journal of visual culture

Mapping City Crime and the New Aesthetic of Danger

Aurora Wallace

Abstract

This article investigates the recent proliferation of crime-mapping software applications provided by police departments in dozens of US cities. In these maps, urban space is rendered according to prevailing notions of criminality, constructing a landscape of danger that borrows from and contributes to the wider visual culture of crime. In the aesthetic rendering of illegality, place is represented with the aim of revealing information with a social purpose, and in so doing it re-imagines real space according to dominant values about the nature of crime, criminals, and urban space. While the adoption of such mapping programs is justified using the rhetoric of community empowerment, their design supports a neo-liberal agenda of individual responsibility over safety in the context of outsourced security.

Keywords

crime • mapping • police • security • urban space

The proliferation of geo-coding software and Google mapping mash-ups have enabled and extended our ability to map all manner of social activity, from real-time flight paths, traffic patterns, apartment vacancies, and celebrity sightings to the locations of Starbucks coffee outlets. Promoters and engineers of these new applications boast the bird's eye view vantage point now available on our cities, promising to make these urban spaces more visible, navigable, and accessible. Among the more provocative visual tools giving a new view of American cities are those that aid in pinpointing danger. A series of crime-tracking applications, hosted largely although not exclusively on police department websites, offer public access to the once privileged world of bureaucratic police work. In these city maps, a new aesthetic of danger is constructed, which both borrows from and contributes to wider discourses of crime. Through them, crime – as an accumulation of

journal of visual culture [http://vcu.sagepub.com]
SAGE Publications (Los Angeles, London, New Delhi, Singapore and Washington DC)

Vol 8(1): 5–24 DOI 10.1177/1470412908100900

illegal events, as a social problem, and as a symptom of danger – is congealed into a set of images that renders the space in which it occurs governable, while also providing a set of tools to the private citizen with which to gauge, and ultimately take responsibility for, their own personal safety.

The systematic gathering of crime statistics, as critical criminologists have shown, is as much a tool for publicizing the efficiency of police and providing grounds for their continued support as it is a tool for the organization of police resources. In the US, the Uniform Crime Reporting (UCR) program was started in 1929 by the International Association of Chiefs of Police (later the Federal Bureau of Investigation) with the aim of standardizing crime statistics across the country. The UCR was compiled partly in response to media-fueled fears about crime, and its legacy of misreporting persists as one strategy employed to generate additional funding (Maltz, 1977; O'Brien, 1985). The FBI continues to collect and publish lengthy reports of 'crimes known to police' and distribute the aggregated data back to local police and to the public but, as Baer and Chambliss (1997) unequivocally argue: 'The UCR is consistent in only one thing: the tendency to distort and mislead' (p. 89). In the voluminous report that comes out annually there are many visual displays, including depictions of crime trends and the ubiquitous 'crime clock' – 'gimmicks and tricks to make the problem of crime appear as threatening as possible' (p. 88). Despite these graphic accompaniments, however, this widely accessible resource used by the media and citizens to assess the level of crime in their community contains only a few maps.[1] Most of the UCR presents information in a chart with numbers on a grid and cities listed in alphabetical order showing no proximal relation to one another. These statistics have been more recently supplemented by the National Incident-Based Reporting System (NIBRS) and the National Victimization Survey, designed to improve the quality of those crime statistics by asking people over the phone if they have been victims of a crime, regardless of whether the crimes were reported to police. Despite improved reporting techniques, the ideological function of crime statistics has been well documented by criminologists as presenting the world as more dangerous, and more in need of punitive measures, than necessary. According to Baer and Chambliss, 'the reports based on these data emanating from the Department of Justice's Bureau of Justice Statistics are constructed so as to maximize fear and minimize public understanding' (p. 100).

In studies of crime and the media, the location of crime is a key variable of obvious interest to academics and the general public. Katz (1987) has argued that 'crime news provides the sociologist with a handy, detailed map to trace the institutional geography of the sacred in modern society' (p. 53). But his map is metaphorical, describing in words rather than diagrams the boundaries of human social and antisocial behavior. According to Katz, crime news performs both a social and moral function, giving readers a compass by which to identify the levels of acceptable behavior. Yet, even in the implied spatialization of Katz's map, geography is central to the construction of crime as a social problem to be tackled location by location. In newspaper crime reporting, maps are common graphic accompaniments, particularly since

the launch of *USA Today* in 1982, which uses the map of the USA as the unchanging template on which all news stories can be grafted (Monmonier, 1989; Prichard, 1987; Wallace, 2005). Newspapers, much more than television, have used these visual representations of place to orient readers within their own communities, suggesting the affinity between maps and the medium of paper. Further emphasizing the significance of place in crime news, Liska and Baccaglini (1990) have found that media coverage of crime not only helps to affirm our convictions about criminality and the relative safety or danger of where we live, but that coverage of crime in locations *other* than our own can make us feel safer. Put simply, crime only matters to the degree that it is nearby. This fact alone has been enough to justify the regular, some would say gratuitous, attention paid to crime in the media: to inform citizens on issues of safety, policing, and the justice system (Altheide, 2002; Chiricos et al., 2000; Heath and Gilbert, 1996).

Now that we have reached a stage of what Rose (1999) calls 'advanced liberalism', however, the traditional media are no longer enough. In what he has diagnosed as the response to perceived failures of state systems to protect and serve its people, rhetorical claims about the responsibilization of citizens have prevailed. The wastefulness of government bureaucracy, the inadequacy of expert systems and declarations that social services aimed at helping the disadvantaged produce a 'dependency culture' are now common in Western governance. Social responsibility, it is argued, has floundered rather than flourished under social programs. In their place, mechanisms to imbue citizens with a new version of self-reliance have emerged, now in the form of individual entrepreneurship and the commodification of all aspects of human existence. In matters of crime and security too, faced with an environment of failing social services and a crumbling state infrastructure, individual citizens now have the burden of using new media technology to supply information for protection against danger.

By providing crime maps free to the general public, transparency, inclusion, and citizen empowerment are pledged, implicating citizen-users in their own safety. The relationship between protectors and the protected is re-framed as one of service provider and customer, with the barrier between expert systems and citizens apparently dismantled. As one police official in Oakland, CA, claimed:

> This is part of a sea change that's going to happen here in terms of getting people involved, by easing the access to information. People will take 15 minutes, but they wouldn't take 15 days. This is a piece of a totally different way of dealing with government. (DeFao, 1999: A17)

Such active participation, however, is not one of political engagement in local affairs but rather of self-preservation. Richer information in the hands of the public is understood *a priori* as a positive, socially beneficial goal, and such projects are guided and funded by the National Institute of Justice, using this rationale. As then Vice President Al Gore wrote in the preface to one of the first crime-mapping studies:

> Maps can represent every dimension of a community . . . They can show how healthy a community's children are, where social services are most needed and most effective, and ways to protect the safety of each citizen . . . innovative communities are using maps to mobilize resources to solve their toughest problems. (Department of Justice, 1999)

Whereas maps have historically played a role in the bureaucratic ordering of citizens by the state, digital crime maps have become a tool for citizens to protect themselves in a project for the 'common good'. Gore's 'innovative communities' are part of the larger process in which 'security becomes the responsibility of the private individuals, who through the pursuit of self-interest, and liberated from enervating reliance on the State, will participate in the creation of the new order' (O'Malley, 1996: 201). It is not only that a new technology is brought to bear on an old problem, or even that the new technology leads us to conceptualize that problem in particular ways. Certainly online crime maps aestheticize crime according to prevailing notions about what it looks like, where it takes place, and who is responsible for it. But what is the status of a crime map as a map, and what if anything is made visible?

Myths and Legends

In order to know where crime is, maps are intuitive devices. A map can indicate relative distance far more efficiently than crime statistics listed by location on a graph. While the map and the statistic are both technologies of governance that seek to identify and diagnose – with the aim of solving – the crime problem, rendering a particular space governable, the map provides qualitatively different information for the assessment of danger. Numbers themselves function as scientific instruments and we can neither imagine nor manage crime, or any other social problem, without first being able to enumerate it. But where the statistic appears fixed, immutable, and sequential by its placement on a chart, collated by period of time, crime category, and location, the map conveys proximity in a seemingly more immediate manner. The crime map promotes visualization of the crime event against a recognizable contextual backdrop, whether it is a street, a neighborhood, or a community, where a crime rate statistic is viewed only against other statistics. Within the map design, however, the depiction of crime can go far beyond the portrayal of proximity. Crime is to some degree 'illegible' until it is processed into a form that categorizes and counts it. As Scott shows in his analysis in *Seeing Like a State* (1998), before any enumeration can take place, the existing terrain has to be mapped. Widely diverse conditions have to be simplified and coded. The space can 'not be assimilated into an administrative grid without being either transformed or reduced to a convenient, if partly fictional, shorthand' (p. 24), and these 'simplifications are always far more static and schematic than the actual social phenomena they presume to typify' (p. 46).

Crime maps employ a range of symbol systems to represent crime incidents across a broad spectrum of iconicity. In semiotic terms, the more symbolic marker has an arbitrary relationship to the thing it represents; any seemingly natural connection between them is purely that of convention. The more iconographic marker bears some resemblance to its referent, as in the case where small indicators in the shape of a car are used to represent the theft of, or from, a car. Of course, the map itself is a symbol system made from largely arbitrary, but now conventional, features: water is always blue, and dots with circles around them represent capital cities. In crime maps, where symbolic systems are used, shapes and colors can be applied somewhat randomly to depict different categories of crime. The most rudimentary crime maps, such as those for Durham, NC, Lansing, MI, and Overland Park, KS, appear as the digital equivalent of a paper push-pin map, where one color is used to represent all categories of crime, typically a red dot for each incident. On a paper map, the pin is an instrument of precision, whether in a police precinct or in a military situation room. It points to a specific place, not just a coordinate or intersection, and it is manually positioned, limited only by the level of detail provided by the map. It is therefore not only spatial but temporal, as no two pins can be placed on exactly the same spot at exactly the same time. An aggregation of pins on a paper map shows concentration and occurrences over time, with greater numbers of pins eventually blurring the underlying spot.

In digital mapping, it is more typical that different colors represent different crime categories, though usually with little connection between the data and the symbol used to represent them. The Atlanta Police Department's map uses red for homicide and yellow for aggravated assault, suggesting degrees of severity through the conventional uses of color, while Los Angeles shows homicide in yellow, rape in green, and robbery in orange, reserving red for property burglary. Across different crime-mapping systems, colors are chosen less for their connotative or conventional meaning than for contrast, which typically results in the use of bold, primary colors best able to appear against a pale background. Notable exceptions include Sacramento's multicolored star system in more subtle hues of peach, taupe and burgundy that appears to borrow from commonly circulating maps of Hollywood identifying the homes of celebrities. In San Francisco, triangles, circles, and squares in soft pastel colors create a friendly pre-school environment that is serene and calming (Figure 1), while vivid colors and abundance of sharp yellow diamonds on a dark purple background in the Scottsdale, AZ, map give it a more psychedelic quality (Figure 2).[2] These figure-ground designs serve a more affective than informational function. The choices of colors and shapes suggest a wide spectrum of views on the relative safety or danger of the place being represented, yet none serve to undermine the fundamental aim of the map, which is to faithfully document the crime that has occurred, thereby connecting statistical information to a set of easily readable symbols.

Iconographic map legends attempt to match a symbol with the thing it represents, tiny guns for shootings, broken glass for break-ins, or flame for fire, for example. It is here that the rendering of illegality borrows from the

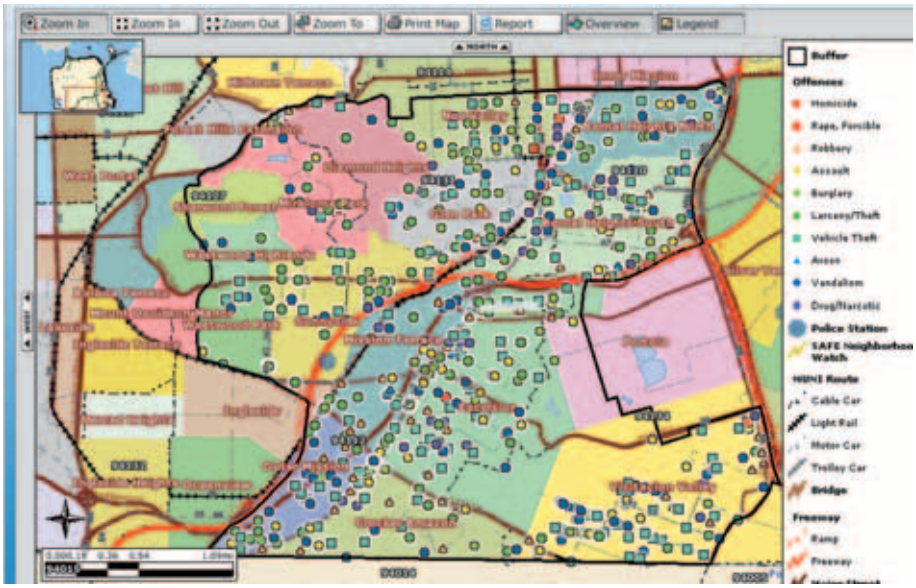

Figure 1 Ninety days of crime in San Francisco, CA. URL (accessed 22 June 2006): http://gispubweb.sfgov.org/website/san_francisco_community/wizard.asp

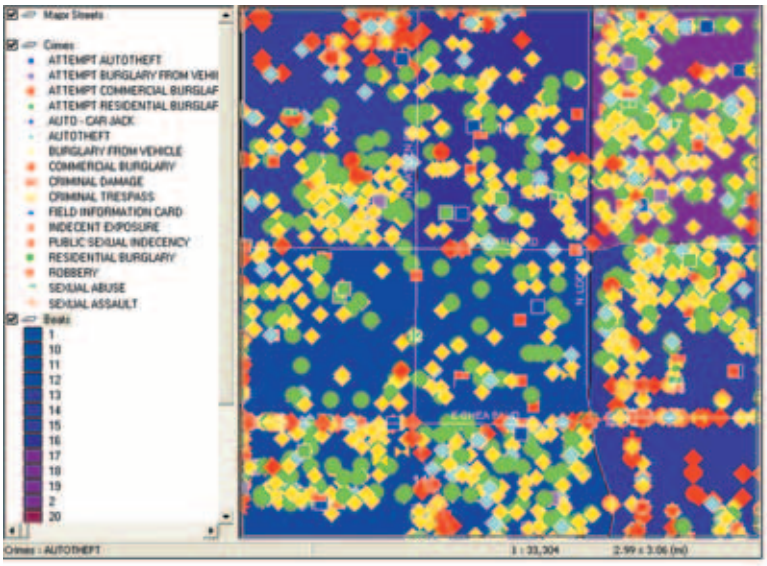

Figure 2 Crime map of Scottsdale, AZ. URL (accessed 11 March 2006): http://eservices.scottsdaleaz.gov/dmc/crimes/map_frame.asp?mapcmd=keymap

broader visual culture of crime and the values embedded in the crime-mapping process become even more evident. In referring to the visual culture of crime, I include all manner of illustrative mediated representations of criminality, including but not limited to: film noir and gangster genres of film, comic books and graphic novels, confidential and true crime magazines, and police procedurals and re-enactments on television in which portrayals of criminality employ a common set of standard characterizations of criminals, law enforcement and punitive measures. The map of Lincoln, NE, for example, is an urban dystopia that uses overtly fear-mongering icons in its legend (Figure 3). All drug activity is represented by large syringes filled with pink liquid that are completely out of scale with the streets on which they are strewn. Robberies are depicted with black facemasks; clenched fists show assaults; and revolvers in profile represent all weapons. Burglaries are shown by fractured houses, vandalism is rendered as a bright green splotch suggesting graffiti, and arson appears as a burning orange flame. A driverless car with its headlights and windshield wipers on represents auto theft, as though driving at night in the rain. By representing each crime category by its most extreme violation, the city looks terrifying, supporting the most fearful preconceptions, even though the most serious crime, homicide, is not represented at all. The gold star for 'indecent exposure' signals the importance of visibility to the crime picture. This necessarily public act is depicted, while many less visible crimes are not. The crime map for West Des Moines, IA, shows a spray can for 'criminal mischief' which suggests that we should interpret all such cases as graffiti, and uses the splotches, this time in red, for traffic accidents, adding slightly more gore to the streetscape although by definition 'accidents' are not criminal (Figure 4). Again, when a crime is personified and a human figure appears, as in the icon for 'theft from auto', the figure is drawn in black. The most generous interpretation of the use of black stick figures and facemasks is that they are there to suggest shadowed figures at night; more problematically, that criminal mischief can be simply and adequately represented in racialized terms.

Icons in crime maps are recycled and repurposed, with little or no standardization in application. A shopping cart on the Vinton, VA, map means 'shoplifting' while the same cart in Reading, PA, means 'vagrancy', underscoring the visibility of homelessness in the form of a wandering nomad using the stolen property of consumer outlets as vehicles for the transportation of their belongings. That vagrancy, characterized in this way, is considered a mapable crime is symptomatic of the more generalized fear propagated by such maps. The shopping cart can only become an icon of concern if one assumes that those with no fixed address pose a significant threat to the public in any criminal sense, or that homelessness itself is illegal. Both suppositions speak to their neo-liberal context, most artfully articulated by Rudy Giuliani while Mayor of New York:

> People that are *homeless* have a specific problem that needs to be addressed . . . Some have problems like alcohol or drug addiction. You've got to deal with that. Some are straight, out-and-out violent

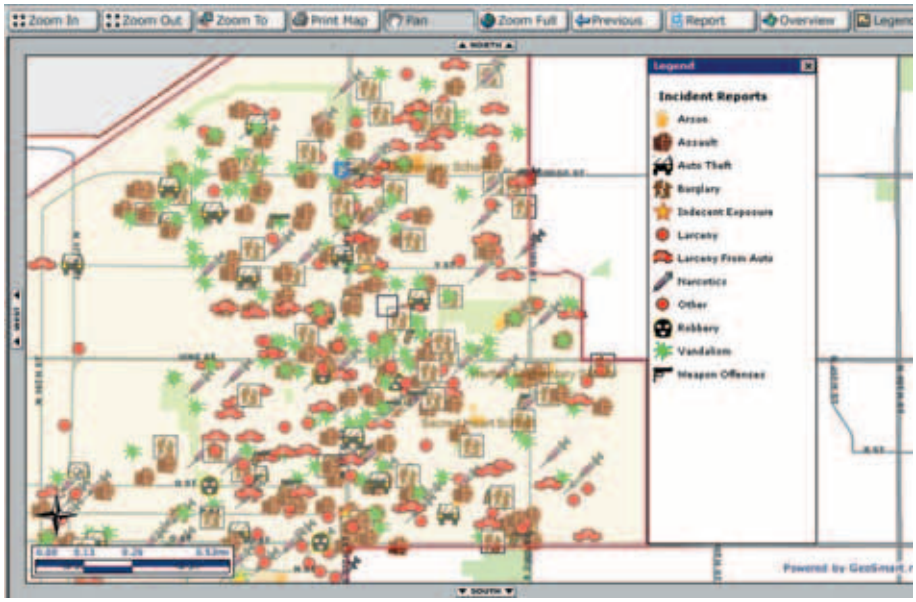

Figure 3 Ninety days of crime in downtown Lincoln, NE. URL (accessed 24 June 2006): http://ims.lincoln.ne.gov/CrimeViewCommunity/wizard.asp

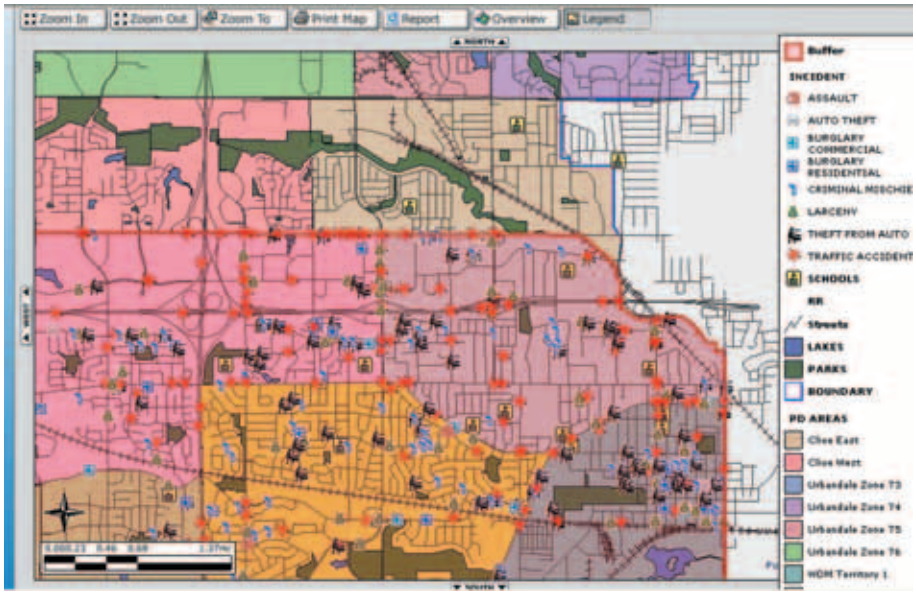

Figure 4 Ninety days of crime in West Des Moines, IA. URL (accessed 24 June 2006): http://crimeview.wdm-ia.com/CVC/wizard.asp

> criminals who are *homeless* and violate other people. They should be arrested, they should be taken off the street and jailed. (Lakey, 1998, emphases added: 1)

The repurposing of the shopping cart is indicative of the common set of stock icons that circulate freely as 'clip art' in the world of crime mapping. The revolver is nearly identical in most maps although, in some places, it means that a weapon has been used; in others, it means a shooting has taken place; and in Memphis, TN, it signifies robbery. The symbol of a car with wavy lines under its tires that is used to represent slippery pavement in road signs appears frequently in crime maps; but in Dallas, TX, it means auto theft, in Concord, CA, it means a traffic accident, while in most other places it means a conviction for driving under the influence of alcohol. Without any fixed meaning attached to the use of any icon, the landscape of the crime map is cluttered with a series of worrisome signs, and the degree of their severity is left to the imagination of the viewer.

Some crimes, by virtue of their physicality, are easier to depict with a tiny icon than others. Liquor infractions can be successfully represented by a bottle shape, and broken curfews by a clock. Rape, on the other hand, does not lend itself easily to a cartoon symbol. The map of San Diego, CA, appears to use non-mimetic symbols, yet 'rape' is feminized with a fuchsia hexagon and other sex crimes are shown with a suggestive light pink hexagon with a solid black center, not unlike the cross-section of a peach (Figure 5). Baltimore, MD, depicts rape with a pink diamond. The limits of iconographic imagination confine the mapmakers of Berkeley, CA, to a pink 'S' for sexual assault. In Reading, PA, 'forcible rape' is gendered with a pink capitalized block letter 'R' and 'prostitution' appears as a purple 'P'. In Vinton, VA, there is no pink 'R' on the legend, so perhaps there is no rape there, but there is a pink capitalized block letter 'F' for 'forcible fondling'. Vinton employs the alphabet for crimes that are more difficult to conjure visually: the 'F' in green symbolizes 'false pretenses/swindle/confidence game', a green 'E' stands for 'embezzlement', a brown 'D' for drugs, an 'L' for larceny, and three red 'X's for pornography. San Diego uses alphabetic letters styled after a letterman's jacket, and as in the fraternity house, 'D' is for 'drunk', although the yellow 'U' is not for university, it is for 'DUI'. Such sophomoric logic in San Diego's crime map is shown in the turquoise 'T' for 'truancy' defined as 'unexcused absence from school', not a traditional index crime in any jurisdiction.

The crime map of Washington, DC, is also of the iconographic type, and the background colors and icons create a similarly cartoonish urban landscape. Most of the icons are red: a red eye-mask for 'robbery with gun', red revolvers for assaults with guns, and red knives for assaults with weapons other than guns. Homicide is depicted with a red splayed body icon resembling the chalk outlines of dead bodies, now familiar after decades of crime scenes in news photography, and film and television police procedurals. Such apparently literal translations of criminal acts construct maps using a somewhat childlike view of the big bad world outside. Crime mapping here renders the city through the lens of a superhero crime-fighting fantasy in which 'bad

Figure 5 Thirty-one days of crime in San Diego, CA. URL (accessed 24 April 2006): http://mapping/arjis.org/main.aspx

guys' are depicted as the silhouetted thugs on a firing range and a bag stamped on the outside with a dollar sign always identifies the 'loot'. All that is missing to complete the picture are footprints and dotted lines tracing the steps of the criminal and his getaway. But what larger purpose is served through these comical renderings? Perhaps they are designed to make the task of risk assessment more entertaining and less burdensome for the at-home user. However, in their attempt to construct representations of criminal activity, these cartoonish icons perform the function of evidence themselves. The revolver is not only a trace of where a crime is alleged to occur, it is proof that it did; it is the proverbial 'smoking gun'.

Despite the standard categories of crime used by the FBI, in which violent crime includes the categories of murder and non-negligent manslaughter, rape, robbery, and aggravated assault, local police maps do not adhere to any such standardization. By predetermining which crime categories can be mapped, we are guided to search for the crimes for which database fields already exist. The selected categories fall roughly into two categories, while excluding a host of others. In keeping with the priorities of neo-liberalism and the visual bias of crime mapping, property and vehicle crimes are the most available categories. These are the crimes most central to a private property ownership society, and whose status and regulation are already embedded into ancillary information databases through insurance, banking and licensing fees, and those of other state agencies. The second category, of what might be considered 'quality of life' or 'nuisance' crimes – vandalism, vagrancy, prostitution – speak most emphatically to the concerns of

homeowners and their property values, and represent the same categories of crime targeted by 'zero tolerance' policing that Young (1999) outlines:

> Its aim on a policing level is to flag an intolerance of incivilities, to sweep the streets clean of deviance and disorder, to deal with aggressive beggars, squeegee merchants, loiterers, drunks and prostitutes. It intends to reverse the tendency to 'define deviance down'. (p. 123)

Extending the definitions of criminality to include such things as vagrancy, loitering and truancy, and choosing to represent them on police department generated crime maps, serves a broader agenda of police surveillance and order. The individual is monitored for even the most minimal or temporary transgressions, with all realms of social behavior brought under the auspices of control and 'reconceptualized along economic lines – as calculative actions undertaken through the human faculty of choice' (Rose, 1999: 141).

Space and Time Distortion

Not only do the figures on each map vary widely, but the ground upon which they are placed does not observe any standard, and these apparently transparent, innocuous backgrounds are similarly value-laden. In order for crime icons to appear clearly, the simplest and least distracting background seems logical, and usually map templates depict only selected man-made features. Roads and highways are displayed in order to make the plotting of street addresses sensible. Only in San Francisco are modes of public transportation shown on the map. Elsewhere, even where they exist, we rarely see subway or bus routes. In these omissions, cities are imagined as they are in SUV commercials, in which alternative (e.g. public and/or free) forms of transportation disappear and streets exist only to provide exhilarating exercises for superior traction and steering control. As in the mediated world of the SUV, green space is pristine. Parks and wilderness areas are completely free of crime because geo-coding relies on street addresses for plotting locations, and crimes with no street address are moved to the nearest street. According to San Diego's map instructions:

> this means that incidents that occur in parks, on school grounds or campuses, at shopping malls, or other such locations are mapped on a street and not at the actual location of the incident in the area.[3]

There are other subtle spatial deceptions in crime maps: the icon for runaways, used by several smaller jurisdictions such as Vinton, is the homicide victim icon standing upright, as if sprinting. But this icon shows the location of precisely where the runaway is not. The limitations of the crime algorithm are rendered visible in these disconnects, showing us a computer-generated interpretation of events that undermines the map's credibility in marking the location of social phenomena. The representation of crime here appears as

the product of what Virilio (1994) described as 'sightless vision': the automated, artificial recognition systems governed by computers rather than humans. Surveillance is tasked to the machine with its pre-programmed ability to 'see', and social phenomena are tracked and interpreted according to 'how computers might perceive things' (p. 73).

The features that are most often fixed on the map are police stations, hospitals, churches, and schools. These institutional points of reference provide the backdrop of a criminal world that challenges their status as protective zones. San Francisco's site is typical in that it does not give the option of leaving schools off any map that is generated, so that any crime query makes it impossible not to note the proximity to elementary and secondary schools. Such templates promote easy political appropriation, as happened recently in Brooklyn, NY, where borough representatives compiled a report highlighting the presence of sex offenders living near schools:

> The disturbing report, completed by Rep. Anthony Weiner (D-Brooklyn), shows that about 670 of the city's 2,114 worst sex offenders live within two blocks of a school. He will join Rep. Ed Towns (D-Brooklyn) today to introduce legislation to fund unprecedented surveillance of sex offenders. Under the bill, $100 million would be available each year for federal and local agencies to track offenders with global positioning systems. (Lemire, 2007: 5)

Such renderings are being used not only to 'identify' where crime is allegedly taking place, but also to target those areas for attention. That digital crime maps can be used for the deployment of police resources may be their overt application, but they also serve to target specific communities for mobilization and provide the basis for public debate that rewards the innovative use of technology with increased funding. In their privileging of street-level scrutiny, the maps illustrate that proximal location to the home is more important than a more general picture of crime. Whether the maps are justified on the grounds of police surveillance or public safety, they promote the same circularity of logic that supports police profiling: crime cannot be found where it is not looked for.

Only those crimes that are 'known' to police can be mapped, so crime mapping is entirely dependent on the categories and bureaucratic practices of local police forces. In constructing abstract representations of crime statistics, crime maps reduce the complexity of the space and the event, thus rendering the area both more manageable and governable. By erasing context, motivation, befores and afters, the static crime map provides limited interpretive information. Incidents where an exact address is unknown are left out of the dataset altogether, as in pick-pocketing, for example. Lesser crimes will not be mapped if they are part of a combined crime incident, because only the more serious offense is recorded.[4] These design decisions function to produce maps which cluster crime to streets and skew the representation toward the most serious crimes. A crime that only lasts a few

minutes may be given a permanent trace on a crime map. The stain might remain on a particular intersection or area long after it is relevant or necessary for it to be there. Further, online crime maps assume that all crime takes place in a space that can be seen on a map, giving them an implicit focus on the most public and visible crimes, and elevating the importance of street crimes over domestic crimes. These priorities have their historical roots in the formation of the FBI and the UCR, which Wilson (2000) argues were more interested in public relations and scientism than any objective appeal to fighting crime (p. 68).

More basic temporal distortions are created by the method of data input and availability. While the statistics that are used to feed these sources are static, they can be accessed, aggregated and recombined to suit the user's need. Because each interactive map appears to be generated in the seconds between a query being made and the data being shown on the screen in graphic form, its creation suggests an up-to-the minute relevancy and an eternal present, but is actually a case of what Virilio (1994) calls 'delayed time perception': 'the past of the representation containing a bit of this media present, of this real-time "telepresence", the "live" recording preserving, like an echo, the real presence of the event' (p. 67). The snapshot of time captured in each map is rather more fixed in time than fluctuating. Baltimore's map has a maximum 14-day search range, with a 10-day lag from present date. Nashville's statistics are available for 28 days prior to a search, San Francisco's for the previous 90 days, Berkeley's for 180 days, and Portland, OR, has only a 12-month date range parameter. Placing limits on the amount of time that can be seen at once allows programmatic control over how dangerous a place can appear. In jurisdictions where searches are limited to one category of crime at a time, no cumulative or overlapping view of crime icons can be generated, yet this does not undermine the affective function of these maps in their creation of a space with an infinite capacity for danger.

If time is misleadingly compressed or expanded in these depictions, space is most certainly distorted. The computer screen does not allow for a complete area to be shown at once, forcing the use of zoom buttons for the level of detail required. A wide view will increase the congestion of icons to the extent that the number of crime incidents blurs the entire city. Where only a single zip code, police precinct or ward can be searched at a time, the area within the boundary will appear busy with icons, while the space outside it appears empty, creating an illusion of completeness from border to border, with a crime-free no man's land beyond. We may see this two-dimensional bird's eye view as the digital equivalent of the police helicopter shining a spotlight on a small area of interest – a view now familiar from television coverage of high-speed police chases. But such neighborhood fragmentation corresponds more correctly to Rose's (2000) suggestion that in the neo-liberal state, 'each community is to take responsibility for preserving the security of its own members, whether they be residents of a neighborhood, the employees of an organization, the consumers and staff of a shopping complex' (p. 328). It is not that the scale of the entire city is not useful for

crime comparison purposes; it is that the city as a social or political unit is not relevant to the question of security within neo-liberalism.

In digital crime mapping, crimes are plotted on a schematic, virtual police grid bearing little relationship to real neighborhoods and cities, and the maps organize their results into static locations, districts, blocks or zip codes. Users are conditioned to see their neighborhoods as the police see them, by precinct or beat. Such abstraction, according to Hayward (2004), is ill suited to the project of conceptualizing crime:

> Complex urban dynamics are not easily integrated into the type of managerialistic postcode-specific framework that underpins the new space of crime intervention/prevention and, as a result, the various micro processes and cultural specificities that manifest themselves at street level are stripped of their inherent diversity and serendipity. (p. 101)

That maps use the bureaucratic grammar of formerly paper-based systems is less at issue than the fact that systems based on data collected for use by professionals are now offered to the public as official interpretations and diagnostics of a wide range of social activity for the purpose of self-protection, and that what exactly is rendered visible remains unclear. Environmental criminology claims that where crime fighting is visually communicated, social order is asserted (Brantingham and Brantingham, 1981; Harries, 1980). In the aesthetic rendering of illegality, place is represented with the aim of revealing information with a social purpose, and in so doing it re-imagines real space according to prevailing values about the nature of crime, criminals and urban space. The wide variation in systems across different jurisdictions prevents the use of crime maps for comparison purposes, so crime mapping returns to being a distinctly local phenomenon, relative only to itself. These maps are hyper-local in the sense that the displayed results are only made meaningful at the highest level of zoom, in which individual streets rather than whole sections of the city can be seen. This view privileges the street-level approach to crime implicit in recent self-policing strategies such as neighborhood watch associations, safe street initiatives, and in the discourses of the 'broken windows' theory of crime, which as Herbert and Brown (2006) demonstrate 'promises great benefit not through any large-scale scheme like income redistribution or shifts in political power, but through the more basic, and easily accomplished, tactics of landscape alteration' (p. 758). To this we might add, more easily accomplished *by those who live there*. By shifting the responsibility for crime prevention to neighborhoods and individuals themselves, crime is positioned outside the purview of official state services. With technology that emphasizes the extreme local, responsibility for safety and security is put into the hands of the public. As Rose (2000) argues:

> Community is not simply the territory within which crime is to be controlled, it is itself a means of government: its detailed knowledge

> about itself and the activities of its inhabitants are to be utilized, its ties, bonds, forces and affiliations are to be celebrated, its centers of authority and methods of dispute resolution are to be encouraged, nurtured, shaped and instrumentalized to enhance the security of each and all. (p. 329)

As objects, these maps are abstracted from the process of their own construction, from the ideological debates and viewpoints that inform them, and from their public uses. They are made to inform and to confirm, functioning as both question and answer. Online crime maps perform these functions without the same status as fixed objects that their paper predecessors once had. They are endlessly changeable, produced differently by each user query, and made static only in screen-shot captures. For most people using interactive crime-mapping technology, professional or otherwise, there is no such thing as *a* crime map; rather, there are a series of mappings, constantly updated, zoom-able images that are viewed via computer screen. Fed by irregularly updated data in the form of crime statistics that are plotted on a map using GIS software, different maps will be generated according to when the systems are accessed. So, while crime tracking websites present us with a new tool to document and navigate the built environment of the city, they also provide a new iteration of the troublesome relationship between the already compromised and partial empirical world of crime statistics and their representation. Further, they suggest the ever-shifting ground on which, as Rose (2000) suggests, the subject in advanced liberal societies must dwell:

> One is always in continuous training, life-long learning, perpetual assessment, continual incitement to buy, to improve oneself, constant monitoring of health and never-ending risk management. (p. 325)

Crime mapping is an attempt to exert rational knowledge and information over a given space through some combination of imperfect information sources. It is an attempt to render visible that which depends on a certain invisibility – criminal acts – for their success. A crime map sets out to show us something we cannot otherwise see. Its goal is predictive, to identify patterns and anticipate future criminal acts by collating information about the time, place, and frequency of past crimes, not only to see, but to foresee.[5] In their formal properties, such attempts at visualizing the spatial patterns and distribution of criminal behavior share both with techniques of map making more generally, and with the broader visual culture of imagining crime. Like all map-making, crime mapping is an exercise in power. The map comes to displace direct observation of phenomena, and not only because direct observation is not possible. The map is the phenomenon objectified, and once objectified, it is its own proof. The absence of direct human witnessing and interpretation is one of the factors that make the digital crime map so pernicious. They are part of the larger process of 'artificial vision' that Virilio (1994) explains as 'delegating the analysis of objective reality to a machine': 'The computer would be responsible for the machine's – rather

Figure 6 Crime map of Charlotte, NC, with loading icon.
URL (accessed 20 June 2006): http://maps.cmpdweb.org/cmpdnet/map.aspx

than the televiewer's – capacity to analyze the ambient environment and automatically interpret the meaning of events' (p. 59).

Further supporting the myth of complete and comprehensive information, the maps conjure the perfectly efficient and omniscient police forces now common in police procedurals on television such as *CSI*, the crime scene investigation series in which all data are known or knowable, and from it, impeccably trained experts find solutions and reach the right conclusions in a timely manner. In most crime-mapping software applications, an overlay appears in the middle of the screen while the maps are being generated. Jacksonville, FL, Austin, TX, and Chicago, IL, show shiny, rotating, police badges; in Charlotte, NC, we see an animated police cruiser with its blue and red siren lights flashing (Figure 6). These waiting icons emphasize their functions as advertisements for police departments, promising immediate, authoritative, and commanding police presence at the scene of the crime, even as the maps themselves promote the notion of a self-reliant, ever vigilant populace and the efficacy of computer-mediated policing at a distance.

The assurance of empowered self-reliance is complicated by the ubiquitous warnings found on these interactive digital crime maps. On each official police department crime map, there is a disclaimer to which users must agree before maps can be generated. In agreeing to use the maps, users must be complicit with statements such as those offered by the San Francisco police department: 'I understand that the information from this site is for informational purposes only, for the betterment of our community.'[6] The Phoenix Police Department warns that it is 'not responsible for misinterpretation of this information and makes no inference or judgment as to the relative safety of any particular area or neighborhood'.[7] The boilerplate

statement on all crime maps is that the information is presented 'strictly as a courtesy and not as an obligation to the user'. Web users are discouraged from drawing conclusions from the maps or judging them for accuracy, and are explicitly warned against using the information for the purposes of vigilantism; yet an implicit belief in helping to fight crime is ostensibly the motivation behind their construction and availability in the first instance, according to the software publicity material:

> People want to know what is happening in their neighborhoods. With CrimeView® Community you can provide an important public service by giving citizens access to information that they may ordinarily request directly from your staff. Creating self reliance among community members and alleviating some of your staff's work load, can be of great benefit to a department and its community outreach and staff productivity.[8]

This justification from the Omega Group illustrates well the twin forces of empowerment and self-reliance: these are technologies of governance with self-governance as their goal. As Rose (2000) shows:

> the beauty of empowerment is that it appears to reject the logics of patronizing dependency that infused earlier welfare modes of expertise. Subjects are to do the work on themselves, not in the name of conformity, but to make them free. (p. 334)

While police disclosure of spatialized crime patterns has been applauded, there is reciprocity endemic to these maps that must be attended to. Public access to this information risks further marginalizing high crime areas by promoting relocation and development away from apparently dangerous neighborhoods, while congratulating low-crime neighborhoods for their self-reliance. These online mapping efforts complicate the discourses lauding the potential of the internet to rejuvenate at-risk urban areas, and the similarly empowering discourses of community-building in online contexts for promoting a more open flow of information, releasing it from the gate-keepers of authority, and ultimately strengthening democracy. Perhaps unsurprisingly, some of the earliest experiments and enthusiasm for direct public access to crime renderings that use geographical information systems came from the San Francisco Bay area, where many new media firms are located. So the first publicly available crime websites were provided not where crime was highest, but where there was a high level of faith in the internet as a tool of empowerment. To date, California still boasts many more crime maps than any other state. But whenever new technologies of visualization emerge, we should always seek to understand the conditions of their production. Are they solutions to non-existent problems, or are they responding to some perceived crisis of legitimacy? Online interactive crime maps may signal a failure to convince the public of the efficacy of current policing strategies, or at the very least a loss of faith in their ability to combat crime using traditional methods.

At the confluence of these dual claims of self-reliance and lighter workloads, we now find online crime maps. These new police techniques are taking place within the neo-liberal context of outsourced labor, privatized policing and gated communities, declining state regulation over prison systems, and increasing faith in new technology as a crime-fighting panacea. Grants from the National Institute of Justice provide funds for these strategies while they do not support other more ostensibly pro-social solutions such as the suppression of poverty or affordable housing. Experts can take advantage of these flexible data systems to support claims for increased funding, vigilance, and fear as political circumstances dictate, and users are given powerful search tools in place of material security. Such sleights of hand can be seen in the Mayor of St. Louis' praise for the police department's 'Safe City' map even as the program name mocks the city's recent ranking as the country's most dangerous city:

> The Safe City web site is based on a very simple premise: The streets of St. Louis belong to the law-abiding people who live in and visit our city – not to criminals. When I ran for mayor, I promised to use cutting-edge technology to reduce crime. This is one of those efforts. By providing maps that show where and when crime is occurring, Safe City will give police a proven tool to prevent crime and make our neighborhoods safer.
>
> Just as important, Safe City gives members of the public unprecedented access to information that will help them be safe as they enjoy all that our city has to offer – from great residential and entertainment districts to outstanding parks and museums. The information available on this site will empower all of us to fight crime.[9]

Much like crime reporting in traditional media, these new websites contribute to a discourse of crime that is inherently technocratic, that over-represents violent crime to the exclusion of other more common types of crime, that sees crime as largely the result of individual irrational predators rather than understanding the motives of the economically marginalized, that under-considers contributing factors like unemployment, that renders less visible crimes less important, and that reinforces race and gender stereotyping. What is learned about the real world of crime is at least as compromised as it is in any other mediated representation of the criminal world: we are given no clues to motivation, context or mitigating factors, and their visualizations substitute for witnesses and witnessing. Crime maps are ultimately guided in their design and their use by what we already believe to be true about crime and urban space, and their visual language paints us into a corner of complicity; we can only respond in kind: the binary good/evil, safety/danger, black/white of law and order ideology that supports the infrastructure of map-making in the first place. These technologies are being offered to the public in place of real material security in the name of self-empowerment and self-protection. We need to remind ourselves that these are systems of values, not systems of facts, or as Roland Barthes (1972) would say, a 'naturalization of the cultural'. These are technologies of control over space, by the usual suspects.

Notes

1. On this point, and the use of maps in the media generally, see Monmonier (1989, 1997).
2. Among the most popular crime-mapping software packages is CrimeView, designed by the Omega Group and used by approximately 450 police departments and other public agencies in the US and Canada. Their clients include the police departments of San Francisco, San Diego, Redondo Beach, Concord, and Berkeley, CA, Indianapolis, IN, Las Vegas, NV, and Lincoln, NE, as well as smaller departments in West De Moines, IA, Fayetteville, NC, Reading, PA, and Vinton, VA. URL (accessed 24 April 2006): http://www.theomegagroup.com/police/crimeview_community.html
3. URL (accessed 22 June 2006): http://mapping.arjis.org/
4. URL (accessed 22 June 2006): http://mapping.arjis.org/
5. On this point, see Virilio (1994: 61).
6. URL (accessed 11 March 2006): http://gispubweb.sfgov.org/website/san_francisco_community/default.asp
7. URL (accessed 11 March 2006): http://phoenix.gov/APPINTRO/crimesta.html
8. URL (accessed 24 April 2006): http://www.theomegagroup.com/police/crimeview_community.html
9. URL (accessed 17 February 2006): http://64.218.68.50/stlouis/newslmpd/viewer.htm

References:

Altheide, D. (2002) *Creating Fear: News and the Construction of Crisis*. New York: Aldine de Gruyter.

Baer, J. and Chambliss, W.J. (1997) 'Generating Fear: The Politics of Crime Reporting', *Crime, Law and Social Change* 27(1): 87–107.

Barthes, R. (1972) *Mythologies*. New York: Hill and Wang.

Brantingham, P.J. and Brantingham, P.L. (eds) (1981) *Environmental Criminology*. Beverly Hills, CA: Sage.

Chiricos, T., Padgett, K. and Gertz, M. (2000) 'Fear, TV News, and the Reality of Crime', *Criminology* 38(3): 755–85.

DeFao, J. (1999) 'Oakland's Crime Data Available on the Net', *San Francisco Chronicle*, 27 December: A17.

Department of Justice (1999) *Mapping Out Crime: Providing 21st Century Tools for Safe Communities*, Report of the Task Force on Crime Mapping and Data-Driven Management. Washington, DC: Congressional Information Service, Inc.

Harries, K. (1980) *Crime and the Environment*. Springfield, IL: Charles C. Thomas.

Hayward, K. (2004) *City Limits: Crime, Consumer Culture and the Urban Experience*. London: GlassHouse Press.

Heath, L. and Gilbert, K. (1996) 'Mass Media and Fear of Crime', *American Behavioral Scientist* 39(4): 379–86.

Herbert, S. and Brown, S. (2006) 'Conceptions of Space and Crime in the Punitive Neoliberal City', *Antipode* 38(4): 755–77.

Katz, J. (1987) 'What Makes Crime News?', *Media, Culture & Society* 9(1): 47–75.

Lakey, J. (1998) 'Lastman Finds New York Tough on Homeless', *Toronto Star*, 19 November: A1.

Lemire, J. (2007) 'School Nabes Full of Sex Fiends', *New York Daily News*, 28 January: 5.

Liska, A.E. and Baccaglini, W. (1990) 'Feeling Safe by Comparison: Crime in the Newspapers', *Social Problems* 37(3): 360–74.

Maltz, M. (1977) 'Crime Statistics a Historical Perspective', *Crime and Delinquency* 23(1): 32–40.
Monmonier, M. (1989) *Maps with the News: The Development of American Journalistic Cartography.* Chicago: University of Chicago Press.
Monmonier, M. (1997) *Cartographies of Danger: Mapping Hazards in America.* Chicago: University of Chicago Press.
O'Brien, R. (1985) *Crime and Victimization Data.* London: Sage.
O'Malley, P. (1996) Risk and Responsibility', in Andrew Barry et al. (eds) *Foucault and Political Reason: Liberalism, Neo-Liberalism, and Rationalities of Government*, pp. 189–207. Chicago: University of Chicago Press.
Prichard, P. (1987) *The Making of McPaper: The Inside Story of USA TODAY*. Kansas City: Andrews McMeel & Parker.
Rose, N. (1999) *Powers of Freedom: Reframing Political Thought*. Cambridge: Cambridge University Press.
Rose, N. (2000) 'Government and Control', *British Journal of Criminology* 40: 321–39.
Scott, J.C. (1998) *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed.* New Haven, CT: Yale University Press.
Virilio, P. (1994) *The Vision Machine*, trans. J. Rose. Bloomington: Indiana University Press.
Wallace, A. (2005) *Newspapers and the Making of Modern America*. Westport, CT: Greenwood Press.
Wilson, C. (2000) *Cop Knowledge: Police Power and Cultural Narrative in Twentieth Century America.* Chicago: University of Chicago Press.
Young, J. (1999) *The Exclusive Society: Social Exclusion, Crime and Difference in Late Modernity*. London: Sage.

Aurora Wallace is an Assistant Professor in the Department of Media, Culture, and Communication at New York University. She is the author of *Newspapers and the Making of Modern America* (Greenwood Press, 2005) and essays in *Space and Culture*, *Journalism History, Environmental Values*, *Philosophy and Geography* and *Crime, Media, and Culture*.

Address: Department of Media, Culture and Communication, New York University, 7th floor, 239 Greene Street, New York, NY 10003, USA. [email: aurora.wallace@nyu.edu]