Fig. 8. Problems of the Boston image
senseable city lab:...
SPATIAL INFORMATION DESIGN LAB
spatial data traces:
+ digital information registered by place that are left behind as we interact with the digital environment.
maps or data are used to **expose** an **issue** make or 
make a statement.
MILLION
DOLLAR
BLOCKS
PRISON POPULATION IN THE UNITED STATES ROSE FROM: 200,000 IN 1970 TO UPWARDS OF 2 MILLION PEOPLE IN 2000
ADDED UP BLOCK BY BLOCK, IT COST \$359 MILLION DOLLARS TO IMPRISON PEOPLE FROM BROOKLYN EACH YEAR.
COMMUNITY DISTRICT 16 HAS 3.5% OF BROOKLYN’S POPULATION, BUT 8.5% OF ITS PRISON ADMISSIONS.
FROM A DEMOGRAPHIC VIEW, THE SPENDING FACILITATES A MASS MIGRATION OF PEOPLE TO PRISON, 95% OF WHOM EVENTUALLY RETURN HOME.
IT COST $11,839,665 TO INCARCERATE PEOPLE FROM THESE 11 BLOCKS IN 2003. WE CALL THESE MILLION DOLLAR BLOCKS.
ON A FINANCIAL SCALE, PRISON IS BECOMING THE PREDOMINANT GOVERNING INSTITUTION IN THE NEIGHBORHOOD.
But for lack of investment in resettlement, up to 40% of those who come home are eventually returned to prison.
WHAT IF MORE RESOURCES WERE ORGANIZED AROUND SETTLEMENT THAN AROUND DISPLACEMENT. HOW WOULD THESE PARTS OF THE CITY LOOK DIFFERENT?
Dynamic Franchise Web

The group’s analysis found this quadrant to be a version of the status quo, and while many examples of these criminology institutions do exist and might be improved, the justice reinvestment model provided a new way of thinking about existing models. To this end, one of the mixed use streets stood out on the map which, according to the residents and community developers at the table, provided a successful model of what might be expanded in Brownsville.

The group extended the mixed-use corridor vertically through Brownsville, and suggested a series of hybrid service combinations. The result is a web of services spreading itself throughout the area with some very creative juxtapositions: workforce training with economic development, domestic violence shelter with a liquor store, political representation with public housing, markets with Legal Aid defenders, Children and Family Services with education and counseling, Child Care with Work Release programs, High School with Medical and Child Care Services, small business development with bail bonds.

This is a scenario in which treatment is considered as positive development and everyday business in the community. Rather than approaching these services as aberrations in the community, and hence associating service delivery with punishment, the hybrids encourage residents to use social services by associating them with their day-to-day lives and with ordinary social interactions.
advocacy

maps or data are used to expose an issue make or

make a statement.
CAN THE OLYMPICS BE A WAY TO EXPOSE AIR QUALITY ISSUE IN CHINA?
HOW CAN WE EXPOSE AIR QUALITY CONDITIONS?

HOW CAN WE DEVELOP A DEVICE/SENSOR THAT WOULD ALLOW US TO MEASURE AIR QUALITY?

HOW CAN WE GAIN ACCESS TO VENUES AND TELL THE STORY TO THE LARGEST AUDIENCE?
SMOG
**PM**

Fine particulate matter is a broad name given to particles of liquids and solids that pollute the air. PM 10 can be breathed deeply into your lungs and will stay there, causing health problems. PM 10 can stay in the air longer and travel farther than larger particles.

**O₃**

Ground Level Ozone. Ground-level ozone is not emitted directly into the air, but forms when nitrogen oxide and volatile organic compounds (VOCs) from vehicle exhaust, factory emissions and other sources react with sunlight. It’s called the “bad ozone” because if you breathe it in, it can cause health problems.

**NO₂**

Nitrogen oxide is a reddish-brown gas that smells foul. Contributes to Acid Rain, has effects on water quality.

**SO₂**

Sulphur dioxide, combines with volatile organic chemicals (VOCs) and sunlight, creates ground-level...

**CO**

Carbon monoxide is an odorless, tasteless, colorless gas. At high levels, carbon monoxide
+ Tangshan, one of China’s busiest steel centers, about 90 miles from Beijing, order 267 businesses to suspend operations.

+ factories shutdowns were widespread among the region. Including closures in Hebei and Tianjin

+ over 3.3 million cars were removed from city streets on alternate days traffic regulations.
MOBILE
Particulate matter measurements in Beijing

Particulate matter, or PM10, are inhalable coarse particles, with diameters smaller than 10 micrometers. The source of PM10 can be natural or man-made. Man-made causes include the burning of fossil fuels and construction projects. High concentration levels of PM10 in the air are a cause for concern because these inhalable particles can settle in the bronchi and lungs and cause health problems.

8/10/2008 Olympic Green mid-afternoon average  
604 micrograms per cubic meter

Olympic Green mid-July average  
326 micrograms per cubic meter

London midafternoon average  
41 micrograms per cubic meter

New York City (City Hall) midafternoon average  
24 micrograms per cubic meter

WHO air quality target for developing countries  
50 micrograms per cubic meter

HOW AP GOT THE RESULTS: The tests are being conducted with a handheld aerosol monitoring system and readings are taken daily in the midafternoon near the National Stadium (Bird's Nest) over a two-hour period. The air samples are measured in 15-second intervals. The handheld monitoring device can measure a range of 0 to 2,500 micrograms/cubic meter. The factory calibration was performed on May 23, 2008, using ISO 12103 Pt A2 fine test dust. The margin of error was less than 15 percent. The photos show the Bird's Nest at the time of each day's testing.
Measured Improvement

The Chinese government's effort to improve Beijing's air quality appears to have worked to reduce carbon monoxide emissions, based on preliminary data collected by Columbia University's Spatial Information Design Lab. In a series of measurements taken along the Olympic marathon route, carbon monoxide levels dropped an average of 40 percent after the city put in alternate-day driving restrictions, which reduced traffic by only 30 percent or even less. Unfortunately, other components of the city's air pollution, like particulate matter, are still at high levels, according to Sarah Williams, director of the lab.

One of the main reasons for Beijing's high carbon monoxide levels is the large number of cars idling in traffic.

This neighborhood still registered high levels after the restrictions because there was still traffic congestion.

Most of the improved areas, like this one, saw dramatically fewer cars than before the restrictions.

Levels were measured around midday in a few locations; in some, the routes could not be exactly followed because of obstructions, like traffic lights.

Source: Sarah Williams and Denise Brader, Spatial Information Design Lab, Columbia University.
RESPONSE
social/ cultural geography maps expose geographic conditions that allow for different social, economic, environmental, or cultural processes.
THE GEOGRAPHY OF BUZZ:
Visualizing Cultural Space In New York and Los Angeles
How is buzz important to the social scene of cultural industries.

How does density of events effect the social scene of the arts and culture industry
What data set can tell us about the social interactions of an industry: Getty Images.
<table>
<thead>
<tr>
<th>EVENTNAME</th>
<th>IMAGES</th>
<th>LOCATION X</th>
<th>Y</th>
<th>ADDRESS</th>
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ANALYZE
fashion events
music events
film events
television events
magnet events
art events
LOS ANGELES
FILM EVENT DENSITY
+ FILM EVENT IMAGES BY QUANTITY
SPATIAL ANALYSIS

Getis-Ord (G*i): Hot-Spot Statistic
LOS ANGELES
MAGNET EVENT DENSITY + MAGNET EVENT IMAGES BY QUANTITY
NEW YORK CITY
MAGNET EVENT DENSITY
+
MAGNET EVENT IMAGES
BY QUANTITY

Event density per square mile*

<p>| | | | | |</p>
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<td>17</td>
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</table>

Number of photographs taken per event*

|<20| 50| 100| 200| >210|

*Break points calculated with standard deviation
EVENT ENCLAVES
Where are they? – The Usual Suspects

Los Angeles
- SUNSET BLVD
- HOLLYWOOD
- BEVERLY HILLS

New York City
- 5th AVE
- MIDTOWN WEST
- WEST VILLAGE/ CHELSEA
EVENT ENCLAVES

What are they?

A-typical cultural urban geography: Times Square, NYC

Typical cultural urban geography: Meatpacking District, NYC
EVENT ENCLAVES

Why are they there?

HIGH-PROFILE VENUE

OTHER VENUE

Hollywood Blvd

Highland Ave

OTHER VENUE

OTHER VENUE
NEW YORK CITY
THEATER EVENT DENSITY
+
THEATER EVENT IMAGES
BY QUANTITY

Event density per square mile*
3  84  167  250  740

Number of photographs taken per event*

<16  50  100  150  >215

*Break points calculated with standard deviation
LOS ANGELES
FILM EVENT DENSITY
+ FILM EVENT IMAGES BY QUANTITY
FIVE BROAD FINDINGS

1. The social consumption of art and culture is not spatially random.

2. There is a reinforcing, recursive mechanism that makes particular places the center of social activity.

3. “Event enclaves” demonstrate homogeneous spatial patterns across all cultural industries.

4. Iconic infrastructure and historically significant sites may play a key role in the cultivation of “place branding”.

5. The clustering of the social milieu also implies a clustering of the media.
flickr

come out and play

cell phones as sensors

beijing : one year later
process data
+ intent on the part of the individual is very low
+ organization/collection is systematic and highly automated
+ trace is hidden and barrier to access is high

curated data
+ intent on part of the individual is guided by that of the institution
+ organization/collection is systematic and manual
+ trace is hidden or visible and barrier to access is low to medium

self-post data
+ intent on the part of the individual is high
+ organization/collection non-systematic
+ mixed (manual search based tags)
+ trace is visible and barrier to access is low