The Critical Foundations of Visual Criminology: The State, Crisis, and the Sensory

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Abstract:

This article considers the manner in which visual criminology has flourished in the current moment, while exploring its foundational relations and points of distinction as a form of critical criminology. In particular, we devote attention to the relationship of images to control, power and resistance at a time defined by the spectacular proliferation of media. We also discuss new and recent directions in visual criminology that enlarge our understandings of both critical and visual work, including forensic architecture and sensory criminology.

Introduction

The rate at which visual criminology has emerged as an arena of thought within and beyond criminology has been exceedingly fast. The 2014 special issue of *Theoretical Criminology* on visual criminology, including work by us, as well as by Nicole Rafter, Alison Young, Judah Schept, and Steven Wakeman, led quickly to other research collaborations. We took on a variety of curatorial roles related to this, including the editorship of the Sage journal, *Crime Media Culture*. As criminology's leading media journal, the publication has served as an important space in which to explore visual criminology's nascent growth, with over a decade's worth of research. We also assembled the first primer on visual criminology, *The Routledge International Handbook of Visual Criminology* (Brown & Carrabine, 2017), and worked diligently on *The Oxford Research Encyclopedia of Crime, Media and Popular Culture* (Rafter and Brown 2018), with both projects culminating in nearly 200 long form essays by leading and emergent international scholars in the field.

While productive in their own right, these efforts have also worked to raise more possibilities, problems, questions and tensions, even as they have endeavored to historicize visual criminology's foundational relations. In this article, we engage with some of those provocations, including the framing of visual criminology as a critical criminology. In exploring the nature of that relationship, we look to the ways that visual criminology builds upon and pushes beyond the current boundaries of critical criminology. We then explore a set of developing areas and approaches that offer ways in which to rethink both kinds of knowledge pursuits.

Visual and Critical Criminology

As we have written elsewhere (Brown and Carrabine 2015, 2017; Brown 2018; Carrabine, 2012), visual criminology considers power's relation to representations and images of crime and control. It takes as its focal points the structure and operations of visual regimes—their coercive and

normalizing effects as well as their contestations. And it does so in the context of an unprecedented, spectacular proliferation of images, sites of production, and modes of analysis. In the words of Carrabine (2012:463), "as images of crime, harm and punishment proliferate across old and new media, there is a growing recognition that criminology needs to rethink its relations with the ascendant power of spectacle." Visual criminology, in this sense, is very much about the assemblage of imagistic sensory elements that give meanings to the pillars of critical criminology: crime and control and their relations to power, resistance, spectacle, and transgression. Invested in a studied visual sensibility, visual criminology devotes special attention to method and theory, committed to a working set of analytical approaches that are attuned to the fraught relations between words, images and power—necessary endeavors in understanding the global flow of visual fragments, transgressive montage, and their various sensory, material, and discursive relations. As Hayward (2010: 9) writes, visual criminology is a vital undertaking not just in relation to critical criminology but to criminology, more broadly: "Given the ascendant position of the image/visual in contemporary culture, it is increasingly important that all criminologists are familiar with the various ways in which crime and 'the story of crime' is imaged, constructed, and 'framed' within modern society."

At a time where historical rupture and ocularcentric forms of reasoning predominate, visual criminology takes crisis as its occasion: insurrectionary images that challenge, coerce, constrain, transgress, and fail—the endpoints of the modernist landscape. In the current moment, visual criminology echoes the activism and opposition to mainstream forms of consensus and classical criminology found at radical criminology's founding in both the UK and the US. For instance, we see critical criminology's key themes of transgression and the construction of youth crime emerging in new and volatile contexts of policing and state violence. One need only think of groundbreaking work by Cohen (1972) in Folk Devils and Moral Panics, and the Birmingham Contemporary Cultural Studies Center's Hall, Critcher, Jefferson, and Roberts (1978) in Policing the Crisis. These volumes represent some of the most historically prominent contributions of critical criminology to the interdisciplinary study of media and social constructionism. For example, Cohen's (1972:9) introduction of the term "moral panic" pointed to the processes by which "a condition, episode, person or group of persons emerges to become defined as a threat to societal values and interests," thereby turning attention to the conditions that produce crisis and categories of crime. In his formulation, the intensity of feeling that accumulates around an issue becomes defined as a fundamental threat to social order in a manner that is disproportionate to the actual threat posed.

In *Policing the Crisis* (Hall et al., 1978), the media emerge as part of a similar and larger story about the politicization of crime—a key site where "consent" is won or lost through processes built upon amplification, spirals and tolerance thresholds that legitimate new forms of state

violence and social control. At the heart of both volumes is an event and process where crime, race, and youth are condensed into particular issues—e.g., "youth violence" and "mugging" that then became crises with political, economic, and ideological dimensions. Both "crises" are argued to have changed British civil and political life, ushering in new modes of political subjectivity cued to race and a shift toward law and order movements. Today, we see similarly how the growing record of police killings of black people in the United States, the executive and emergency legal orders that typify border control in the Australia, Europe and the United States, and the growing visibility of Indigenous and racialized criminalization worldwide mark crisis points similar to these early states of exception, of concern to both critical and visual criminology. Thus, visual criminologists and critical criminologists share an ongoing, urgent concern with deepening our understandings of the complexity of relationships between crime, law and the state, as well as the role of control, power, resistance and subordination—all framed within an intellectual and political desire for social justice and transformation. These elements, of course, build from and extend various critical criminologies (Carrington and Hogg 2002; De Keseredy and Dragiewicz 2012; Brisman, this issue), specifically radical Marxist work (Hall 1978), cultural criminology (Ferrell et al., 2018, Ilan this issue), feminist perspectives (Chesney-Lind and Morash 2013; Henne and Shah 2018; Musto this issue) and critical historical perspectives (Carrabine 2018a). They also push our vantage points further, insisting our analyses acknowledge and engage with work in the black radical tradition, critical race theory (Biber 2007; Saleh Hannah 2017) and intersectional studies (Potter 2013; Henne and Troshynski, this issue); Indigenous and settler colonial studies (Cunneen 2017; Ball, this issue); and queer theory and work on gender and sexual violence (Powell 2015; Dodge 2016; Ball, this issue) in an effort to better understand not simply identity but the structural inequalities of modernity.

By centering the visual, this approach brings with it the potential transformation of criminology. Bringing the work of images to the fore allows for a fundamental rethinking of criminology's foundations, history, methodological and theoretical commitments, asking us to contemplate anew the responsibilities behind the study of crime and punishment. In exploring the tensions between power, social structure and spectacle, visual criminologists reveal the ethical aspects of aestheticization. The rise of narrative and discourse analysis allows visual researchers to devote attention to some aspects of this by focusing upon the manner in which identity, institutions, power, regimes of truth, and technologies are produced. This renewed interest in stories and narrative is part of a wider "linguistic turn" that has occurred across the humanities and social sciences (of which visual criminology is also a part) (see Presser and Sandberg, this issue). In pursuing the work that images do, the field of visual criminology expresses unique possibilities for a kind of critical criminology that can better illuminate the social relations that cause harm—not just in the conventional sense of legal categories of crime, but of processes that produce criminalization and interpersonal, legal, state and structural violence. For instance, visual

criminologists seek to disrupt the dyad of crime and punishment by way of analyses of the visual that challenge common sense assumptions that punishment leads to a reduction in crime (Schept, 2014; Story et al., 2017; Hunt 2017). The visual is also a powerful means through which to map the production of control: policing, prisons, surveillance and their counterpoints; the production of transgression and resistance against old and new categories of criminalization; the historical resurgence of insurgencies, justice campaigns, social movements, and uprisings. Visual criminology brings the possibility of new rigor and new life to critical criminology, specifically, and criminology, more broadly, as a discipline, by making the commitment to understanding the power of the image in the perpetually mediated worlds of control, crime, harm, resistance and violence in which we exist.

Perhaps then visual criminology contributes most directly to the aims of critical criminology in that it promises a more expansive body of knowledge about control and resistance—one that offers new kinds of foundational insights. And consistent with the insurgent energies of critical approaches, visual criminologists call for reinvention, for research, and for creative ways of understanding crime and control that can bring together image, method and theory. The parameters of visual criminology and critical criminology are similarly broad, and both share an appreciation for and interest in the possibility for critique, new horizons of study, as well as concern for various forms of social justice. At a time when media and visual research is a daunting, formidable undertaking, as unprecedented numbers of mediascapes, technologies and interfaces take shape, visual scholars have worked hard to develop and reinvent methodological practices in step with the immediate and perpetual production and proliferation of images of crime and punishment. The image's production, circulation, and scale of distribution are (increasingly) politicized functions and its presence appears less as (just) an image and more as the locus of a complex interface among humans, networks, technologies, and global flows. This requires a thorough articulation of the relationship of the image to the various kinds of work it does and the larger mediascape from which it derives. In old and new media spaces—the ether within which new ideological and cultural orders form—we should anticipate rapid methodological shifts and developments. Such research imperatives are evident in work on some topics that have not been perceived traditionally as the terrain of critical criminology. Big data, particular forms of content analysis (note the rise of thicker, qualitative versions of this method), emergent sensory and affective research, and new media analyses are but some of what authors have to consider and examine in rethinking the foundations, limits and possibilities of critical methodological approaches.

In short, methodologically, visual criminology enlarges the traditional work of critical criminologists beyond any easy artificial positivist/qualitative debate. There are, even now, a number of urgent areas of development on this front that are entering the intellectual scene.

We explore three below: forensic architecture and changing cityscapes; big data and surveillance; and emergent research on the criminology of the senses.

Forensic Architecture and the Politics of Verticality

In his influential call for an understanding of the "politics of verticality," Weizman (2002, 2007) contends that we need new ways of producing and making public evidence of armed conflict, corporate violence and state crime. This is a position developed in light of the Israeli occupation of Palestinian territories, where he has indicated how we must grasp the fractured spaces of the Gaza and the West Bank in terms of multiple vertical dimensions and divisions. In this regard, airspace, bridges, hills and tunnels are as crucial to understanding the conflict as are the fences, land and walls that sever the territory into distinct, discontinuous layers. By examining the architecture and planning of Israeli settlements, Weizman demonstrates how observational advantage is gained from their strategic location on mountains and hilltops looking over the dense and rapidly changing Palestinian urban environment below. An example is the perplexing network of bypass roads that weave over and under each other, with an Israeli highway superimposed over a meandering Palestinian road emphasizing the different transportation sovereignties separating the two communities. In this context, a bridge is not simply a structure connecting previously isolated points or overcoming some natural obstacle. Instead, it becomes the boundary itself, splintering social space across the vertical dimension. The bypass highways enable the four hundred thousand Israelis living in the settlements perched atop hills to have freedom of movement while three million Palestinians are restricted to their enclaves. Israel's near total closure of the Gaza Strip continues to have severe consequences. It allows only limited quantities of construction material to enter, and then only under supervision, as the Israeli government maintains it can be used for military purposes, including fortifying tunnels. Such restrictions have largely prevented the rebuilding of the 17,800 housing units damaged severely or destroyed during Israel's 2014 military operation in Gaza, meaning that some 29,000 people who lost their homes remain displaced (Human Rights Watch, 2018).

Once one takes into account the fact that Israel controls the airspace over the entire West Bank, as well as the water and sewage systems below the surface, one can visualize and understand the administrative violence constituting the rule of government in the occupied territories of Palestine. The forensic gaze in this instance is one that attempts to reconstruct scenes of violence and violation as they are inscribed in physical artefacts and built environments. Weizman (2017) has termed this mode of intervention "forensic architecture" and has likened it to the humble, unassuming work of the building surveyor who always understands that a building is not a static thing, but is continuously in flux and undergoing transformation. Yet, many of a building's most

crucial changes occur out of sight, well below the threshold of everyday (or even enhanced) visual perception. It is this sense of partial undetectability that lies at the core of his approach.

Although forensic practice has largely served the state's interest, it holds radical potential. As Weizman (2014:9) explains:

Forensis is Latin for "pertaining to the forum" and is the origin of the term forensics. The Roman forum to which forensics pertained was a multidimensional space of politics, law, and economy, but the word has since undergone a strong linguistic drift: the forum gradually came to refer exclusively to the court of law, and forensics to the use of medicine and science within it. This telescoping of the term meant that a critical dimension of the practice of forensics was lost in the process of modernization – namely its potential as a political practice.

There is an important sense in which Weizman's approach speaks to the crisis of human witnessing as the primary means for generating evidence of violations of the law and the need to reconstruct criminal events from the traces that remain. He gives the example of how in the spring of 2009, the Hamas-run Ministry of Public Works and Housing began compiling an archive, entitled A Verification of Building-Destruction Resulting from Attacks by the Israeli Government, in the wake of an Israeli attack of Gaza from December 2008 to January 2009 in which 1,400 people were killed, 50,000 displaced and 15,000 buildings were damaged or destroyed. This "book of destruction" contains thousands of entries with each entry documenting a single building based on the devastation left behind, and is an example of "forensic architecture" at work. Every photograph displays a catalogue number spray-painted either on the walls left standing or on the rubble. Each entry contains further documentation describing the size of the plot, the type of construction technique and, if the municipality could get hold of them, blueprints of the building itself. Crucially, each file records how the damage was inflicted: "destroyed by armoured D9 bulldozers," "bombed from the air," "shelled from the ground," "directly targeted," "indirectly struck" or "controlled demolition by explosives." The state of the building is also described: "reduced to rubble," "partially destroyed" or "still standing but dangerous and requiring demolition." In doing so, the archive reveals "something of the history and economy of the area such as the fast and rudimentary building technique typical of refugee homes" and how the buildings' "fragile structural skeletons easily succumbed to the steel and explosives hurled at them" (Weizman, 2015:189). Thus, A Verification of Building-Destruction Resulting from Attacks by the Israeli Government poses urgent questions regarding control, power, and what constitutes an archive of conflict, while obliging us to reconsider issues of representation and truth.

A persistent theme is the extent to which forensic practice—one that has historically served the state's interest—can be subverted, reversed and transformed into civil testimony and political practice. Such forensic investigations have confronted critical contemporary issues like border regimes, climate change and urban warfare. With respect to climate change, Nixon (2011), for example, has drawn attention to the fundamental visual dynamics of material crises caused by the Anthropocene. The problem, as Nixon (2011:10) writes in his account of the structural violence of resource extraction and toxic drift, is that there is a 'representational bias against slow violence' in favor of spectacular eruptions and sensation driven events. The challenges are 'acute, requiring creative ways of drawing public attention to catastrophic acts that are low in instant spectacle but high in long-term effects' (see also Brisman, 2018). It is often the case that many environmental hazards resulting from industrial processes are slow moving, long in the making and observable only using certain forms of sensor technology. In her work on "dirty pictures," Schuppli (2016) has examined how polluted environments are immense, highly photosensitive arrays recording trace evidence of the violence caused by modern industrialization. As she explains:

The slow accretion of black carbon dust particles on Arctic ice sheets resulting in the phenomena known as "dark snow" is another case in point. Dirty pictures, such as these vast swathes of carbon-encrusted snow, are often "massively distributed in time and space" (Morton's characterisation of the hyper object) and thus exceed our capacity to grasp them by traditional documentary means. (Schuppli, 2016:205)

Schuppli, like Nixon, then, makes the radical claim that global warming and toxic ecologies are producing new optical regimes, and call for different conceptions of the visual, which can meet the demand for representing the 'slow violence' occurring across the surface of the earth.

The "left to die boat" case represents another example of how surveillance technologies have been repurposed strategically in order to expose the violence of the border regime. Here, sixty-three African migrants lost their lives while drifting for fourteen days in the Mediterranean Sea. To recount, in April 2011, a boat carrying the migrants from the port of Tripoli to the Italian island of Lampedusa ran out of fuel. This occurred at the same time as NATO's siege of Libya, so the area was full of military vessels. Movement on water leaves barely any trace, but satellite imagery was crucial in confirming the presence of a high number of ships in close proximity to the drifting migrants' boat. The probable drift path was calculated from historical patterns of the winds and currents, revealing just how close the migrant boat was to so many civilian and military vessels that ignored the plight of those on board. Only 9 of the passengers survived and they later recalled several encounters they had with others while adrift. These included a distress call they

placed via satellite telephone, as well as encounters with military aircrafts, helicopters, and ships, and various fishing boats. As Heller and colleagues (2014:640) explain,

the Italian and Maltese Maritime Rescue Coordination Centers, as well as NATO forces present in the area, were informed of the distress of the boat and of its location, and had the technical and logistical ability to assist it. Despite the legal obligation to render assistance to people in distress at sea enshrined in several international conventions, none of these actors intervened in a way that could have averted the tragic fate of the people on the boat.

The subsequent reconstruction by the Forensic Oceanography group, which began in 2011 as a research project by Lorenzo Pezzani and Charles Heller to investigate the militarized border regime in the Mediterranean Sea, used innovative visual methodologies to study the sea and capture those forensic fragments that lie at the edge of detection, hovering between visibility and invisibility, thereby generating evidence of human rights violations.

The politics of verticality have also been explored by geographers, particularly in the work of Graham (2004, 2010, 2018), who maintains that a two-dimensional map cannot convey the geopolitical realities of our times. Instead, the world and its divisions should be understood as a series of vertical strata that reach from the satellites orbiting the planet to the subway tunnels and bunkers deep under the ground. Crucial here is the transformation of Western military forces into high-tech urban counter-insurgency forces, which now regard the city and its inhabitants as targets that need to be tracked, scanned and controlled continuously. Such an understanding is indebted to the French cultural theorist, Paul Virilio, who has written extensively on how military "ways of seeing" have transformed social relations. According to Virilio, understanding warfare is of critical significance to understanding human history, more broadly. In Speed and Politics, for example, Virilio (1986) presents a "war model" of the evolution of the modern city—one organized around the need for defence and preparation for war. The central thesis is that the militarization of urban and political space, at large, and technological innovations, in particular, produces an acceleration of communication that plays a key role shaping social life and in altering profoundly our experience of the world. The importance of these arguments in criminology have been recognised by Wall and Monaghan (2011:241) in their account of drone warfare, technological politics and "cosmic control." Indeed, they have developed the concept of the "drone stare" to describe a type of surveillance that "abstracts targets from political, cultural, and geographical contexts, thereby reducing variation, difference, and noise that may impede action or introduce moral ambiguity" (Wall and Monahan (2011:250). The mixing of the means of communication with those of destruction has fundamentally altered the politics of warfare and empire. Such changes have not taken place all at once, but they do all entail the drive to gain heightened "observational advantage" (Wall and Monahan, 2011:241) that increasingly loses any dependence on a human viewer combined with the gradual transformation of warfare to a question of data management.

Building on Virilio's insights, Chow (2006:31) suggests "that in the age of bombing, the world has also been transformed into – is essentially conceived and grasped as – a target." The centrality of the "overhead image" to thinking through this concept of "the world as target" has since been developed by Parks (2013, 2016) in a compelling account of the frequency with which such imagery now circulates in our global media culture. Indeed, the proliferation of overhead imagery relates to a combination of factors, ranging from the commercialization of satellite and remote sensing technologies to the transformation of the Internet into a location-based web system, mobilizing consumer subjects into "militarized ways of being" (Kaplan, 2006:708). As Parks (2013:197 explains:

the overhead image refers to image-data that has been acquired by instruments onboard aircraft or satellites, downlinked to earth stations, rendered by computer software, and, in some cases, composited for the purposes of representing, viewing, and analyzing particular sites or activities on earth. The production of the overhead image is made possible by a vast and largely invisible communication infrastructure, which, I would argue, undergirds the capacity to imagine the world as a target.

Many of these developments have been driven by an "American military imaginary," where the "virtualization of violence" is a key dynamic (Gregory, 2013:182), and by a "scopic regime," through which drone operations take place (Gregory, 2011:190). Gregory (2011, 2013), a geographer, has also pursued the implications of the aerial gaze in late modern warfare and how it has evolved from earlier forms of colonial policing (discussed in more detail in Carrabine, 2018b). Indeed, these "aerial perspectives" have accompanied "the rise of an imperial world view" and it is clear that while they pre-date "high altitude surveillance by many centuries, the aerial viewpoints adopted and provided by the cartographers of state and empire established the systems of legibility that were central to the formation of modern forms of territorial power" (Adey, Whitehead and Williams, 2011:176).

In a related vein, Cosgrove (2001) has interrogated the significance of the elevated, cosmic viewpoint in an ambitious attempt to trace the long history of human attempts to represent the earth, from antiquity to the space age, and the changing mentalities that lie behind such efforts. Crucial to the "Apollonian gaze," Cosgrove (2001:xi) explains, is the way it "seizes divine authority for itself, radiating power across the global surface from a sacred center, locating and projecting human authority imperially towards the ends of the earth." These dynamics of surveillance and

conquest are embedded in the Western imagination and thought (see also Carrabine, 2018c) and while many geographers have been orientated upwards, even if looking down to the ground, others have sought to understand further the depth of power by looking below the earth's surface. The underground is indelibly tied to danger, risk and the unknown. It is no accident that "Radical political groups, characteristically using terror and violence as their weapons, are still known as 'underground' movements" (Ackroyd, 2012:12) and that the importance of the underground plays an increasingly prominent role in military strategy. Indeed, Bishop (2011) has analysed the US "Transparent Earth" project as a major example of how subterranean netherworlds constitute new frontiers in surveillance and military intelligence gathering. The initiative, as Bishop (2011:272) continues, is one seeking to extend observation and control:

More than half a century of advanced satellite episcopy has rendered the surface of the earth consistently and constantly visible and resulted in the concomitant defensive move to underground weapon systems, battlements and sites. Deep underground military bases (DUMB) provide the military's highly developed systems and technics of aerial observation with their biggest challenge yet, for they cannot be seen or interpreted with any sense of accuracy. To read beneath the earth's surface, the US military is investigating numerous strategies, including harnessing lightning (natural and artificial), radio signals and complex algorithms to 'see' through other sensorial means.

The use of these different sensory technologies to render a picture of that which cannot be seen speaks to how the desire for agency and control is both animated and frustrated by these attempts at mastery, generating a fear of and fascination with this very elusiveness. Interventions such as these are increasingly commonplace in a digital age, characterized by new communication technologies and products, such as cell phones, iPads, and new social media (e.g., Facebook, Skype and Twitter). In the next section, we turn to a discussion of the implications of a "digital society" before turning to a "criminology of the senses" as a pointer for where future developments might lead in a critically orientated visual criminology.

Digital Society

From Lombroso's efforts to catalog the "criminal man" through careful measurements and records of offenders' bodies to the anthropometric techniques and bureaucratic methodologies of sorting found in the vast collections of criminal photographs introduced by Francis Galton and Paris police clerk Alphonse Bertillon, archival visual media capture something important about the daily modern practices of policing, surveillance and criminal justice. The foundations of visual regimes, in their attention to the visual medium and its evidentiary and archival propensities, are

intertwined with the development of criminology as a discipline and its modern forms (Biber 2007, 2018; Finn 2009). Photography has been essential to work in visual criminology, with the camera a key technology through which to enhance the scientific qualities of surveillant data collection across time—from crime scenes to police stations and jails to border crossings and immigration offices to the manifold emergent public and private sites of CCTV and biometric recordings. With the arrival of the internet and vast digital storage capacities, there is an increased willingness to engage in self-securitization and surveillance by way of ubiquitous personal digital devices.

While critical surveillance studies have focused upon policing and militarization (see, e.g., Koskela 2006, Michel 2017, Wall and Monahan 2011), others emphasize the realm of biometric digitization (Magnet 2007) and algorithmic practices related to so-called "big data." Big data encompasses the rise of the digital collection, archiving and analysis of massive data sets drawn from a wide range of institutional fields: business, medicine, sports, science, and, most importantly for our purposes, criminal justice, in particular policing. Chan (2018: 58) argues that big data marks the blurring of digital and non-digital worlds with big data visualization best conceived as "a performance that simultaneously masks the power of commercial and governmental surveillance and renders information political" (see also Chan and Moses 2016, 2017). Data sorting along the lines of social inequality (Lyon 2007; Lyon et al. 2012) has been a longstanding concern of surveillance studies but new work, such as Browne's (2015) research on the surveillance of black bodies from the trans-Atlantic slave trade to the present and Wood's (2017) scholarship on antisocial media, gender and masculinity, deepen these analyses and also further connect visual criminology to critical criminology's critique of domination (see Brisman, this issue). Brayne (2017) insists that this work, such as that in relation to policing, has multi-level impacts upon society, where the kind of data collected, the methods used, and the interpretation of this work in predictive capacities is hardly objective:

Big data and associated new technological tools permit unprecedentedly broad and deep surveillance. By broad, I mean surveillance capable of passively tracking a large number of people. Information that would previously have been unknown to law enforcement because it was too labor intensive to retrieve is more readily available, and individuals previously unknown to law enforcement are now part of the corpus through dragnet surveillance and data collection by non–criminal justice organizations. By deep, I mean able to track one individual more intensively over time, including across different institutional settings. The intended and unintended social consequences of new surveillance practices have implications for social inequality, law, and future research on big data surveillance in other fields (996).

In many respects, what is required is a critical criminology of big data and the profound changes rendered by digital society (Walters 2003). Not least since knowledge itself has been transformed through digital technologies and the multidimensional networks that accompany them. Thrift (2006, 2007) has been at the forefront of attempts to understand what he terms "knowing capitalism," by which he means the way that economic value is derived increasingly from information as a source of profit. Internet behemoths, like Amazon, Apple, Facebook and Google, dominate the digital world and have fundamentally changed the ways knowledge is produced, so that power "now operates principally through modes of communication" (Lupton, 2015:22). Across a series of case studies, Powell, Stratton and Cameron (2018) have analyzed peer and corporate surveillance, crowd-sourced investigations and citizen engagements with "crime in real time," crime "selfies," "digilantism," "hashtag activism," social media hate, and "viral" justice. Taken together, the work reveals the extent to which digital technology is transforming everyday life and everyday crime.

Visual criminology has always been a marker for what possibilities lie *beyond* the visual. The surveillance and big data possibilities above point toward the ubiquitous ways in which digital devices can sense, document, record and archive. New technological arrivals point as well to the importance of affective and sensory life, broadly, in documenting and transforming the material realities and lived experiences that criminology engages (Young, 2010). Visual criminology will benefit from avoiding visual essentialism (the study of the visual in isolation or with a pure primacy, or, as Bal (2003) describes it, a privileging of the visual aspects of an object or even to the exclusion of all other senses) as few visual events are without sound, touch, smell, and other sensory aspects. There are a variety of fascinating recent studies that have taken up this sensory work.

Toward a Criminology of the Senses

Visual work in criminology has led to increasing exploration of the senses, more broadly, including acoustic, affective, haptic, olfactory and sonic approaches. Carceral acoustemologies of the past (Hemsworth, 2015) and the present (Paglen 2006; Russell and Carlton 2018) are focal points of recent work on the spatial geographies of prison. In her analysis of the historical records of Kingston Penitentiary in Ontario, Canada, Hemsworth (2015) demonstrates how sonic methods can help reveal much about carceral control tactics, such as the silent system of early prison governance, the sonic command of a prison bell sounding 32 times a day, or the imagined "conversation-tubes" of Bentham's panopticon. Sonic methods also reveal the tensions of subordination and small pockets of prisoner autonomy in the pacifying technologies of headphones, for instance, prized for the ability to help prisoners reclaim some spatial and psychic control, while also working to distract from larger problems of overcrowding and carceral

intrusion. Hemsworth (2015:28) draws our attention to voice recordings, ambient sound, echoes, and "aural exercises in deep mobile listening." Similarly, work by Russell and Carlton (2018) explores the effects and potential of counter-carceral practices against increased securitization and surveillance in carceral contexts. Investigating a number of historic feminist anti-carceral campaigns directed at women's prisons in Victoria, Australia, the authors reveal how sound produced by protesters on the outside (dance, music, noise, radio, etc.) in a variety of forms could intervene in dominant control narratives. They write,

By harnessing the mobile qualities of sound, activists infiltrated the prison and the airwaves, created lively shared experiences and appropriated the concrete wall to magnify protest effects the auditory space as 'a terrain through which acts of solidarity and resistance could be exercised', collaboratively, across the prison boundary (Hemsworth, 2015 95). Through the production of counter-carceral acoustemologies, demonstrators temporarily reconfigured the 'set rhythms' of the prison soundscape with new patterns and flows, thus revealing 'the historical and mutable nature' of that which is usually considered 'the way things are' (Cresswell, 1996: 26). The delineation of 'carceral' and 'public' space was rendered problematic and impermanent, and alternative spaces of resistance were momentarily made possible.

Soundscapes and sonic investigations are important and urgent new terrain, with recent work taking up various aspects of urban sound environments, anthropogenic noise pollution, and sound weaponization by the state (Garcia and South 2018; Atkinson 2007; Hayward 2012, Wall and Linnemann 2014).

In "The Smell of Power," Neocleous (2016) describes the expansive uses of olfactory senses and suspicion in his analysis of the political meaning of police sniffer dogs, who play primary roles in police stops and arrests. He argues that the visual, in the form of the gaze, has dominated surveillance research, with aural surveillance (e.g., bugging, eavesdropping, phone-tapping) close behind. Smell, as part of the state's sensory surveillance, however, has often been omitted and downplayed as essential to power. He finds "dogs are always already sniffing something" (2016: 12) and that the ever-expanding olfactory search for any variety of things that might be in one's possession transgress various legal and private boundaries. In short, "the sniff produces the subject" (2016: 13), opening up a permanent and ubiquitous police power having little to do with crime and everything to do with constructions of disorder. His work shares important themes with Smith's (2009) explanation of how race is made/constructed through problematic sensory assumptions, like smell.

Finally, Shalhoub-Kevorkian (2017) brings these various approaches together in a brilliant analysis of the occupation of the senses. Her work focuses on sensory technologies that manage language, sight, sound, space and time to the point of death in the colony, in this case, occupied East Jerusalem. She demonstrates how "[t]he colonial regime works to inculcate a sense of control among the colonizers, while instilling discipline and obedience among the colonized. Settler colonial aesthetic and sensory displays of power act as a mode of fascism that ultimately aims to render the colonized senseless" (2017: 1296). Here, as Shalhoub-Kevorkian insists, an account of the senses—and the myriad daily assaults upon them—is necessary in order to rethink our relations to domination and control, theorizing and criminology.

This work resonates with developments in geography that include an emerging commitment to non-representational (Thrift, 2008) or more-than-representational (Lorimer, 2005) theory, both of which offer ways of engaging with the visual that explore the affective, habitual, sensory and tacit aspects of experiencing space that rarely feature in more traditional, representational geography. Others have advocated "polyphonic methods" in an effort to extend more convivial and caring practices of listening that resonate with these more experimental methods, opening up a "sonic geography of voice" and a renewed focus on the politics of speaking and listening (Kanngieser, 2011). Likewise, Back and Puwal (2012), in their provocative call for a "live sociology," emphasise the need to rethink the sociological craft and forms of representation that are creative, imaginative and playful. Their manifesto arises directly from debates over empirical sociology's methodological crisis, which results from the emergence of sophisticated information-based capitalism and digital culture, discussed above. Back (2012:19), in a separate piece, contrasts this vision against "dead sociology," which tends to render the data it analyses (whether quantitative or qualitative) as lifeless, disengaged and parochial, in that it fails to recognize the vitality of the material and produces "fossil facts." It takes comfort from "zombie concepts" and is unable to grasp the dynamic, fluid, spontaneous nature of social life, whereas "live sociology" attends to the "fleeting, distributed, multiple, sensory, emotional and kinaesthetic aspects of sociality" (Back, 2012:28). In short, the proposal is one of expanding the sensory dimensions of sociological research, designing methods that are in tune with the social world and developing an array of vantage points from which to generate convincing, empirical accounts of social relations. It is a demand for a different kind of sociological sensibility, while retaining some of the reflexivity of previous approaches (e.g., Becker, 2007), and is one that is open to fresh ways of telling about society.

Conclusion

In this article, we have sought to identify the critical foundations of visual criminology in the well-established tradition of research on "crime and the media" and track some of the more recent

directions the "visual turn" has inspired in the discipline, indicating the kind of ambitious ideas and range of approaches currently deployed in diverse fields. It is clear that a growing and sophisticated set of concepts, methods and theories are being used to interrogate how the various optics of criminology and criminal justice (defined by disciplinary, institutional, and epistemological boundaries) are produced that inevitably bring certain claims, possibilities and principles into the line of vision, while obscuring others. They also give attention to how these optics are contested, transgressed and, on occasion, reversed. Appadurai's (1996:7) early use of the term "mediascape" captures this sense of transformation—as a space of global cultural flows—but Appaduari also made the crucial point that 'the imagination is today a staging ground for action, and not only for escape.' All the work discussed above engages with such a view and demonstrates the radical potential of doing so.

Moreover, we must become attentive to (multidirectional) assaults on the senses:

Modern 'maximum security' prisons and 'black sites', in which the sensory experiences of the occupants under the total control of the sovereign power, are particularly important loci for further analysis. Such practices as solitary confinement, sensory deprivation, sleep deprivation, enforced physical pain, waterboarding and the use of music in torture demand criminological analysis attuned to sensory and embodied aspects of crime.

(Shalhoub-Kevorkian, 2017: 1297)

If one has visited a courtroom, jail, police station, or prison tier, then one knows that the ethnographic details of such spaces are never reducible to the visual—or any one sense alone. There is evidently room for sensory engagements that give primacy to the embodied, haptic, sonic, spatial, temporal, visceral—modes of phenomenological immersion and immediacy that grow over time into patterned forces, institutions, performances, and practices of crime and control. As should now be clear, the new field of visual criminology goes well beyond an examination of the visual. It raises pressing questions about what should be the focus and the methods of contemporary criminological research and theorizing, while alerting us to how the discipline can remain vibrant and alive to the latest technological developments, cultural processes and social change. And it does so always with an "eye" for critical criminology's deep critique of control, power and resistance in the formation of crime, law and the state.

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¹ Because there is an ongoing blockade of Gaza, the tunnels are the means by which essential building material, food, fuel and medicine are brought into the area without too much scrutiny. Weapons can also be transported through

these tunnels. As such, they are regarded by Israel as a serious security threat and suspected sites are targeted continuously for demolition (Weizman, 2007:254-258).

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