines state boundaries around freshwater systems. In this ecocentric vision, watershed divides act as territorial borders, allowing citizens to locate themselves within the river networks upon which they depend. In Emily Jacir's project *Where We Come From* (2001–03; Fig. 22) the Palestinian-American artist invited Palestinians living abroad, who had limited or no access to their homeland, "If I could do something for you, anywhere in Palestine, what would it be?" She then used her American passport to fulfill their requests, which ranged from playing soccer with children to placing flowers on a mother's grave. In a similar, more technological take on uniting families across borders, artist Alvaro Morales created virtual reality postcards for immigrants who could not travel home for legal, political, or financial reasons (*Family Reunions Project*, 2016). Other works intervene in the physical landscape. The art collective Postcommodity spent 8 years negotiating their project *Repellent Fence* (2015; Fig. 23) which placed 26 giant, yellow balloons along two miles of the US–Mexico border. The balloons used indigenous medicine colors and iconography as a way of challenging binary border policy and media portrayals that erase the lived experiences of indigenous people.



**Figure 21** Mississippi/Mobile-Tombigbee, Pascagoula, Pearl (a detail from "Political/Hydrological: A Watershed Remapping of the Contiguous United States") (2006). Reproduced with permission from Lauren Rosenthal.



Other contemporary art projects that fall in the category of experimental geography take the form of tools. The Institute for Applied Autonomy, for example, created *iSee* (2001–04; Fig. 24), a web-based software application that would chart “the path of least surveillance” through New York City. Presaging the proliferation of sensors in the “smart city”, users need only plug in the beginning and end coordinates of their journey through Manhattan, and the application would spit out a printable map that takes the traveler past the fewest number of surveillance cameras. Numerous artists, community groups, and activists have created collectively authored maps with free mapping tools provided by online platforms such as Google, Flickr, and OpenStreet-Map. These chart everything from Romantic places to Greenpeace expeditions to international graffiti sites. For example, An Xiao Mina and other scholars from the Civic Beat collective produced the *Animal Meme Map* (2016) that demonstrates how animal-related memes circulate globally.

Many action-oriented projects exist at the borders of cartography, less-directly referencing the visual language of maps but nonetheless consisting of collections of geographic places with a specific focus (a process of “mapping”). In *The Pansy Project* (2005–present; Fig. 25), Paul Harfleet plants pansies wherever people report being victims of homophobic verbal or physical abuse, a way of reclaiming both homophobic language (“pansy”) and the geographic site of trauma or abuse. Using his body, Alex Villar stages *Temporary Occupations* (2004; Fig. 26) of private spaces that border on public spaces in New York City. The video shows a series of clips of the artist gracefully jumping fences and slipping behind boundaries of private areas that are adjacent to the New York sidewalks, calling into question the purpose of these lines of demarcation. The project *In Conditions of Fresh Water* (2017; Fig. 27) by artist Torkwase Dyson and lawyer-geographer Danielle Purefoy was designed to interrogate environmental racism through oral histories, multimedia and visual art. The creators traveled through two counties in the Southern United States in a mobile solar-powered studio built by Dyson with recycled materials. Along the way, they collected stories of water and infrastructure, as seen through the lived experienced of black people. In many of the process-oriented mapping projects, public conversation,



**Figure 24** *iSee* by the Institute for Applied Autonomy, 2001–04. Reproduced with permission from John Henry, Institute of Applied Autonomy.



**Figure 25** *The Pansy Project* (2005 to present). Reproduced with permission from Paul Harfleet.





**Figure 26** *Temporary Occupations* (2004). Reproduced with permission from Alex Villar.



**Figure 27** *In Conditions of Fresh Water* (2017). Reproduced with permission from Torkwase Dyson and Danielle Purefoy.

dialog, and community building are inseparable from the art. Indeed, many of these projects use anomalous, idiosyncratic actions (planting pansies, jumping fences, hosting conversations in a homemade mobile studio, etc.) in order to provoke public engagement, raise awareness about the larger issues at stake, and, ultimately, catalyze transformative, collective action.

### Information Mappers: Artists Who Use Cartographic Metaphors to Visualize Informational Territories Such as the Internet or the Human Genome

The 20th Century witnessed many technological and social changes as people developed new ways of sensing the world, communicating with each other, killing each other, and moving through space. These changes helped spawn what might be called “informational territories”—virtual, invisible, infinitely small or large, multidimensional, time-based, and even cultural and political spaces. The Internet, the stock market, the human genome, the electromagnetic spectrum, and global corporate power all serve as data landscapes that can be mined, visualized, and experienced in different ways. The 21st Century has seen a rise in data visualization—the graphic representation of quantitative information. While data visualization has a long history, the cartographic metaphor—the idea of data as space and creating visual relationships from nonvisual phenomena as mapping—came later and has been accentuated and popularized in recent years.

What the information mappers have in common is that they use cartographic terminology, typically reserved for discussing the surface of the Earth, and apply it metaphorically to these informational frontiers. An operative principle, descended from information theory, cybernetics, and popular computing culture, is that all the world can be treated as data, ready for selecting, categorizing, visualizing, and revisualizing in infinite ways. This principle, of course, opens into a new politics of data visualization which looks very similar to the present and past politics of the geographic map: Whose data are mapped? Whose data are left out? Who makes the map, for whom, and for what purpose?

Some projects that map informational worlds overlay data on physical landscapes and are clearly linked to cartographic concerns in familiar ways. For example, Ingo Günther's long-term project *World Processor* (1988–2005) is a series of over 300 globes that



represent different views of the Earth with datasets artfully overlaid on the surface. In the case of each globe, the dataset is selected carefully to visualize the world with a different intent. For example, *Landlocked Nations* shows only those countries that do not border an ocean or sea, and the wall text discusses the economic and social impact of the absence of a body of water. Other datasets include life expectancy, the world according to Chinese geography, and *Statistical Challenges* (Fig. 28), which maps elusive, invisible qualities, such as "Happiness," "Jokes created per year," and "Intensity of Dreams," onto a blank globe with no geopolitical lines. Each of these datasets has an associated globe, which is lit from within.

Many projects are entirely dissociated from geographic conceptions of physical space and are preoccupied with visualizing other spaces. In *Genome Valence* (2000; Fig. 29), Ben Frye maps genetic data into a delicate, spherical computer graphic that one can search and zoom through. Technically, *Genome Valence* is a visualization of the BLAST algorithm, the most common way that scientists have of searching through genomic data to see if a particular sequence of letters is found in the genes of other organisms. Fry calls this series of work "genomic cartography."

Artists have also mapped distributed global power as its own kind of informational space. In *They Rule* (2001; Fig. 30), Josh On created an interactive online application that allows the user to map the interlocking relationships between individuals who sit on boards of different global corporations. Using publicly available data gathered from Securities and Exchange Commission (SEC)



**Figure 28** Statistical Challenges, from the World Processor series by Ingo Günther, 1988–2005.



**Figure 29** Genome Valence by Ben Fry, 2000.

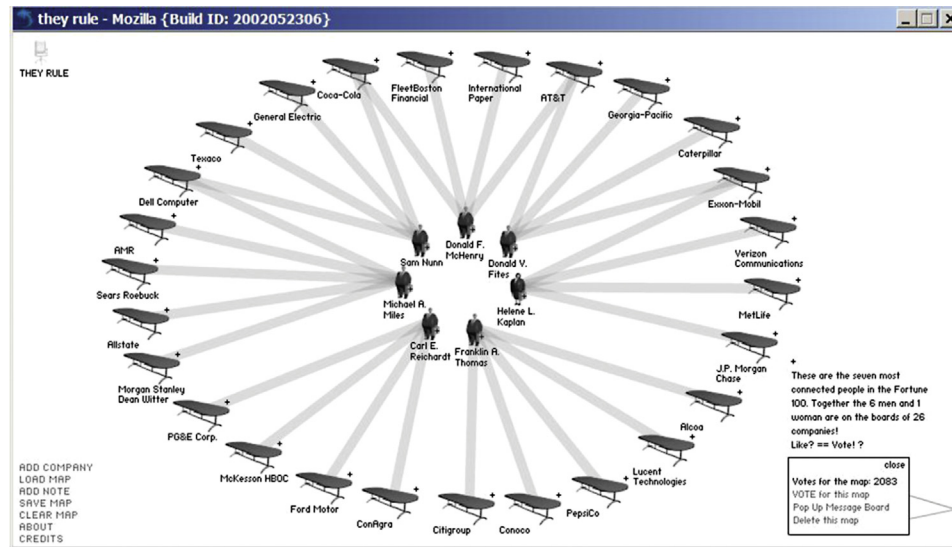


Figure 30 One of the user-created network diagrams from *They Rule* by Josh On, 2001.

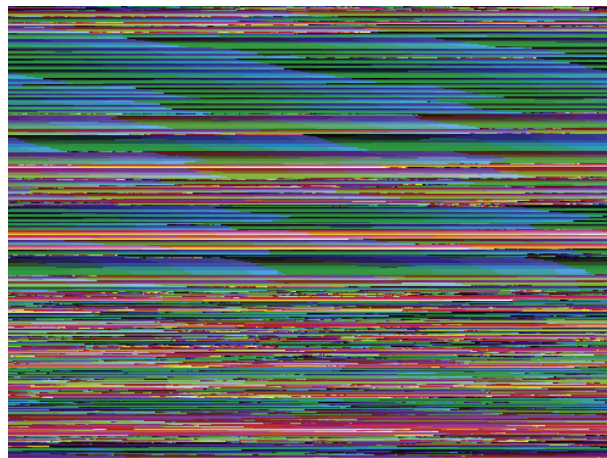


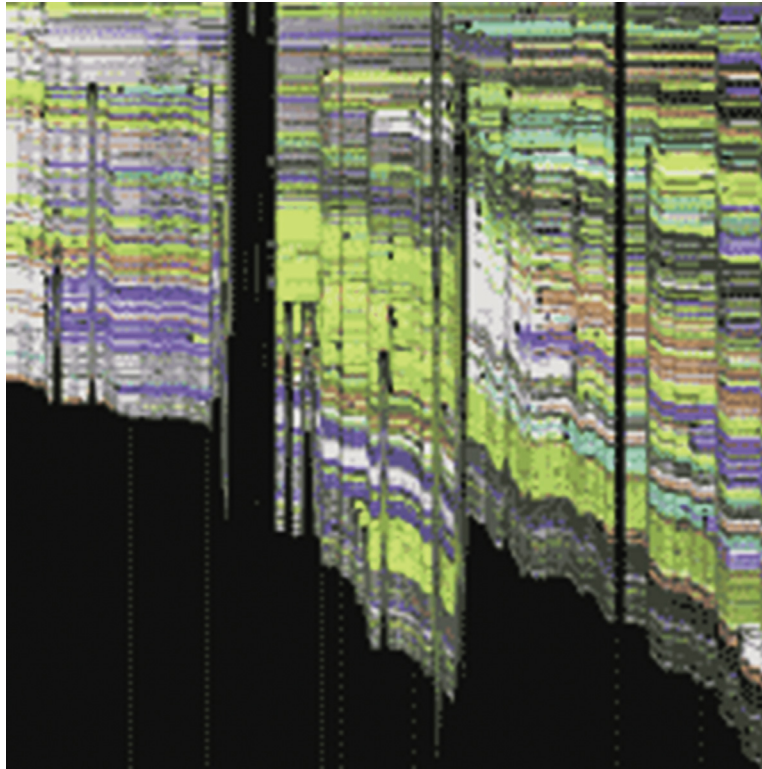
Figure 31 *1:1 Interface: Every (IP)*, by Lisa Jevbratt, 1999. Source: [http://jevbratt.com/1 to 1](http://jevbratt.com/1%20to%201).

filings and corporate websites, the application demonstrates the unsurprising overlap among corporate boards of directors and raises questions about the ruling power of an elite class of citizens. This echoes earlier work by artist Mark Lombardi to trace global money flows and corporate malfeasance with precise network diagrams.

Since the mid-1990s and the introduction of cyberspace into popular imagination, the Internet has inspired numerous artistic visualizations. Inspired by a Jorge Luis Borges quote, in *1:1 Interface: Every* (1999; Fig. 31), Lisa Jevbratt visualizes the dataset of Internet protocol (IP) addresses on the Internet (everything from 000.000.000.000 to 255.255.255.255) color coded as to whether or not they are occupied by an actual website. The results of this process are output as an enormous, billboard-sized print, which is both physically beautiful and overwhelming. Fernanda Viégas and Martin Wattenberg created time-based visualizations of single entries in Wikipedia, the collective encyclopedia project, to help understand some of the dynamics of editing and vandalism (*History Flow*, 2003, Fig. 32).

Finally, the stock market, as data source, has been an inspiration to a number of artists. Andreas Nicolas Fischer created *Indizes* (2008; Fig. 33) which combined and visualized three prominent stock market indices during the crash of 2008. The work is presented as a physical sculpture made from plywood and paint.

Though these data-scapes of cyberspace, genes, stock market, and corporate power do not correspond to physical geography, they borrow spatial metaphors to represent multilayered informational phenomena. With the proliferation of data, it is probable that artists will continue to employ mapping metaphors to engage with complexity and power in the age of artificial intelligence.



**Figure 32** History Flow by Fernanda Viégas and Martin Wattenberg, 2003.



**Figure 33** *Indizes* by Andreas Nicolas Fischer, 2008.

## Conclusion

Though art and cartography have always been in dialog, the last 125 years constitute a veritable explosion of artwork that takes on maps and mapping in order to critique, subvert, reimagine, or simply envision geographic and informational territories. There are three loose groupings of important mapping impulses that have characterized the artistic appropriation of cartographic strategies, both literally and metaphorically, from the early 20th Century to present times: symbol saboteurs, agents and actors, and information mappers.

Both the Enlightenment project of cartography as a way of accessing fundamental truths about reality and the more recent critical cartographic project in which visual representations are constructed in order to transform the world remain powerful inspiration to artists. Cartography—the idea that one can, should, or must map the world in particular ways—retains an ever-growing hold on the artistic imagination. This is especially the case in a world characterized by complexity, inequality, war, globalization, and informationalization. The idea of place is complicated and maps (critical, contestational, hacked, technological, and imaginary) are more essential than ever.

**See Also:** Critical Cartography; Decolonization; Maps and the State; Psychogeography; Visuality; Walking Methodologies.

## Further Reading

- Bender, S., 2001. The World According to the Newest and Most Exact Observations: Mapping Art + Science. Tang Teaching Museum.
- Cosgrove, D.E., 2003. Apollo's Eye: A Cartographic Genealogy of the Earth in the Western Imagination. JHU Press.
- Harmon, K., 2004. You Are Here: Personal Geographies and Other Maps of the Imagination. Princeton Architectural Press.
- Harmon, K., Clemans, G., 2009. The Map as Art: Contemporary Artists Explore Cartography. Princeton Architectural Press.
- Kollektiv Orangotango+ (Ed.), 2018. This Is Not an Atlas: A Global Collection of Counter-cartographies.
- Krygier, J., Wood, D. (Eds.), 2006. Special Issue on Art and Mapping. Cartographic Perspectives, (53).
- Mesquita, A.L., 2013. Mapas dissidentes: proposições sobre um mundo em crise (1960–2010) (Doctoral dissertation). Universidade de São Paulo.
- Mogel, L., Bhagat, A., 2008. An Atlas of Radical Cartography. Journal of Aesthetics & Protest Press, Los Angeles, CA, USA.
- O'Rourke, K., 2013. Walking and Mapping: Artists as Cartographers. MIT Press.
- Sussman, E., 1989. On the Passage of a Few People through a rather Brief Moment in Time the Situationist International, pp. 1957–1972.
- Thompson, N., 2008. Experimental Geography: Radical Approaches to Landscape, Cartography, and Urbanism. Melville House.
- Watson, R., 2009. Mapping and contemporary art. Cartogr. J. 46 (4), 293–307.
- Wood, D., 2010. Rethinking the Power of Maps. Guilford Press.
- Woodward, D., 1987. Art and Cartography: Six Historical Essays. University of Chicago Press.

## Relevant Websites

- <https://artcarto.wordpress.com/about/> An on-going project from the International Cartographic Association to bring together geographers, cartographers and artists.
- <https://makingmaps.net/2014/05/12/map-art-exhibitions-2012-13/Cartography> scholar Denis Wood has comprehensive lists of map art exhibitions from the early 2010s on his website *Making Maps*, co-run with John Krygier.
- <https://www.moma.org/calendar/exhibitions/436> Web presentation of Mapping, a 1994 exhibition by Robert Storr at the Museum of Modern Art in New York.
- <https://flowingdata.com/category/visualization/artistic-visualization/> Data art featured by the *Flowing Data* blog. Not all data art is related to cartography, but all of it involves some process of mapping information to materials and design decisions.