INTERVIEW WITH
Sarah Williams

by **Jeremy Hight**, online via email correspondence, March 2011

Re-Drawing Boundaries, Leonardo Electronic Almanac New Media Exhibition
Curator: Jeremy Hight
Senior Curators: Lanfranco Aceti and Christiane Paul

What are some of the primary dystopic and utopic tropes and/or concerns in the popular media about things like Google Maps, Geo-Location, GIS, Augmented Reality and mapping layers and mapping as a whole? What are your thoughts on them?

Well that's certainly a large question; there are so many different vantage points on these ideas in the popular media. It's certainly a hot topic. I think the ubiquitous presence of maps and mapping tools on the internet has allowed us all to become map reader / interpreters. Overall, I think it has helped us to see the geographic relationships between phenomena that we might not have otherwise seen. In this way, the presence and popularity of maps has been important, because it has allowed everyone to contextualize the spatial relationships in the world they live in and see things they never saw before. They are able to understand a relationship that might have been obfuscated.

This constant vantage point and ability to get and

map data in real time can be alarming. There are certainly concerns related to privacy and tracking and using data to map our movements when we didn't intend our data to be used that way. The recent news regarding the map log in Apple's iPhone is certainly disconcerting – what rights do people have over their own data is certainly a hot topic.

I think interest in GIS, mapping and the new data enthusiasm we have seen in the last few years is both good and bad. It's exciting that more people are interested in using maps and data to understand the spatial relationships in our world, but I worry about people's ability to critic and interpret the new data they have access to. I wonder if new "information" interpreters understand that data comes with biases and that depending on where they received their information from it could only represent one community instead of the whole. In other words there is a lot of potential to do good things with data, but there is also a lot of potential to do bad – the "information interpreter" is the key to proper use.

Is GIS getting its proper due in this mass cartographic moment? What are we seeing happening with mapping and awareness of cartography as more and more map augmentations and map based tools become ubiquitous?

I am not sure what you mean by is GIS getting its "proper due". GIS or Geographic Information Systems are spatial databases that allow us to make maps as well as develop and ask spatial questions – I certainly think it is being used this way and will continue to grow. I am not sure that it needs to be popularized in media outlets, if that is what you mean by "proper due". Cartographers, Geographers, Social Scientists, and artists are using it to make maps. These results are what is important not the tool itself. I think if anything, the presence of Google Earth and other map based web software has made the use of GIS more popular. GIS is different from a lot of the free web based map software as it has the ability to ask complicated spatial statistical questions. This type of use needs a user base that understands how to ask and interpret these questions.

Which of your projects were the most interesting to work on?

Another hard question to answer, all of the projects in the show had different challenges which made them all interesting but in very different ways.

The Million Dollar Blocks Project was really interesting as it provided a compelling way to expose the data about how much money we spend on the prison system in the US. It was interesting to be part of the project that had a serious impact on the Justice Reinvestment Act, but was also recognized for its compelling visuals.

The Beijing Air Tracks project was exciting because it allowed me to develop and build a measurement device. It was great fun to develop a device that could be highly mobile but also send data back to our server allowing us to visualize air quality in real time. The challenges were interesting to overcome and it was exciting to create a device that could essentially allow anyone to measure their air quality. What was compelling about the "Geography of Buzz" project was the ability to mine an online database (Getty Photo database) to tell us something about the world we live in. With thousands of photos being taken all over the world it was interesting to see that there was a spatial pattern that emerged.

What are you working on right now?

I am just finishing a project about noise complaints in New York City for the Guggenheim. The interactive map allows you to explore noise complaints that come in through New York City's non-emergency call system. The project is really fun as it actually allows you to see what the caller said. The voices of New Yorkers ring through as you explore the complaint database. It also provides a way for people to access this online data source.

I am also working with the Rockefeller Foundation to understand how Data Visualization can have an

effect on policy. We have just finished a paper on this topic and we are really excited about it.
We have also been working on a number of crowd sourcing / data visualization project that are funded through various sources.

What historical precedents do you see influencing your aesthetics? Is it more a project by project fluid and organic process?

I would say we definitely have more of a project by project organic process. The problem you are trying to solve helps you contextualize the design of the map you are going to make. I certainly am influenced by my early background in remote sensing and raster based mapping techniques, but I don't limit my representational techniques to those tools. For example in the "Geography of Buzz" maps we realized a lot of our data was showing where the celebrities or stars sell products. So we wanted our maps to look like constellations.

Are distinctions such as "Mapping Art": or "Creative Mapping" really that distinct from each other?

Hmm..If this was a quiz I would say.. "Mapping Art" is art that uses or incorporates maps, while "Creative Mapping" are maps that might show statistical or scientific information in a creative/artist way.

What most fascinated/fascinates you about maps and mapping and what is possible?

Maps are fun! I think the most fascinating aspect of maps is their ability to quickly show phenomenon spatially that we might not have otherwise seen. They are great tools for seeing the world we live in an understanding and exploring it on a new level. I think that is why people love maps. They are always fascinated by seeing the places they live in a new way.

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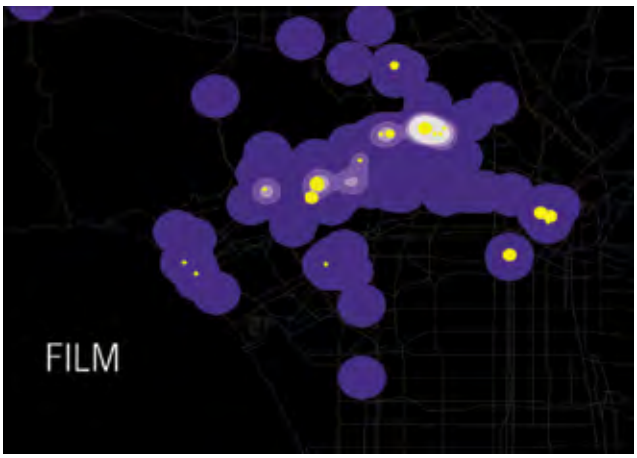
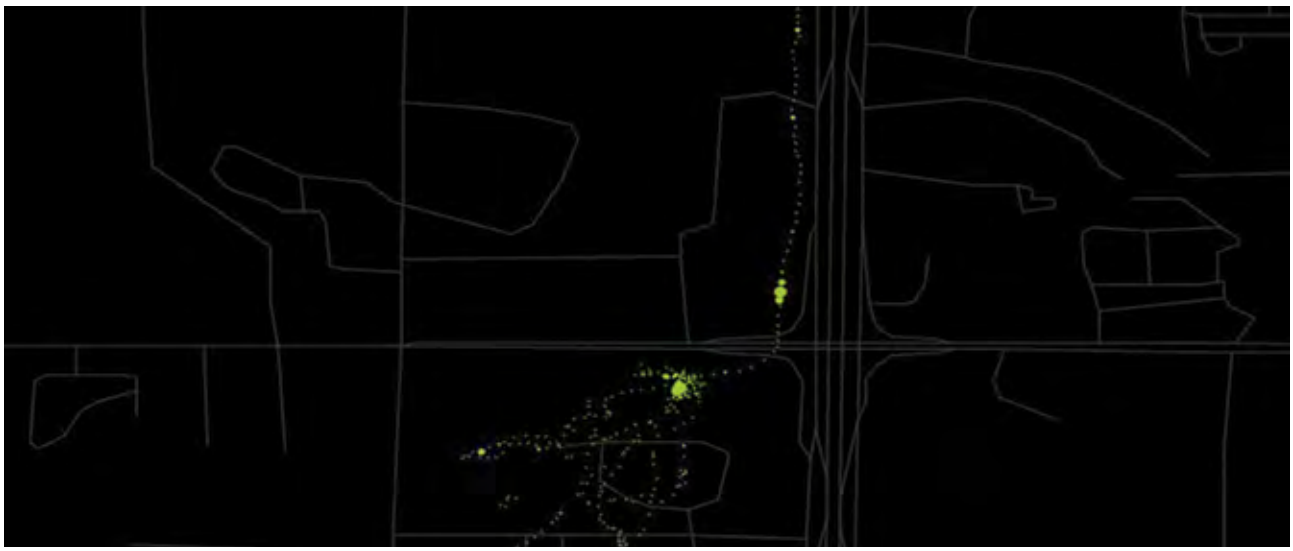


The Geography of Buzz, 2008, Sarah Williams. All images and video material are the copyright of the artist and cannot be used or altered in any way without the express consent of the artist.

The Geography of Buzz

Research about cultural industries argues that the arts economy helps to make cities more dynamic places, as the industry both supports and is supported by other advanced service sectors in the city. The reciprocity between these economic sectors helps to establish places with rich cultural environments that benefit all industrial sectors. While this argument has been made largely through ethnographic studies and interviews, attempts to spatially analyze these dynamics have been limited by data scale and to certain areas of the industry production chain (e.g. firm location and worker residence). This is because much of the arts and culture industry data available establishes where goods are produced, rather than informal spaces, where much of the industry transactions actually occur. It is these social settings, where the arts industry rubs up against its colleagues and those whom are interested in consuming their products that sets the economic pace of the industry.

In the summer of 2008, the Spatial Information Design Lab set out to analyze the unique spatial and social dynamics that are created by the arts and entertainment industries in New York City and Los Angeles. Working with Elizabeth Currid from the University of Southern California, the lab used a database of arts and entertainment event photography by Getty Images as a proxy for social interaction in geographical space. Because photographs taken by Getty are tagged with location information, they are transformed into data with an unexpectedly powerful spatial component. The results of the research showed that both Los Angeles and New York have unique “event geographies”, or locations of interest to Getty photographers that reappear at a statistically high rate than the rest of the city. While each separate arts industry showed some tendencies toward specific geographic locations the events geographies of all the industries are largely held in very similar locations, suggesting that event geographies appear to be closely linked to iconic symbols in both cities.



Beijing Air Tracks, 2008, Sarah Williams. All images and video material are the copyright of the artist and cannot be used or altered in any way without the express consent of the artist.

Beijing Air Tracks

The causes and effects of air pollution comprise a complicated chemical recipe that is all too easily reduced to superficial observation (the color of the sky) or an abstract statistical reading from static instruments. In reality, the total experience of a city's air quality is a combination of highly localized as well as more regional effects that shift in intensity as one moves through an urban landscape.

In the months leading up to the 2008 Summer Olympics, Beijing's poor air quality was a major source of concern as the host city struggled to fulfill its commitment to provide the best possible environment for athletes and visitors. With air that is typically two to three times dirtier than that of most Western cities, Beijing was under tremendous pressure to clear up its smoggy skies before coming under global scrutiny. Despite claims made by Chinese authorities that fog (not smog) was responsible for the low levels of visibility around the city, a the government acknowledged the problem by putting into place a series of initiatives to dramatically curb pollution and visibly improve Beijing's air quality. These include the removal of half of the city's 3.3 million cars from the road on alternate days; a temporary ban on 300,000 heavily polluting trucks; the phasing out of older buses and taxis in favor of newer models that use compressed natural gas; higher emissions standards for new cars; the temporary shuttering of dozens of steel, chemical, and cement factories and power plants; doubling the number of subway lines; the pause in all construction activities throughout the city more than two weeks ahead of the games; and the addition of urban parks, or "greenbelts" throughout the city.

Beijing Air Tracks is a project intended to combine air sensing with spatial dynamics to accurately assess the air quality of Olympic host city. In collaboration with the Associated Press, SIDL assigned journalists with handheld aerosol monitoring devices and GPS units which tracked both the air quality (particulate matter and CO2) and the journalists' geographic location as they moved throughout the city in the course of their daily reporting. With unrivaled access to the Olympic venues, journalists gathered a month's worth of data which was then assessed as a time series in comparison to average measurements in New York City and London. The results show the image of a city reacting to positive localized change while struggling with larger patterns of regional pollution, thus reflecting the woeful irrelevance of administrative boundaries to environmental problems.

Million Dollar Blocks, 2005, Sarah Williams. All images and video material are the copyright of the artist and cannot be used or altered in any way without the express consent of the artist.

Million Dollar Blocks

The United States currently has more than 2 million people locked up in jails and prisons. A disproportionate number of them come from a very few neighborhoods in the country's biggest cities. In many places the concentration is so dense that states are spending in excess of a million dollars a year to incarcerate the residents of single city blocks. When these people are released and reenter their communities, roughly forty percent do not stay more than three years before they are re-incarcerated.

Using rarely accessible data from the criminal justice system, the Spatial Information Design Lab and the Justice Mapping Center have created maps of these "million dollar blocks" and of the city-prison-city-prison migration flow for five of the nation's cities. The maps suggest that the criminal justice system has become the predominant government institution in these communities and that public investment in this system has resulted in significant costs to other elements of our civic infrastructure – education, housing, health, and family. Prisons and jails form the distant exostructure of many American cities today.

The project continues to present ongoing work on criminal justice statistics to make visible the geography of incarceration and return in New York, Phoenix, New Orleans, and Wichita, prompting new ways of understanding the spatial dimension of an area of public policy with profound implications for American cities. Million Dollar Blocks is the first of a series of projects to be undertaken by SIDL, as part of a two year research and development project on Graphical Innovation in Justice Mapping. The project, generously supported by the JEHT Foundation and by the Open Society Institute activates a partnership between the Justice Mapping Center (JMC), the JFA Institute (JFA), and the Columbia University Graduate School of Architecture, Planning & Preservation (GSAPP).

This unique partnership enables the Justice Mapping Center to refine analytical and graphical techniques within the research and teaching environment of the Spatial Information Design Lab, which can then be applied to real life policy initiatives through work with the JFA Institute. Reciprocally, input from state and local leaders is then brought back to the Design Lab for further development. This feedback loop is a valuable tool resulting in new methods of spatial analyses and ways of visually presenting them that reveal previously unseen dimensions of criminal justice and related government policies in states across the United States.

Artist's statement

Trained early on as a Geographer, I think some of the things that influenced me the most were discussions on how maps are used. Dennis Wood's book the "Power of Maps" had a huge influenceon the way I think about data and representing it. Dennis Wood reminds us that maps are powerful tools that present information and that representation can be easily skewed. It reminds us that maps might not always be factual but we often read them that way. As a map maker or cartographer, it is important that you can pick up on these techniques as well as make representations that are as fair as possible. There are so many ways we can use maps as a tool for understand the world we live in. I think there are endless possibilities for developing maps. I think the biggest area to be explored is the current data explosion. Eighty percent of the world's data is held privately; how can that data be explored and mapped?

Bio

Sarah Williams is currently the Director of Columbia University's Spatial Information Design Lab (SIDL) where her research has focused on the intersection between media, design, and urban planning. The Spatial Information Design Lab (SIDL) which Williams' directs uses innovative mapping and visualization techniques to highlight urban issues. The work of SIDL has been widely exhibited and written about including recent shows at the Museum of Modern Art, New York (MoMA) and the Venice Biennale. The work of the Lab has been featured in the New York Times, Atlantic Monthly, and Associated Press. Before becoming the Director of the Spatial Information Design Lab, Williams was at MIT where she started the MIT Geographic Information System (GIS) Laboratory and was a researcher at MIT's SENSEable City Laboratory (a joint research lab established between MIT's Media Lab and the Department of Urban Studies and Planning). Williams has a background in Remote Sensing, GIS and environmental monitoring and worked as a programmer for one of the first desktop Remote Sensing programs (IDRISI) . Williams' is trained as a Geographer, Landscape/Urban Designer, and Urban Planner – with a Masters degree from MIT's in City Planning and Urban Design and a Bachelor's degree in Geography and History from Clark University. Williams is also currently faculty at Columbia Graduate School of Architecture Planning and Preservation where she teaches Intro to GIS, Advanced GIS, Crowd Sourced City and Spatial Data Visualization. ■