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‘All knowledge begins with the senses’¹: Toward a sensory criminology

In press, *British Journal of Criminology*

ABSTRACT

Visual criminology has established itself as a site of criminological innovation. Its ascendance, though, highlights ways in which the ‘ocularcentrism’ of the social sciences is reproduced in criminology. We respond, arguing for attention to the totality of sensorial modalities. Outlining the possible contours of a criminology concerned with smell, taste, sound, and touch—along with the visual—the paper describes moments in which the sensory intersects with various phenomena of crime, harm, justice, and power. Noting the primacy of the sensorial in understanding environmental harm, we describe an explicitly sensory green criminology while also suggesting the ways that heightened criminological attention to the nonvisual senses might uncover new sites and modes of knowledge and a more richly affective criminology.

Introduction

In describing the recent attention given to the dynamics and power of the visual and the image in the contemporary criminological imagination, Carrabine (2015: 103) notes that the ‘field of visual methodology is the site of innovative interdisciplinary scholarship’. Carrabine is correct, of course, as any effort to survey the field of criminology and other social sciences will quickly reveal; there is no paucity of innovative research that deals with or employs the image. The emergent visual criminology has much to offer, then, particularly when considering the various ways that deviance, crime, and punishment are given meaning through images and iconography (see generally: Brown 2009, 2014; Rafter 2014; Brown and Rafter 2013; Carrabine 2011, 2012). Because crime, harm, justice, and power are experienced in intensely visual ways, it is understandable that criminology has adopted and explored perspectives and methodologies that are attuned to what Carrabine (2012: 463) has called the ‘ascendant power of the spectacle’ in order to locate meaning in moments of crime and justice.

¹ This title is a quotation from Kant (1998).

While it is therefore fitting that so much contemporary innovation in criminology is primarily interested in the visual dynamics that condition and configure human interaction with the world, this is not sufficient. It is necessary to also consider the ways in which *nonvisual* sensorial interaction with that same world also condition and configure human interpretation and meaning-making. This is, of course, an unsurprising suggestion. Within sociology, as Borer (2013: 965-966) notes, there has been a ‘resurgence of studies depicting the experiential dimension of city life as lived and felt through the body’s five senses. Those interested in urban experiences – and those producing less place-based works of sensory scholarship – have tried to move beyond the presumed Western bias that tends to grant vision and visibility a privileged status over the other senses (Classen 1997; Low 2012, 271–3).’ Borer draws on Lefebvre (1996, 147) in arguing that the negotiation of the urban and its ‘world of strangers (Lofland 1973)’ requires the urbanite ‘to hear, to touch, to taste’ and to ‘gather these perceptions in a world.’ Goffman’s (1967) ‘public encounters’ says Borer, are ‘produced through active encounters with the cultural and built environments’ using the senses.

Obviously though importantly, the senses interact: ‘one sensory modality can enhance the response of another if both are active concurrently’; for example, ‘the acoustic environment in which we consume food can influence our food choices, rate of consumption, and hedonic experiences’ (Kantono et al. 2016: 1111-1112). Sound frequencies, lighting levels, colour differentiation, temperature variability and so on, are all now manipulated to create optimum ambient environments for consumption, business meetings and leisure activities. The way we see the world may be visual, but this is not in isolation from other sensory cues and conditions: Lindstrom (2005: 153-156) notes that forms of sensory marketing and branding are now used to build a multisensory experience embracing not just the senses but rituals and symbols.

From early Greek philosophy onward, there has been a peculiar—albeit understandable and, it seems, inescapable—tendency to value the visual over the other senses. Khazam (2014) deconstructs the ‘hierarchy of the senses’ that has stood since Ancient Greece, with western society ranking sight, hearing, touch, taste, and smell ‘according to their “perceived epistemological importance”’ (Buccafusco 2007: 1140). The Greeks ‘privileged sight and hearing over touch, taste, and smell because sight and hearing were thought to provide the best objective information about the world’ as they could remain untainted by any necessity of immediate proximity to their sources (Broussard 2008: 720)- a requirement for the senses of touch, taste, and smell. In these cases,

proximity ‘was thought to generate “not just physical but moral danger” as it “imped[ed] the transcendence of the body’s corporeality and [thus] the possibility of objective philosophical inquiry”’. Although this hierarchy has been historically and socially constructed, with the bases for the favoured and the unfavoured having no real essential foundation, ‘sight’ has routinely been privileged as ‘the noblest of senses’, a tendency influencing criminology today as much as it influenced Plato, Socrates, and Descartes. That tendency, though, has not been without critique. Jay (1988; 1991; 1995; 1999) has decried the ‘ocularcentrism’ that characterized scopic regimes in the wake of Cartesian thought, while writers like Rukavina (2013) describe the ways in which ocularcentrism is reflective of not only the privileging of one sense, but a broader and more problematic privileging of Western thought². Here we also note that Kant (1998), in the quotation borrowed in our title, located the origins of ‘all knowledge’ in ‘the senses’: while, then, historical sensory hierarchies have played a role in the ocularcentric configuration of knowledge, there is ample evidence suggesting recognition of the importance of the *totality* of the senses as the essential site of knowledge production.

Here we do not call on visual criminology to abandon its *raison d’être* but to continue to acknowledge, as Brown and Carrabine (2019/in press,) have done, the need for serious criminological attention to also be paid to the important sensory inputs made by the nonvisual. To that end, the present paper will begin by offering a brief overview of the ways that criminological inquiry, law and power, and considerations of space, are already quietly attuned to the significance of sensorial perception, although primarily ocularcentric. We then describe some examples of contemporary phenomena that would be particularly well-suited for explicitly nonvisual analysis and highlight recent research that follows promising nonvisual sensorial pathways. Following that, we note the unique relationship between nonhuman environmental and ecological space and the sensory and establish the ways in which green criminology might be uniquely suited for a criminological enterprise that expands its aesthetic analysis beyond the limitations of the visual. We conclude with a sketched outline of an analytical, theoretical, and methodological agenda that we hope offers useful suggestions for a sensory criminology that gives the vast sensorial fields of the nonvisual their due.

² It should be noted that Rukavina concludes that, in some ways, resisting ocularcentrism, at least in philosophy, results in a sort of ‘anti-ocularcentrism’ that is just ‘another way of seeing’ so that anti-ocularcentrism is (or becomes) ‘ocularcentric after all’ (Workman 2016).

Criminology(ies), Space, and the Senses

The present paper is, in some respects, a contribution to the agenda suggested by Hayward's 'Five Spaces of Cultural Criminology' (2012), in which he offered both a critique of criminological engagement with 'space', and a framework for more imaginative ways of thinking criminologically about the intersection of geography and crime. Among Hayward's 'five spaces'—more-than-representational spaces, parafunctional spaces, container spaces, virtual/networked spaces, and acoustic spaces—our interest is primarily in the first and the last. While each of the five spaces proposed by Hayward involves a degree of sensorial interaction and experience, a framework attuned to a consideration of acoustic spaces provides a fertile starting point for a distinctly sensory criminology (one that has been partially taken up by Garcia Ruiz and South, 2018 and Millie, 2017). Drawing on Campbell (2012), Hayward employs 'more-than-representational spaces' to call for serious consideration and incorporation of 'the experiential, affective, and inter-material aspects of space' (Hayward 2012: 449). Emerging out of debates within cultural geography over the theoretical and political potential and utility of nonrepresentational theory (NRT) —which is largely concerned with the embodied worlds of experience and performance rather than the textual world of representation (Lorimer 2005)—theories of space as *more-than-representational* urge us to consider the experience of subjectivities while retaining an insistence on the significance of representation. Joining Campbell and Hayward, then, we endeavor here to sketch out a criminological agenda more rigorously attuned to the embodied and sensorial dimensions of harm, power, crime, and control.

This earlier work appears to have left its mark; since 2012, criminologists have followed Campbell's and Hayward's calls in considerations of the dynamics of security (Schuilenburg 2017), gangs and youth culture (Ilan 2015; Fraser 2013; Muncie 2014), environmental harm (Brisman et al. 2014; Ferrell 2013), and the relationship between criminology and cartography (Kindynis 2014), to name but a few examples. Thus far, though, Hayward's 'five spaces' have been employed primarily in the further review of compact issues already familiar to the cultural criminological imagination. This is, to be clear, a good thing: as Hayward describes, and as any degree of engaged observation will indicate, criminology has had a troubled relationship with the political and social dynamics of space dating back to the Chicago School's theories and methods of mapping and explaining spatial differentiation. We at once, then, celebrate the evident legacy

of Hayward's and Campbell's calls while simultaneously noting that there remains work to be done. In our view, some of that work consists of expanding 'the five spaces' of cultural criminology to include the interior and always-affective spaces of the senses. Or, perhaps rather than expansion, we can think of the five *interior* sensorial spaces as mapping over the five *external* (though also affective) spaces described by Hayward. Transposing internal and embodied sensorial spaces (sight, sound, taste, smell, and touch) over and across the external spaces elaborated by Hayward offers a new layer to the map of cultural criminological thought, new and intensely affective sites of analysis that we feel strengthen cultural criminology's already well-demonstrated commitment to creative ways of thinking about crime, harm, control, and power.

In addition to responding to Hayward's 'five spaces', this paper also responds to Millie's (2017) call for an aesthetic criminology, in which Millie joins earlier suggestions offered by Young, who describes the ways in which visual criminology 'frequently construct[s] [images] as objects of analysis rather than as constitutive elements of the discursive field' (Young, 2014). Millie suggests an aesthetic turn for criminology, calling on criminologists to 'be concerned with' the 'sights and sounds and smells' of phenomena and with the 'emotive and affective responses to sensory encounters'. Here, Millie draws on the foundations of cultural criminology laid in Katz's seminal *Seductions of Crime* (1988). Katz, for his part, displays intense interest in what Ferrell (1992) calls 'the sensual details' of the 'immediate, interactional dynamic' through which crime, harm, and justice are constructed. Millie, then, joins Campbell, Hayward, Katz, Ferrell, and others in providing a fertile starting point for what we propose here. One significant point of divergence, though, is that Millie is (rightly) interested in an *aesthetic* criminology, one that is most fundamentally concerned with 'taste' not in the sensorial sense but in the cultural sense. An aesthetic criminology such as the one proposed by Millie would locate its central interest in the ways that the lines demarcating 'high' and 'low' culture are constructed and employed in and through the various phenomena of crime and power. As Freeland (2012: 399) has described, the field of aesthetics is 'consistently focused on "higher arts" such as painting, sculpture, and music, while denigrating the cultural products that address our "lower" senses, ones more typically associated with appetites, such as taste, touch, and smell'. Illustrating this point in what are widely considered to be two of critical theory and philosophy's greatest contemporary contributions to the study of aesthetics, *Dissensus* (2010) and *Aesthesis* (2013), Ranciere limits his analysis almost entirely to the visual. This is offered not to note a shortcoming in either book, but only as evidence

of the ways that an analysis of 'aesthetics' is, seemingly, almost destined to continue to privilege the visual. While Millie demonstrates, then, the need for an 'aesthetic criminology', we find it important to suggest that more sensorial criminological variants might benefit from an approach that seeks to avoid the high-low cultural binaries and 'visuocentrism' (Freeland 2012: 399) of traditional studies of aesthetics.

Ocularcentrism and Sensorial Social Science

Outside of criminology there is no paucity of work that has adopted a broader interest in the sensorially nonvisual and contributed to criticism of the ways in which the privileging of the visual is regularly connected to a privileging of Western thought, epistemology, ontology, and cosmology. Summarising the arguments of historian Martin Jay, Warnke (1993: 287) describes ocularcentrism as the 'epistemological privileging of vision that begins at least as early as Plato's notion that ethical universals must be accessible to "the mind's eye" and continues with the Renaissance, the invention of printing, and the development of the modern sciences'. Largey and Watson (1972), nearly fifty years ago, examined the sociological significance of 'odors' in relation to the social definitions that influence moral status, stereotyping and avoidance/attraction, and hence personal and group interactions. In anthropology, there has been significant research into the various ways that cultural expression is sonically undertaken and what the sound and noise of culture might mean for ethnographic engagement (Erlmann 2004a, 2004b; Feld and Brenneis 2004; Feld 2012; Spray 2011). Other studies have explored the anthropology of smell (Moeran 2007; Kenna 2005; MacPhee 1992), of taste (Sutton 2001; Lalonde 1992; Stoller 1989; Falk 1991), and of touch (Blake 2011). While anthropology has made significant headway in undertaking a disciplinary approach to research that seriously considers the importance of nonvisual sensory inputs (Classen 1997), we also point again to cultural geography, which has become more widely sensorial, leading to influential and compelling work on 'soundscapes' (Schafer 1993; Smith 1994; Waterman 2000) and the permeability and relations between the various senses (see generally: Bal 2003). There is also recent work on the particular soundscapes of carcerality and carceral spaces (Hemsworth 2016; Rice 2016) which has already been taken up by some criminologists interested in the interplay between carceral landscapes and soundscapes (Russell and Carlton 2018).

Sensing Crime and Law

While law, as described by Lam (2012), is in many ways intensely ocularcentric, the substantive corpus of law frequently belies a tendency to also consider the nonvisual. In particular, ‘quality of life’ codes and legal regimes often account for the nonvisual dimensions of life with provisions determining permitted levels of what may be experienced as ‘offensive’ odors and sounds. As Garcia Ruiz and South (2018) describe, laws against ‘noise pollution’ indicate the peculiar position of sound as an invisible pollutant. Codified steps to outlaw offensive odors—laws which often find their roots in miasmatic theories of disease and public health—similarly indicate a legal or official interest in various dimensions of nonvisual sensorial experience and subjectivity. The idea of the military ‘cordon sanitaire’, for example, is borrowed from the French term for the public health measure of establishing a quarantine zone (Atkinson et al. 2017: 446). Both, for various purposes, aim to separate human populations in order to prevent opportunities for touch and oral communication. ‘Quality of life’ regulation and law, then, plainly addresses something that exists dynamically outside the strict confines of the visual. Like all controls, though—with a foundational interest and purpose located in the maintenance of hierarchical social and economic relations—these sensorial legal and regulatory regimes function primarily to draw boundaries between the ‘civilized’ bourgeoisie and ‘uncivilized’ dangerous classes. In our view, then, law and its supporting practices substantively reflect the various ways in which the senses are mobilized in establishing and enforcing an aesthetic order often favorable to the aims of power and capital.

Here we can consider the rhetoric employed in mediated descriptions of spaces like homeless encampments in the United States or United Kingdom, or migrant camps in continental Europe, which are routinely described as harboring or producing ‘bad smells’ or ‘foul odors’. One report from the Calais migrant encampment in France, published in *The Guardian*, opens by employing a description of the olfactory sensation upon entering the camp: ‘The first thing that hits you is the smell: of unwashed bodies, dirty clothes, and desperation’ (Topping 2009). There are signals here of social class dynamics (which themselves indicate a certain employment of a distinctly colonial sensory imagination); and references to ‘unwashed bodies’ and ‘dirty clothes’ convey an intentionally sensorially-loaded message about difference and marginality. This, in itself, is of course not new: as Bradley (2016) shows, ‘Ancients also used their eyes and ears to diagnose bodies or matter that did not conform to the expectations of society’ and ‘examples of aversion to unwanted, unwashed and unsavoury bodies were legion in classical antiquity’. However, the *Guardian* reporter’s inclusion of the odor of ‘desperation’ engulfing the Calais

encampment seems to add a dark affective layer to the sense of smell: is there really such a thing as the smell of desperation? If so, what does it really smell like? How might we know it?

As many have noted, images and our perception of them are not static or without conditions. Just as there is no objective image, there is no *real* or objective ‘smell of desperation’. For all that we are guided by our senses, they do not dominate us – we can ignore them and make the ‘visible’ socially *invisible*, we can employ our own olfactory navigation to suppress awareness of smell, a socially induced *anosmia*. For personal and political reasons, we may wish to avoid encounters with uncomfortable realities and therefore adopt techniques of avoidance and evasion which enable us to avoid data from our senses about ‘invisible crimes’ (Davies et al. 2014), such as clusters of human misery or signs of environmental damage.

Olfactory, tactile, auditory, gustatory, and visual data, as they arrive in our internal affective spaces, are creations of an incalculable range of factors that include the conditions of their production, the historical context of that production and dissemination, and the cultural dynamics of their intake or consumption. Put simply, sensory information is given meaning through a complex system of interpretations, encounters, and relations. It would seem, then, as though the nonvisual sensorial is every bit as ripe for criminological analysis and engagement as the visual, although to date there remains little work in criminology that gives adequate attention to nonvisual sensory phenomena and its role in the dynamics of crime and justice (for one exception see: Li 2014). Just as with the visual, though, criminology should be mindful of the presence of conditioning factors when considering the relationship between smell (or taste, touch, or sound), power, and harm. These conditions are, as noted, a product of historical context and over time, as humans and environments have interacted, so have they changed ‘our sensory and perceptual landscapes’ (Hoover 2018: 53). Most profoundly this has occurred since the industrial revolution which ‘split ... the sensory past and present’ as ‘technology overburdened the senses (e.g. the noise of industry, the visual blight of pollution)’ and medical records began to document the ‘notable increase’ in sensory disorders ‘associated with modern living’ (Hoover 2008: 54; Jutte 2005).

A Sensorial Criminological Agenda

Having established the many ways in which criminology—along with other social sciences—has adopted or developed an ocularcentric position and analytical approach, and having elaborated on

the ways and moments in which nonvisual sensorial interaction with the world contributes significantly to the ways in which we think about, analyse, and experience the complex dynamics of crime, control, and power, we now turn our attention to the ways in which new sensorially-attuned research agendas may be set or pursued within the broader paradigm of critical criminology. For criminology, the significance and power of the senses is particularly obvious when they are considered in terms of their removal, loss, degradation or indeed, their weaponisation. In what follows, we offer a description of the moments in which human senses are implicated in criminologically relevant phenomena and the moments in which criminology has already demonstrated some attention to the power of nonvisual sensorial modalities.

Sound

If the 'visualist tradition' (Idhe 2007: 13) was dominant from the ancient world to the modern, it was not without some accompanying recognition of the importance of sound. As Hendy (2013: x) points out, recognizing this can help convey some understanding of the 'drama and struggle of human history', not least 'how we learned to overcome our fears about the natural world'. By the Victorian era, developments such as 'the invention of the stethoscope in medicine, industrial noise' and new technologies such as the phonograph (invented in 1857 as a device that could imprint paper or glass with lines representing sound waves) were opening up a new 'auscultative age' (Picker 2003: 7). The telephone, the radio and means of recording and reproducing sound followed in the next decades (Calanchi 2018: 1) with transformative impacts on social interactions, including those based on crime and control (Novak 2018).

Among the vast fields of nonvisual sensorial knowing, sound is perhaps the most robustly addressed in criminology. This is, for the most part, because of cultural criminology's rich history of engagement with music as a subcultural product that both reveals and performs the processes of meaning-making essential to cultural criminological inquiry. For all its cultural ubiquity and familiarity, music is, however, just one expression of the sounds surrounding us in all environments from the womb onwards (Partanen et al. 2013). Socialization and education are multi-faceted but the vocal power of instructions, encouragements and reprimands from parents and teachers is significant; workplace and school bullies employ shouting and swearing as well as physical contact (Vaidyanathan 2010); singing and cheering become ways of expressing belonging and pleasure (Pearce et al 2015). All have profound cultural significance, but sound and noise are

of particular criminological relevance when used to dehumanize, punish or torture. Loud noise, discordant sounds, amplified music have all been employed in interrogations and punishments and as ‘noise is a prime source of orientation to our surroundings, both removal of sound and / or overload of aural input are disorientating and discomfoting’ (Garcia Ruiz and South 2018). Shalhoub-Kevorkian (2017: 1297) describes the manipulation of all aspects of the sensory environment used in official regimes of punishment (prisons) and unofficial regimes of disappearance (‘black sites’) as delivered through ‘solitary confinement, sensory deprivation, sleep deprivation, enforced physical pain, waterboarding’ and so on. Building on this and similar work, Brown and Carrabine (2019) draw attention to work on ‘carceral acoustemologies’ (Hemsworth 2015; Paglen 2006) that reveals ‘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.’ As with other impositions of control, possible responses include resistance and subversion, and it is worth noting how sound offers an accessible form of counter-control, being cheap to produce and capable of audible magnification both as a human product or when mediated through technology. Brown and Carrabine (2019) note how Russell and Carlton (2018) have described ‘feminist anti-carceral campaigns’ in Australia in which protestors outside the prison used noise, radio, music and dance to challenge and, for a time, reconfigure ‘the “set rhythms” of the prison soundscape with new patterns and flows.’

Outside of the confines of the prison or the black site, police regularly employ sound as a means of social control and in the production and maintenance of order. As Linnemann and Turner (2018) note, police have routinely weaponized sound—in the form of LRAD crowd control technologies, ‘shot-spotter’ surveillance systems, and concussion devices or sound cannons—in order to govern space and produce order. There is a process here of both the amplification of ‘force’, as well as the amplification of ‘forces of nature’ for the purposes of social control and police power. Control technologies take the elements of our environment – water, light and sound – and weaponize them in support of police and military power (Garcia Ruiz and South, 2018: 3).

Smell

According to Khazam’s discussion of the ‘hierarchy of the senses’, outlined earlier, ‘smell’ “has been marginalized because it is felt to threaten the abstract and impersonal regime of modernity by virtue of its radical interiority, its boundary-transgressing propensities and its emotional

potency.” (Classen et al., 1994: 5). Hence it ranks “low in the hierarchy of the senses,” a position which, says Khazam, has left a ‘distinct impression on many aspects of the law (Miller, 2005: 349).’ In the arena of policing, Neocleous’s essay *The Smell of Power* (2011), offers a critique of the training and use of police ‘sniffer dogs’, employed by police power to ‘sniff out’ crime and criminals. Along the way, Neocleous notes that surveillance and security studies, like criminology (as elaborated above), suffer from a ‘focus on...sight and vision’. Here Neocleous opens the door for a critique of police that recognizes that the ‘the ubiquity of the panopticon as a theoretical tool for grappling with the powers of discipline and punishment’ has arisen at the expense of meaningful critical engagement with sensory fields outside of ‘the visual’. Neocleous works to set surveillance studies onto a more sensorially complete path by drawing attention to the ways in which power is constituted and exercised across the sensorial fields of the nonvisual. Shear (2017) has also taken up this line of inquiry, considering the ways in which the police sniffer dog expressed a certain kind of ‘state rationality’ in its role in enforcing apartheid in South Africa.

Smell, then, is routinely implicated in the construction of the dangerous other and the policing of social boundaries, as evidenced in the examples of migrant encampments offered above, but also in examples of state apartheid and the routine police technology of the sniffer dog. Smell is also employed, though, as a site of resistance to state power. Take, for example, calls made by the revolutionary anarchist group Crimethinc., which encourage readers to stop bathing and wearing deodorant as a form of political resistance (Collective 2001: 121). Here we can locate an example of the recognition by a distinctly lumpen subculture that smell is, indeed, an intense marker of bourgeoisie inclusion, and so to transgress the boundaries of acceptable human odor is to mark oneself as of another social class or position. This subversion of the appropriate and expected ‘ensemble of corporeal practices which produce and give “a body” its place in everyday life’ (Turner 2000: 492), and the role of ‘the different senses’ and emotions, is the basis for various kinds of chosen and/or attributed states of deviance and stigma (Weinberg and Williams 2005: 315).

Taste

Having elaborated the relationship between smell and crime, it follows we might now turn our attention to taste. In many ways, the relationship(s) between taste and smell, crime and control, is (are) always already intertwined, owing to the biological and cultural relationships between those

two sensory fields. The sorts of media-driven narratives of the odorous migrant ‘other’ described above, for example, appear to have as much to do with the smells produced by the culinary expressions and practices of the Other as they do with the odours produced as an unintended result of the conditions of life in contemporary migrant settlements. Similarly, as Fukui (2017) describes, the culinary traditions of the ‘smelly migrant’ mark the ‘most subversive of all migrants’, and ‘the fear of the other is often expressed’ in relation to culinary cultural practice. As Fukui notes, the borders of cultural belonging are often policed along the lines of culinary practice, with ‘distaste’ functioning to socially manage ‘ethnic excess’ and establish the boundaries of what is ‘tolerably ethnic’. Taste—and its related olfactory dimension—then, is an important dimension of the cultural politics of space, marking it as a sensorial field worthy of serious critical criminological attention.

Like smell, taste is not outside the ambit of policing and punishment, and so should not remain outside the scope of criminological inquiry. Here we can consider police technologies like pepper spray and tear gas that are designed for a calculated sensorial attack. Taste and related fields can also, though, be the *basis* of crime and of punishment. Foods that are legally unfit for consumption may be sold with the addition of flavourings and ‘clouding agents’ that obscure the taste and smell that would normally warn the senses (Johnson 2014; Kilcast 1996). It should not be under-estimated how relevant this is, in terms of both evolution and criminal behaviour, to the avoidance of poisonous substances. As punishment, the withholding of food and water, or spoiling that which is supplied, has been common for centuries though it is now condemned under humanitarian law (Ripley 2011; Barclay 2014). According to Barclay, providing ‘Tasteless food as punishment is nothing new: Back in the 19th century, prisoners were given bread and water until they'd earned with good behavior the right to eat meat and cheese’. Today, ‘In many prisons and jails across the U.S., punishment can come in the form of a bland, brownish lump. ...Even though it meets nutritional guidelines, civil rights activists urge against the use of the brick-shaped meal.’ The human capacity to ‘taste’ craves variety, so repetition of the same bland taste on a daily basis can become depressingly monotonous, constituting a routinized and systematic mode of sensory deprivation.

Touch

Finally, we turn briefly to touch. If touch feels more immediate or otherwise different from the other sensorial modalities discussed above, it is likely because of its materiality: tactile encounters

are, perhaps, the most direct connection we have to the material world, and our other senses often act in anticipation of a tactile encounter. Like each of the other human sensory modalities described above, touch is also deeply and inextricably implicated in the exercise of power and control. While Althusser (2006) locates the transformation of ordinary subject into subject of law in the interpellative act of the police verbal command, we note the significance of the moment in which freedom is transformed into detention in the tactile physical police encounter. While other sensorial modalities are routinely employed in control and punishment, as in the cases of prison food or sonic compliance devices, Woodward and Bruzzone (2014) note the ways in which police exercise ‘soft power’ through haptic contacts that allow police to control crowds and subjects. Of course, more crude and brutal touch is also employed as a tool of state and police power, most notably in the intimate physicality of material police violence: a police fist smashing into a face implicates all five senses, but none more clearly than touch.

Touch and the tactile are also, though, entangled with the dynamics of power, harm, crime, and justice in less immediate and less immediately recognizable ways. Here we might consider fingerprinting and other forensic technologies which seek to establish their own forms of formal knowledge based on tactile encounters. And, of course, the boundaries of touch are key concepts in law, particularly in laws governing assault and battery generally and sexual violence more specifically. Tactility and touch, then, like all other human sensory modalities, are inextricably woven into the fabrics of society, law, power, control, and harm, yet remain relatively unexamined as objects of theoretical criminological inquiry. Woodward and Bruzzone (2015: 540) note similarly that, in affect theory, there is ‘near-total absence of engagements with touch as a form of governance’, a point with which we concur and extend to criminology.

Sensory Totality

While each of the sensorial modalities described above—sight, smell, sound, taste, and touch—operates within its own register, a sensory criminology would perhaps be most effective were it to grapple with the totality of our sensory perception. For Bal (2003), who has been instrumental in urging visual studies in the same directions we presently urge criminology, this sensory overlap and interplay—what we might also call *sensory totality*—is captured as ‘synaesthesia’. In criminology, Young (2019) makes an important start down this holistic path by describing the significance of ‘atmospheres’ of crime and criminal justice. What is most suggestive here for a sensory criminology are the ways in which sensorially *detuned* knowledge of the affective spaces

of crime and justice often fails to capture the ‘texture or intensity’ of those spaces. Young suggests a reorientation, one that works to reveal and account for the atmospherics that condition and configure the spaces, sites, and meanings of crime and justice. Here, then, Young again suggests that criminology should move away from approaching sensory artifacts as objects, treating them instead as potential encounters with affective meaning.

Approaching the sensory spaces and phenomena of crime, harm, and justice from this starting position, we contend, allows for and encourages more affective and meaningful encounters: ‘atmospheres’ are already always spaces configured in the totality of sensory information, and so cannot be easily reduced to ‘the visual’, ‘the tactile’ and so forth. Attention to ‘atmosphere’, moreover, suggests that a sensory criminology such as that called for here might find a particularly fitting home in green criminology, which is already uniquely attuned to the material and affective atmospherics of environment and ecology. Finally, while a *synaesthetic* approach is certainly useful in describing the confluences of human sensory perception, *atmospheres* offer a framework that retains the possibility of sensory realms outside of or beyond the human. Below, then, we outline the ways in which an atmospherically-minded sensory criminology might complement green criminology.

Sensing Environmental Harms and Crimes

The environments—urban or otherwise—in which we exist are apprehended and experienced in the complex interaction of our senses. It seems, then, that harms and crimes against the environment might offer a fitting starting point for the development of a distinctly sensory criminology. Yet, as argued here, investigations of the effects of modern industrialization and the ‘treadmill of production’ (Stretesky et al. 2013) need to be more attuned to the sensory. This relates to the incidence and causes of ‘sensory disruption in modern living’ and resulting ‘sensory inequities’ (Hoover 2018: 53). Hoover introduces the idea of sensory inequity to ‘describe variation in sensory environments based on socio-economic status’ meaning that environmental harm and injustice, locally and globally, may result in inequity in sensory loss. For example, ‘individuals with reduced means (due to socio-political factors) are regularly exposed to unhealthy levels of pollution which causes olfactory dysfunction and ensuing inequitable negative outcomes across multiple domains of health’ (Hoover 2018: 59). Much sensory loss is invisible and various causes should be added to the field of investigation of ‘invisible crimes’ already routinely

undertaken by green criminology. A sensorial variant of green criminology might, for example, consider ‘odourless’ or ‘silent’ environmental harms alongside ‘invisible’ harms. Young (2019: 13), moreover, describes the ways in which analytical attention to ‘atmospheres’ ‘invites us to extend and deepen the work of analysis to include both human and non-human bodies and elements’, and so a sensory criminology might also aid in the development of criminological knowledge of harms experienced by animals other than humans.

Visual and nonvisual modalities of sensory perception are not only complimentary, they are also inextricably linked in ways that allow one input to condition another. What we smell is often conditioned by what we see, what we see is conditioned by what we hear, and so forth³. What matters most, though, for present purposes, is what is constituted in the totality of our sensory modalities; it is through sensorial immersion that ‘the environment’ emerges in the social and criminological imagination. It follows, then, that a sensory green criminology would (or should) arise to consider human-environment interactions as entirely configured by our sensory perceptions. While it is our position that criminology writ large would benefit from increased attention to the nonvisual sensory world, we suggest green criminology in particular as a fitting site for engagement with the nonvisual. Social/human experience of the environment and ecology (and, it follows, of harms to environments and ecologies) is not simply visual, and so it is only reasonable that we seek new modes and directions of criminological inquiry that foster and explore that recognition.

The need for green criminological engagement with nonvisual perceptual modalities can be further illustrated by considering those moments in which environmental harms (or, in some cases, crimes) are initially perceived. Three examples may be sufficient. The wildfires that raged across the moorlands outside Manchester, in England’s northwest during the summer of 2018, led to residents beyond the perimeter of the fire reporting that they had been affected by the fires before any flames were visible. As reported in the Manchester Evening News, one resident noted the ways in which the *sound* of the fire caused an affective fear response: ‘It’s getting a bit frightening...we can literally hear it crackling’ (Williams 2018). Similarly, the major spill of chemicals used in the processing of mined coal into West Virginia’s Elk River in 2014 was initially noticed not by inspectors, but by residents who noted the noxious *smell* drifting from the river (Williamson 2014). Or we can turn to the ongoing water crisis in Flint, Michigan, where residents

³ For a thorough theoretical description of these inter-sensory relations see: Bal 2003.

had regularly expressed concern over the *odor* and *taste* of municipal tap water before the extent of the problem was fully understood or revealed (Brisman et al. 2018: 189).

Our aim here also includes the recognition that human experiences of *non-urban* space—including rural and suburban space, and the nonhuman spaces of ecology and environment—are every bit as stimulating and active across the senses as the urban. The experience of immersion in the natural world is – and always has been - intensely sensory. The taste and smell of ‘fresh air’, the uninterrupted landscapes of the countryside, and the feel of the forest floor beneath the feet are all variously offered as benefits of escape from the city. All of this recognizes a point that is important to remember - as Hoover (2018: 53) puts it ‘While the human environment is simplistically described as a linear progression out of nature into built spaces, the human ecological niche that shaped our senses is highly complex and the environment to which our senses were tuned is vastly different from the one we inhabit today.’

To move forward—to reconcile the ‘ecological niche that shaped our senses’ with the one that we now occupy—requires a criminological approach sensitive to a broader range of sources of influence and impact on behaviour and experience than traditional criminology recognizes. A ‘green cultural criminology’ (Brisman and South, 2013, 2014; McClanahan, 2014) has been proposed as a theoretical and methodological orientation that applies cultural criminology’s fundamental concern with culture and meaning to the global problems of ecological destruction described by green criminology. Our sensorial engagement in and with the worlds of nature and environment is conditioned by cultural products, positions, and forces, so the addition of a clear sensory dimension to green-cultural criminology seems appropriate. Such a perspective could connect with the work of others such as social historians, poets, anthropologists and physicists who have contributed to ‘the new frontier of “sensory history”’ (Hendy 2013: x).

Within criminology, it would seem likely that cultural and green criminologies are the most fertile grounds available for the exploration of a sensorially-engaged criminological approach, not least in their openness to connections with art and performance (Campbell, 2012; Ferrell and Sanders, 1995; Brisman and South, 2013), interdisciplinarity, and considerations of other-than-human, non-speciesist interests. For example, connections could be made with feminist post-humanist explorations of ‘the power of sound to foreground affectivity and the dissolution of boundaries between humans, technologies, and other-than-human environments’ (Tiainen 2017: 372). A green cultural criminology seeking new forms of expression of concern for ‘multi-species

survival on a “wounded earth” (Haraway 2016: 10)’, could explore sensory performances that employ sound, touch, taste, smell and the visual devised in ways that challenge ‘western anthropocentrism, human exceptionalism, and passive nature’ (Tiainen 2016: 361). A green cultural criminology can also connect to relevant sensory work in literature. Hsu (2016: 807) for example, reviews novels focused on themes of environmental justice that connect smell, health and ‘stratified air’, observing that such novels can ‘leverage naturalism’s aesthetic concern with smellscapes to depict lived experience in unevenly distributed conditions of environmental debilitation, illuminating critical intersections between the environment, race, and the disabling geographies across the twentieth century.’

A more sensorially engaged green cultural criminology would follow the path cleared by Hsu, Tiainen, and others in order to consider the affective sensory experience of ecological engagement beyond the boundaries of the visual. To date, though, even the most pathbreaking and creative work in green cultural criminology has privileged the visual. If green cultural criminology were to pursue a sensorially-attuned ‘aesthetic criminology’, we might uncover new ways of exploring and exposing environmental harms that have, thus far, eluded the discipline.

Conclusion: Senses, Affect, and Criminology

Save for some notable exceptions, discussed earlier and throughout, criminology appears to have been surprisingly unconcerned thus far with the ways in which we *experience* phenomena—that is, the ways in which our senses *connect us* to crime. Excitement, fear, emotional highs and lows have all been explored as responses to criminal opportunity or victimization (See generally: Katz 1988; Lyng 1990, 2004a, 2004b; De Haan and Loader 2002; on ‘fear of crime’ generally, see Hancock 2017) but the *intertwining* of our emotions and our senses has been missed. This is important because, as Rago (2014) points out, ‘our senses play an integral role in our emotional processing, learning, and interpretation. ... Our emotions and sensory cortices can impact one another in both directions. ... our emotions and senses are very tightly intertwined. What we hear, see, taste, smell, and touch can provide us with information on how to feel. In the other direction, what we feel can be heavily influenced by what our senses are taking in’ (Rago 2014). In sociology, neurosciences and psychology (Cunningham and Weinel 2016, Juslin 2013, Palmer et al 2013, Schindler et al 2017), links have been made between the senses, perception, how we live our lives and the additional ‘sense’ of appreciation of life, art, music – culture – developed as ‘aesthetic

appreciation' (e.g. Iseminger 1981; Budd 1996). In criminology, Millie's (2017) outline of an 'aesthetic criminology' has come closest to making such connections, although as described above Millie is primarily concerned with developing a criminology of aesthetics that wrestles with matters of taste and space in the city, which are already regularly given primacy in cultural criminology. There may be, as Brown and Carrabine (2019: xx) note, other ways to analyse connections between the sensory and aesthetic forms but via approaches that highlight not appreciation but *depreciation*, linking back to the use of sensory technologies and regimes of control, as discussed earlier. Thus Shalhoub-Kevorkian (2017: 1296, emphasis added) writes of the 'occupation of the senses' in occupied East Jerusalem and how 'Settler colonial aesthetic and sensory displays of power act as a mode of fascism that ultimately aims to render the colonized *senseless*'.

A sensory criminology of the type we have called for and outlined here might emerge in method, theory, or both. As described throughout, a critical sensory criminology could potentially attend to the sensory modalities of the olfactory, the tactile, the auditory, or the gustatory expressions of either state and police power or resistance. Such an approach might consider the previously mentioned ways in which the boundaries of social inclusion, cultural belonging, and citizenship are policed through scent, taste, feeling, sound, and the visual alike. Criminological ethnographers have long worked to convey in their writing the affective total sensory experience of being in a place, or of witnessing phenomena, but that is generally left as pure description. Here we suggest that a sensorially attuned and interested critical criminology should seek to transcend that tendency by striving instead to search for *meaning* in the odorous, the tactile, the sonic, and the gustatory as rigorously as in the visual

Pink (2015: 8) describes the contours and potential of a 'sensory ethnography' and offers a robust methodological framework that 'departs from the observational approach' in order to 'insist that ethnography is a reflexive and experiential process through which understanding, knowing, and (academic) knowledge are produced'⁴. Quoting Bloch (1998: 46), Pink notes that ethnographies attuned to sensorial perception produce and communicate 'the most profound type of knowledge'. Put simply, 'doing' sensory ethnography puts the ethnographer out into the materiality of the world, with all of its tastes, smells, sounds, and touches, and then asks the

⁴ Here, Pink joins a crowded field of ethnographers *outside of criminology* (see generally: Spinney 2009; Gandy 2017) that have already moved in the directions in which we presently urge criminology.

ethnographer to translate experience into sensorially holistic knowledge. A possible technique for this sort of sensorially informed ethnographic method is suggested by the ‘walking ethnography’ described in Ingold and Vergunst (2008). Affirming the assertion that walking provides the opportunity for ‘mobilising all of our senses of smell and touch as well as vision’ (Ingold 2011: 42), the volume details the ways in which reflexive physical immersion in the field of research—embodied, in their formulation, by walking—offers a more holistic experience to a researcher, leading inevitably to more rich and expressive insight. Criminological ethnographers, then, might work to develop research plans and agendas that center ethnographic practices like walking (and other forms of sensory immersion) in order to reveal important nonvisual sensory phenomena. Another possible methodological avenue for the development of a sensory criminology is revealed by Redmon (2015), who suggests a ‘documentary criminology’ that is at once productive and analytical: Redmon suggests that criminologists both produce and analyze documentary film(s) as important potential locations of criminological knowing. Here, Redmon argues that ‘the substance of sensory knowledge is the fleeting patterns of lived, aesthetic experiences recorded as movements, sounds, colors, and atmospheres’, a point that suggests a sensory criminological method that is at once a ‘practice-oriented approach and a hermeneutic endeavor’ (Redmon 2015: 426-427).

A sensory criminology might also be developed outside of the (admittedly tight) confines of practices like ‘documentary criminology’ and ‘walking ethnography’. As we have described throughout, crime and power routinely materialize in the senses, in ways that could—and should—be not only noted but *analysed* by criminologists. We envision, then, a criminology that employs sensory data as more than adjectives, instead allowing the senses (and the dynamics of sensory perception) to move from fodder for description to sites of meaningful analytical engagement. A sensorially attuned criminology, then, could emerge simply in the sorts of questions criminologists seek to respond to. Such a criminology might, for example, ask questions such as: what does it mean to be deprived of the senses? What does it mean to know a toxic environment through nonvisual perception? How are the sensory delights of the world distributed across populations? In what ways are the senses marshalled in the service of power against populations or individuals? By asking these sorts of questions, or by otherwise attending to the powerful role of the senses in meaning-making, a sensorially-attuned criminology might, as Young (2014) suggests, shift the criminological treatment of sensory experience from ‘object to encounter’. By moving the

nonvisual sensory experience from the margins to the center, criminology might, we contend, find new meaning, new ways of communicating harm and power, and a new affective richness.

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