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POLICING SOUNDS

Abstract

Sound is always present in exercises of police power, whether produced through sonic weaponry, routinized interventions into social life, or contributions to everyday soundscapes. The use of sound is productive of how police produce, govern, and intervene in space. Scholars in geography and adjacent fields have grappled with sound in ways that engage with or have the potential to inform the study of police within the discipline. Attention to sound adds texture to understandings of state power as expressed through the contested sonic politics of policing. This article explores sound and policing through their territorial, affective, atmospheric, and political effects.

Keywords: sound, sonic geographies, police, affect, racism

1. Introduction

There are a number of videos online that document the use of long range acoustic devices (LRADs) by police against protestors. An LRAD's 'warning' or 'deterrent' tone, which is sometimes used as a weapon to disperse crowds, sounds like a car alarm when recorded. In person, the 'warning' tone is capable of inflicting permanent human hearing loss in matter of seconds. Even at close range, however, the LRAD's powerful sound, which can reach 160 decibels (Pesko-Yang, 2020), quickly exceeds the upper limits of a recording device's input threshold. Exceeding these limits results in a distorted audio signal when recorded, but does little to increase the overall volume of a recording as the peaks of sounds waves are cut to fit within the limits. Playback of sounds that reach these upper recording limits will sound similar in volume to recorded music or radio broadcasts, which are treated with audio effects that allow the recording to consistently reach those same peaks. Capturing the magnitude of these sonic weapons requires specialized equipment like a noise meter or specialized phone application. So while protestors have experienced nausea, dizziness, headaches, and permanent hearing loss due to LRAD exposure (Parker, 2018), these damages can escape easy capture unlike other forms of spectacular police violence. Even in its most weaponized form, sound can be an elusive aspect of policing.

With American policing currently facing a crisis of legitimacy galvanized by documentation of its routine and racialized violence, the weaponization of sound offers a harder-to-detect form of violence at a distance. The invisible manipulation of air through sound waves and the internalization of its effects allowed the New York Police Department (NYPD) to argue in court of their LRAD usage: "the officers' creation of a sound that plaintiffs happened to hear cannot be considered 'physical contact'"¹ (Tempey, 2017). While the NYPD ultimately settled the LRAD lawsuit with a large payment to protestors, the ephemerality of sound makes it difficult to perceive, record, and make sense of compared to other technologies of policing. As Feigenbaum and Kanngieser (2015) argue, compared to sound, "[t]he tangibility, or more so the tactility, of other control technologies makes them easier to examine both forensically and semiotically" (p. 81). Even fleeting contact with an LRAD during a protest, which may not even stand out among the cacophony of sounds that a digital recording might capture, can incur ringing in the ears. This ringing, medically classified as tinnitus, can be a permanent but invisible effect of sonic weaponry, which evades measurement by medical apparatuses. But the effects can only be communicated through the subjective experience of a person experiencing tinnitus (Atkinson, 2007), unlike other forms of injury that leave visible marks on the body.

The creation and manipulation of sound by police is not limited to the use of military weaponry like LRADs and flashbangs, but also encompasses quotidian expressions and augmentations of police power. As part of their use of discretionary powers to achieve and maintain territorial orderings of social life, police regularly deploy sonic techniques to achieve their goals. The warning tone of an LRAD, a loud explosion from a flashbang, the command to "freeze," the passing siren of a patrol car, a pop song played on repeat, the quiet shuffling of boots on the ground, the questioning of people on the street, or even the intentional maintenance of silence all enroll people into a set of relations with the police and each other mediated through sound. If space is produced through unfolding sets of relations, sound is an important component that produces and mediates

¹ Similar logics were used to defend Israel's nighttime deployment of low-altitude sonic booms over the Gaza Strip, arguing that they were not violations of international law because they did not constitute attacks, much less attacks on civilian populations Schuppli (2014). The case drew from a legal precedent where American forces deployed sonic booms over Nicaragua, which were deemed not to constitute state force Schuppli (2014)

these relations and reorients their connections with each other (Revoll, 2016). These relations are not limited to a perceiving cartesian subject, as the manipulation of sound waves—a material effect in itself—leaves forensic traces in, for example, a ruptured ear drum, the vibration of a microphone’s diaphragm, or a predictive algorithm’s flagging of a suspected gunshot. Sounds affects and enrolls subjects and objects, both human and non-human, differently and unevenly based on their material capacities to be affected, their standing within social structures and hierarchies, and their orientations towards other modes of social and material differentiation. Additionally, sounds spill out beyond its intended targets, becoming a shared experience and material effect of the uneven geographies of police power.

In this article, I show how scholars in geography and adjacent fields have grappled with sound in ways that engage with or have the potential to inform the study of police within the discipline. On the one hand, I draw from a growing body of work in geography that theorizes the relationship between sound and the production of space, place, and territories (Boland, 2010; Kanngieser, 2012; Paiva, 2018; Simpson, 2017). On the other hand, I draw from the vibrant field of sound studies, which has similarly theorized the relational and spatial implications of sound (LaBelle, 2019; Sterne, 2012). I argue that sound as a material process is central to territorial and racialized practices of policing in the United States. In order to make this argument, I focus on sound as the subset of vibrational forces that are audible (Goodman, 2012) or felt by humans² and manipulated through practices of police power. Sound, in fact, is always present in exercises of state power as expressed through the police. Understanding how police deploy, manipulate, and interpret sound elucidates how they express power in and through processes of gentrification, surveillance, racialization, and territorialization, which are all explored below. My focus here is on formal police institutions in the United States in order to show how sound contributes to their particular forms of racialized, gendered, and classed practices of social and territorial control. In order to theorize these connections, I turn to scholarship on the atmospheric, affective, and territorial dimensions of sound, showing how these discussions have the potential to contribute to understandings of police power. Then I highlight scholarship that explicates how police deploy sounds, govern sounds, and intervene in contested sonic politics. But first, this article proceeds by sketching out the growth of police studies within geography.

2. Policing, space, sound, and everyday politics

While spectacular acts of violence are often the means by which popular imaginaries come to confront police power, geographers have elucidated the quotidian practices of policing that saturate everyday life. Practices of policing inform the logics governing the spaces of schools (Nguyen, 2015), cars (Bloch, 2021b), neighborhoods (Jefferson, 2016; Kaufman, 2016), airports (Adey, 2009), homes (Cuomo, 2019), and so many other everyday spaces, both public and private. Police studies in geography deploy expansive critical and humanistic methodologies to understand policing, leveraging a range of ethnographic, socio-theoretical, and mixed methods approaches (Bloch, 2021a), uniquely positioning geography to attend to “the complex realities of police and policing today” (Kaufman, 2020). Some have argued for an expansive understanding of ‘policing’ in order to

² Some scholars of sound studies deploy a similar human-centric definition, while others take up a more expansive definition that recognizes the many inaudible vibrations that constitute the world (Sterne, 2012). While I recognize possibilities opened by analyzing a wider spectrum of vibrational forces (Goodman, 2012), here I focus on those police vibrations that are sensible by humans in their varying sensory capacities.

recognize the growth of actors and institutions that participate in the governance, regulation, ordering, and securitization of people and places (Yarwood, 2007), or what Ruth Wilson Gilmore (2011) has theorized as the rise of “guard duty.” In this article, however, I focus on ‘the police’ as represented by the uniformed agents of the state, which Mat Coleman (2016) has termed ‘state power in blue.’

Quotidian practices of policing structure and make possible contemporary forms of neoliberal racial capitalism. In the United States, uniformed police can trace their roots to slave patrols, which were made up of poor white people who defended the property interests of rich white enslavers (Du Bois, 1998). From its inception, US police reified and exploited racialized categories of difference that have always been central to processes of capitalist accumulation (Robinson, 2000). More broadly, policing maintains capitalist property relations constructed through ongoing and historic forms of accumulation and dispossession (Neocleous, 2021). In the post-Reagan era of the “anti-state state,” characterized by shrinking social services and expanding apparatuses of securitization, police become tasked with managing crises precipitated by this “systematic abandonment” (Gilmore and Gilmore, 2016). The management of surplus populations and social crises through policing is always a territorial project. It is territorial insofar as it requires the defense of private property, the intensive management and surveillance of targeted spaces (Vitale and Jefferson, 2016), the reduction of friction of the movement of capital (Correia and Wall, 2021), and the ongoing dispossession of property and wealth (Baker, 2021).

Recognition of police as violence workers of the state necessary for the perpetuation of racial capitalism (Seigel, 2018) is the context from which growing calls for abolition arise. Abolition, then, does not simply call for the end of policing in isolation. Rather, it is an invitation to rethink the social relations that make policing and incarceration as the primary political responses to so many spiralling social crises. As Ruth Wilson Gilmore (2022) argues—invoking her well-known definition of racism—abolition targets “processes of hierarchy, dispossession, and exclusion that congeal in and as group-differentiated vulnerability to premature death” (p. 475). As Gilmore makes clear, abolition points towards liberation, which is necessarily a process of place-making. Drawing from Gilmore’s conceptualization of “freedom as a place,” Celeste Winston (2021) looks to Black geographies that show models of a world without police. Winston writes, “Black geographies of freedom from policing include community spaces of service provision, support networks, and accountability measures that already challenge and exceed the limitations of state surveillance and routine violence” (p. 816). As I show in this article, sound is a central to practices of place-making. Research into sound, then, gives deeper insights into the interlocking processes of oppression that abolition targets and helps point to modes of resistance and liberatory practices of place-making of which sound is necessarily a part.

In the wake of racial justice protests in the summer of 2020, calls for abolition reached popular audiences through media and governmental channels. The sharing of police misconduct through social and traditional media galvanized these protest movements by revealing the racialized violence of policing, especially as it leads to extrajudicial killings. The analysis of video documentation often focuses on visual evidence—and rightfully so—but what can the sounds of policing reveal about the quotidian violence of police power? Indeed, sound haunts the study of police, reverberating across social relations, used as a means of control, to elicit affective and emotional reactions, and to preemptively justify actions. Attention to sound has the potential to add texture to the complexities of power, which may seem unequivocal when expressed through corporeal police violence, but which can also, as in the case of sound, “harm you without seeming ever to touch you” (Gordon, 2008: 3). As Michelle Duffy et al. (2016) argue, sound resists analytic binaries of conscious/nonconscious, cultural/material, physiological/psychological, and biological/social, occupying both poles at once. How, then, can human geographers be theoretically

and methodologically attuned to the work that sound does in the territorial project of policing? As I argue below, a focus on sound not only allows us to understand it as a phenomenon in itself, but also helps us understand other forms of ‘softer’ police power. This understanding also shows how sound can be leveraged as a site of resistance against the violence endemic to the police.

3. Territories, atmospheres, and affect

Sound is a ubiquitous presence in the spaces of everyday life—creating a patterning of social life that contributes to processes of territorialization and place-making. Anja Kanngieser (2019), for example, shows how sound is used to bring “bodies, object, and infrastructures” into new formations as a geopolitical strategy of territorial control by states (p. 237). So too do the everyday practices of social life produce distinct sonic territories. Daniel Paiva and Herculano Cachniho (2022) show how street footballers produce territories through sounds, voices, rhythms, and silence that differentially demarcate access and use of space. Extending Kanngieser’s work on the worldmaking power of the voice (2012), Paiva and Cachniho argue that non-vocal human sound making is also generative of “micro-worlds and territories” (p. 122). Similarly, Rowland Atkinson (2007) theorize the ways that sound serves territorial functions by producing and intervening in sonic ecologies. A sonic ecology, according to Atkinson, “has a tendency for repetition and spatial order which, while not fixed, also displays a patterning and persistence, even as these constellation and overlapping ambient fields collide and fade in occasionally unpredictable, multiple or purposeful ways” (1906). For Brandon LaBelle (2019), reconfigurations of space through sound are political processes of “acoustic territorialization.” According to LaBelle, everyday life is made up of acoustic territories full of meaning, but also ambiguity owing to the fluid and non-signifying qualities of sound. Police contribute to the production of these acoustic territories of everyday life, using sound to enforce territorial differentiation and social control, often by intervening in or contributing to sonic ecologies.

While sound contributes to processes of territorialization, it is also fluid and leaky, leading some to theorize its atmospheric and ambient qualities. Feigenbaum and Kanngieser (2015) theorize the use of sound by police as a form of ‘atmospheric policing,’ referring “to those technologies and techniques for controlling populations that are fundamentally predicated on their relationship with air” (p. 81). The shriek of an LRAD, an explosion of flashbang, an order yelled by a police officer, and “the distinctive sound of acceleration from a Ford Crown Victoria or Chevy Caprice” car (Bloch, 2021b: 148) all exemplify sudden disruptions by police into the atmospheric sounds of everyday life. These atmospheric ruptures are attempts to achieve particular territorial orderings through sonic interventions. Accounting for how these disruptions intervene in the production of space requires not only attention to them as individual events, but also their relationship to the patterned soundscapes of everyday life. In some instances, these disruptions might be so anomalous that they inspire curiosity, reflecting a trust in the police to restore social order. In other spaces, the sound of a particular model of car accelerating, as cited above, might signal the inevitability of a “demeaning and often violent interaction with a police officer assigned to the local gang unit” (Bloch, 2021b: 148). Attending to these subtleties and differences necessitates an “expanded conception of listening” that recognizes how sound can act “as a force that disrupts and reworks common spatial concepts” while connecting and affecting various bodies (Gallagher et al., 2017: 620).

The ability for sound to create an immersive atmosphere that unevenly enrolls those within it has led a number of scholars to theorize the affective capacity of sound. Drawing from Spinoza as read by Deleuze, Michael Gallagher (2016) argues that sound acts as a “repetition that unfolds

difference” (p. 47) in its affective capacities as “an oscillating difference, an intensity that moves bodies, a vibration physically pushing and pulling their material fabric” (p. 43). Similarly, Steve Goodman (2012a) uses a Spinozan-Deleuzian understanding of affect to theorize a ‘politics of frequency’ as sound becomes a weaponized vector of power, producing an “ambience of fear and dread” or a “*bad vibe*” (p. xiv). Susan Schuppli (2014) writes of the anxiety and dread produced through the incessant high-pitched sound of otherwise invisible drones—an extreme example of a *bad vibe* faced by those under military occupation, which has resonances with the incessant sounds of police helicopters in some US neighborhoods. These accounts invite us to grapple with the intensive qualities of sound whose effects and affects, which, while often unruly and unpredictable, make significant contributions to the acoustic territories of everyday life. Considering the institutionalization of proactive, community, and broken windows policing that ramped up in the 90’s, which “succeeded in bringing police deeper into the everyday lives of residents in major cities across the United States” (Bloch, 2021a: 3), attention to the sonic qualities of those interventions directs us towards expanded understandings of the affective, atmospheric, and territorial possibilities of power expressed through sound. In this context, the affective qualities of sound encourage us to think beyond signifying regimes, decentering the individuated human subject to understand the affective materialities of sound (Gallagher, 2016). In a similar vein, Keith Woodward and Mario Bruzzone (2015) describe the use of touch by police as a means to modulate protestors’ behaviors. The soft touch of an officer is experienced by one of the authors as a moment that precedes subjection—as a force that “enrolls the materialities of the individual body without referencing spontaneous political imaginaries” (p. 543). This example elucidates how touch as a form of power is “felt with particular bodily intensities and how power’s experiential intensities are mediated through the practices of adjustment, improvisation, bargaining, and so on” (Anderson, 2017: 504). In the use of sound, policing find similar affective possibilities for expressing power at a distance.

In a constantly unfolding world that exceeds our capacities to theorize it, the experiences and materialities of sound can resist familiar representational modes, requiring expansive forms of witnessing and presenting (Dewsbury et al., 2002). Lacking stable referents in their modulation of social life, the sounds of policing understood as territorial, atmospheric, or affective help us theorize the depths to which policing regulates, surveils, and modulates the spaces of everyday life. Just as qualitative methods have opened research to broader understandings of everyday police power that extend beyond police-collected ‘crime’ data, attention to sounds promises new directions for geographic police studies. In reckoning with the use of sound by police, which is the subject of the next section, it is important to recognize that processes of signification and interpretation are exceedingly unstable when it comes to sound. In other words, we can expect reactions to and interpretations of police sounds to be highly uneven and differentiated.

4. Police sounds

Starting in the 1980s, as “[h]ip-hop music morphed into ethnographic analyses of racial criminalization” (Jefferson, 2020: 64), the genre began to regularly incorporate sounds of the police into its compositions. Songs decrying racialized police violence frequently incorporated sampled police sirens and dispatch calls, as well as skits featuring fictional cops disrespecting, harassing, and arresting songs’ protagonists. NWA’s 1988 “Fuck tha Police” (1988) includes a fictional trial between the group and the LAPD, interspersed with skits featuring sirens, police knocking on a door to serve a warrant, and commands being yelled at the rappers. It is emblematic of hip hop records that examine anti-Black violence by mimicking the ‘cop voice’—a white supremacist weaponization of speech deployed by police against racialized subjects (Stoeberl, 2018). Other

sounds of police power also become central to hip hop soundscapes. In KRS-One's 1993 "Sound of da Police," (1993) the rapper begins the song with a chorus that mimics the sound of a police siren: "Woop-woop! / That's the sound of the police / Woop-woop! / That's the sound of the beast." The jarring, high-pitched yell of an imitated police siren brings an instantly-recognizable *bad vibe* to the fore. Later in the song, KRS-One plays on the sonic similarities between the words "officer" and "overseer," connecting the practices of the police to their roots in slave patrols. Police harassment, violence, and anti-Black racism continue to be common tropes in hip-hop, often brought to life through sonic means. The genre offers what is likely the most sustained engagement with the sonic qualities of police interventions that have become regularized occurrences for the racialized and classed populations of American cities³. Owing to its roots in sampling, the use of skits that express ethnographic details of daily life, and its origins in the some of the most heavily policed urban areas in the world, hip hop regularly recreates the sonic textures experienced by those occupying spaces targeted by police power. Hip hop can be understood as a challenge to the carceral logics that structure Black communities from which the genre emerged (Shabazz, 2021). More recently, Vince Staples, in his 2014 "Hands Up," (2014) deploys a swirling, slowed down siren that dances around the beat, creating a tense, atmospheric backing track over which he raps about the anti-Black racism of various policing institutions around Los Angeles. After memorializing Deangelo Lopez and Tyler Woods, two Black men killed by the police, Staples summons the police in the song's chorus: "Yeah, put your hands in the air / N**** freeze, put your hands in the air."

Police commands to "freeze" and "put your hands up" cut through what was previously a generalized sonic ambience to interpellate particular individuals as subjects. For Althusser (2001), this hailing, and its recognition, transforms individuals into subjects of the state. Famously, Althusser illustrates the process of interpellation using the figure of the police officer who yells "Hey, you there!", to which the individual turns in recognition that they are indeed the subject of police power. Fanon (1982), writing nearly two decades earlier, makes a similar observation in regards to the objectification of Black people. For Fanon, this objectification arises in relation to whiteness and is made legible through the enunciation of racist harassment and epithets. In policing, we find this twin movement of subjectification and objectification, which attention to the sonic qualities of police interventions further elucidate. Here we see the worldmaking power of the voice, where both the content of the message and sonic inflections are central to expressions of that power (Kangieser, 2012). In an instructive example, Voigt et al. (2017) analyzed the body camera audio of nearly one thousand traffic stops made by Oakland police, finding "that utterances spoken to white community members are consistently more respectful" than those spoken to Black people (6522). The authors, however, only analyzed the textual content of those interactions, suggesting that "speech intonation and emotional prosody" could deepen the analysis (6525). Here we find resonances with qualitative research that only transcribes sounds in order to unveil their chains of signification without attention to the qualities of those sounds. While the subtleties of speech in police interactions might seem prosaic, it is important to note that verbal commands are an early step in use of force guidelines within police departments⁴. In this continuum, verbal commands follow officer presence, which marks an important shift from atmospheric sounds to subjectifying sounds. The subject of training, these commands are ostensibly a means to assert control over a situation through compliance and de-escalation, but they can also be the beginning of an escalation

³ Others have argued for seeing hip-hop as a form of ethnographic research (Beer, 2014), useful for triangulating with other research data (Jaffe, 2014)

⁴ See, for example: <https://nij.ojp.gov/topics/articles/use-force-continuum>

into conflict and violence. Numerous videos of police brutalizing individuals circulating online find officers repeatedly yelling “stop resisting!”, becoming a trope for memes about police violence. Academic scholarship, however, has had less to say about the use of verbal commands by police, whether in their subjectifying, differentiating, or de/escalating powers expressed through sonic means (see Stoeber, 2018 for a notable exception).

Compared to the subtleties of sonic atmospheres and voice commands, the weaponization of sound has received more scholarly and media attention, including the deployment of LRADs and so-called flashbangs or stun grenades (Altmann, 2001; Parker, 2018; Volcler, 2013). Similar to LRADs, flashbangs have found their way from military usage into police department arsenals. Often used during drug raids, flashbangs emit a loud sound and flash of light intended to disorient those subjected to it. While considered a less-lethal weapon, they can still cause serious injury, including burns and permanent hearing loss, or even death in some cases (Nehring, 2015). When deployed to disperse protestors, they can precipitate chaos and confusion as individuals scatter, attempting to flee from the potential harms wrought by these unknown explosions. I distinctly remember my first experience of police flashbangs as their explosions echoed across building fronts in a dense downtown area and protestors ran in fear, many with their eyes full of tear gas and pepper spray. Earlier in the day, numerous corporate storefront windows had been smashed by protestors, making me wonder if protests had escalated into a bombing campaign—a possibility that elicited fear and confusion. The intensive and sometimes confusing relations brought on by flashbangs are examples of what Woodward (2014) calls “state affects,” which “are expressed in confused encounters where thought struggles to make sense of affective relations” (p. 23). These state affects, as Woodward (2014) argues, differentially enroll individuals, producing a ‘politics of confusion’ that resists reification as a legible entity that we might identify as the state. Instead, state affects are administered experimentally and received experientially, which, in the case of sound weapons, may leave a permanent reminder of their impact in the form of tinnitus. This damage, as Ash (2015) argues, is deeply material—the result of sound “altering the material thresholds of organs in the body” (p. 89) whose only trace is the perception of a constant ringing in the ears. Sonic weapons, as outlined in the introduction, can leave permanent scars while appearing benign relative to other police weapons.

The damages that sound can inflict on an individual are not limited to hearing loss, but can also cause or evoke mental trauma. In some cases, these effects are used as a means to punish, harass, or otherwise inflict damage on individuals. For example, people held captive in an Oklahoma jail⁵ claim they were subjected to repeated renditions of the children’s song “Baby Shark”—a song that was also used to deter homeless populations in Florida (Oladipo, 2021). Using music as a form of torture has been used extensively by the US military. Targets of the U.S. government’s so-called “global war on terror” have been subjected to unrelenting “loud music” in order to “harass, discipline, and in some cases “break” detainees,” creating atmospheres that some have claimed constitute torture (Cusick, 2008: 2). The weaponization of sound has been the subject of extensive military research, experimentation, and deployment (Volcler, 2013). Considering the historically tight coupling of domestic police forces and the US military (Neocleous, 2021) and the stockpiling of military grade weapons by police departments, it is unsurprising to see parallels in the use of sound between the two. Further research, however, could go further in elucidating the affective and traumatic implications of everyday sounds produced and modulated by police, which we often see evidence of within the confines of jails. For example, Rashad Shabazz (2014) writes of Angela Davis’s time in the New York Women’s House of Detention: “The ubiquitous concrete amplified

⁵ US jails are most run by local law enforcement agencies, including police and sheriff’s offices, and are used to contain people with short sentences or those awaiting trial.

the sounds of the jail. Screams, key jingling, doors slamming were a constant soundtrack” (p. 589). Here we find the worldmaking power of non-signifying sounds in jail, which are made possible and punctuated by the subjectifying sounds of police and guards.

5. Policing sounds

In addition to its uses as a tool of police power, sound is also a target of the uneven, discretionary powers of policing. Discretion is central to the exercise of police power, as police decide, for example, who to stop and search based on ‘reasonable suspicion’ or other subjective interpretations that exceed any narrow adherence to the rule of law (Neocleous, 2021). Owing to its non-signifying qualities and differential reception by perceiving subjects, how sound is interpreted and acted upon by police differs widely based on a number of contextual factors. In some cases, discretionary decisions based on the interpretation of sound reflect existing biases of police officers (Stoever, 2016). Racial bias in policing is already extremely difficult to ‘prove’ within existing legal disciplinary frameworks (Coleman and Kocher, 2019)—verifying the use of sound as a justification may prove even harder. Consider, for example, the ruling in the Supreme Court case *Kentucky v. King* (2011), which justifies the warrantless search of private residences based on the interpretation of sound and smell by police. In that case, the court ruled that the smell of marijuana combined with sounds from behind a door that police interpreted as evidence being destroyed justified the search, thereby bypassing constitutional rights to privacy. The ability to use sound and other non-visual senses to justify actions makes the purview of police discretion increasingly amorphous and complex (Lally, 2022a). Considering that police institutions are steeped in a culture of lying in order to protect their own members (Goldstein, 2018), the use of non-visual sensory inputs to suspend a person’s constitutional rights is particularly concerning. Further research could reveal the uneven geographies of policing as they intersect with the expansive discretionary powers offered by the policing of sound.

Police discretion in relation to sound sometimes intersects with community concerns related to divergent interpretations of ‘noise’—a situation that can reveal deep cultural fissures, especially in gentrifying neighborhoods. In these cases, we see how sound leaks across existing boundaries of private property and is unevenly experienced (Peterson, 2017). Margaret M Ramírez (2020), for example, theorizes gentrifying Oakland as a borderland, where new arrivals call on the police to regulate soundscapes that have long been part of cultural life in those neighborhoods. Ramírez writes: “These sonic geographies that have made Oakland hum, the aural landscape of generations of Black life in Oakland, have become criminalized, deemed unwelcome” (p. 159). In New Orleans, Trushna Parekh (2015) found that gentrifiers “were used to having control over the noise level of their surroundings and would not hesitate to call the police” when music that had been part of the neighborhood for generations was perceived to be disruptive (p. 210). Similar to the policing of brass bands in New Orleans, Brandi Thompson Summers (2021) writes of the silencing of go-go music in gentrifying Washington DC—a genre that had become “emblematic of a native Black Washingtonian identity” (p. 31). In cases of gentrification, we can see how “sounds are racialized, naturalized and then policed as ‘black’ or ‘white’” (Stoever, 2018: 119) with profound material consequences.

As police are increasingly called to gentrifying neighborhoods, the results can be a silencing of racialized populations that are newly seen as being ‘out of place.’ Cahill et al. (2019), for example, show how in gentrifying neighborhoods in New York City, youth will attempt to become imperceptible when faced with police presence. Their interlocutors explain the reflexive tendency to become quiet as they deploy silence as a tactic to avoid detection. Similarly, Sterre Gilsing (2020)

writes of the “fearful silence” actively produced by police incursions into the favelas of Rio de Janeiro. This silence, argues Gilsing, disrupts the usual soundscape of daily life, reflecting the fear of residents in the face of police presence, while also allowing them to be attuned to the sounds of police movements and actions. The policing of sounds in these neighborhoods shows how police actions in relation to sound is central to state exercises of power, with profound impacts on the soundscapes of the city. I include this non-US version for two reasons. First, it points to the kind of research that could help explore some of the themes of this article in different contexts. And second, Brazilian police have long received training and support from US law enforcement agencies.⁶ It is an important reminder that US policing is not confined by national borders, but finds expression across the globe through various partnerships, affiliations, and interventions. Similarly, policing technologies developed in the US currently find wide usage around the world.

The increasing use of digital technologies by police departments has entwined algorithms with the discretionary policing of sound, best exemplified by the gunshot detection technology ShotSpotter. In the dozens of cities that have contracted with ShotSpotter, neighborhoods that are perceived to be at risk of gun violence are saturated with overhead microphones that are triggered by loud noises. Algorithms then determine if a sound is a gunshot⁷, triangulate its approximate location, and notify the police. Predictably, these technologies are predominately deployed in Black communities in North America, expanding ‘infrastructures of racialized surveillance’ (Cowen, 2020) available to police. The use of nonhuman agents like microphones and algorithms promises to address problems with human bias in policing, but technologies like ShotSpotter are plagued with uncertainty, in addition to supporting existing racist assemblages of policing (Merrill, 2017). Additionally, the use of ShotSpotter raises concerns around constitutional rights to privacy as audio recordings of conversations from its microphones have been used in multiple court cases (Gecas, 2016).

Technologies like ShotSpotter do not exist in isolation, but are part of a complex assemblages of people, algorithms, and institutions that come together to police and surveil the soundscapes of everyday life (Merrill, 2017). The geospatial predictive policing software formerly known as HunchLab, for example, is now part of ShotSpotter’s technology suite, meaning the former can now easily ingest sound data into its predictive algorithms⁸. Michael Gallagher’s (2011) work on sound used as tool of power in schools is instructive here. Extending the lessons of Foucault’s largely visual analysis of the panoptic model, Gallagher observes, “surveillance of sound therefore produced a more diffuse and uncertain space of surveillance” (51). Considering ShotSpotter’s ambiguous and evolving relationship to systems of law, the recording of non-gunshot audio opens possibilities of expanded and amorphous spaces of surveillance (Gecas, 2016). Through ShotSpotter and other technologies of surveillance, sound becomes an important node that connects

⁶ <https://web.archive.org/web/20221007055428/https://br.usembassy.gov/u-s-embassy-and-fbi-facilitate-rapid-response-training-and-exchange-of-best-practices-with-16-brazilian-security-organs/>

⁷ There are ongoing debates over the accuracy of the detection algorithm, which are the grounds on which many debates around algorithmic policing are currently being waged. But, as I argue elsewhere, algorithmic accuracy might not be the most pertinent question considering the centrality of interpretive discretion in relation to technology and the racist outcomes of American policing (Lally, 2022b, see also: Brayne, 2021).

⁸ On the “Frequently Asked Questions” page for ShotSpotter’s Connect software, which offers predictive crime mapping, “ShotSpotter gunfire incidents” is the first in a list of data feeds that the mapping software can use, see: <https://web.archive.org/web/20220721011903/https://www.shotspotter.com/faqs/shotspotter-connect-faqs/#how-can-shotspotter-connect-benefit-a-police-department-and-community>

discretionary policing, predictive algorithms, and gentrification through complex chains of translation and interpretation.

6. Contested sonic politics

Policing has recently been at the center of fierce debates that question its societal role, often backed by visual evidence of its oppressive tendencies. Sound sometimes plays an important role in these political contestations. For example, in response to being filmed—an act that US courts have determined is a constitutionally protected right—some police officers have exploited algorithmic means to resist the distribution of such videos. The presence of copyrighted music in a video uploaded to popular video hosting services like Youtube will often result in its automated removal by copyright detection algorithms. Police in a number of cities around California have exploited this fact by playing pop songs while being recorded (Sharp, 2021; Trendacosta, 2021; Yang, 2022). In these cases, forensic evidence of police practices in the form of video and audio recordings are suppressed through the novel exploitation of machine listening.

Video and audio evidence have long been used by the state to surveil and convict those subject to state power, but these practices have increasingly been used to document wrongdoings by police. These efforts, which Matthew Fuller and Eyal Weizman (2021) have described as “counter investigations,” “strive to reverse the trajectory of sensemaking that characterises state procedure” (161). As the authors argue, these investigations can act as political critiques that question practices that have become normalized or, as in the case of misconduct by police, written off as isolated incidents not indicative of wider patterns of abuse. Lawrence Abu Hamdan, an artist with ties to Weizman’s research group Forensic Architecture, examines the use of speech analysis by immigration police to adjudicate asylum cases in his piece “The Freedom of Speech Itself.” Through his art practice, he reveals the complex personhood that such processes of audio interpretation deny in efforts to police borders (Apter, 2016). Elsewhere, Abu Hamdan has deployed audio forensic techniques to distinguish sounds made by rubber bullets and live ammunition in an investigation of the killing of two teenagers by Israeli border police in the West Bank (Weizman, 2017). Through an analysis of audio frequencies captured in news media videos, Abu Hamdan was able to argue that police had fired live ammunition through rubber bullet extensions in an attempt to disguise the fatal shots, which he furthered explored in his art installation “Earshot”. In this growing field of inquiry, which some have called ‘counter forensics’ (Keenan, 2014), we find possibilities for sound analysis to produce evidence that contests exercises of police power.

In addition to its use as evidence to contest policing, sound is sometimes deployed as a direct mode of resistance. Below, I highlight a number of US and international examples that could inform approaches to contesting police power in the US. Brandi Thompson Summers (2021) theorizes the #DontMuteDC movement, which used go-go music to protest gentrification, as a form of “reclamation aesthetics.” Summers describes these aesthetic modes of resistance as “spatial acts through which Black people assert their place to counter the social and economic forces of gentrification— specifically re-establishing a Black geographic terrain in the face of urban restructuring, surveillance, and spatial segregation” (p. 37). Against the silencing of people newly interpellated as being ‘out-of-place’ in gentrifying neighborhoods, #DontMuteDC used music as means for longterm residents facing displacement to be heard and seen. Sound often plays a similar role during protests around by creating a means to disrupt existing soundscapes while mobilizing

⁹ <http://lawrenceabuhamdan.com/earshot>

people in solidarity, especially when faced with police presence. Gordon Waite et al. (2014) describe how ad hoc protest music “disturbs the affective relations that emanate from the sounds of police sirens, onlookers and even wind moving through the trees” (p. 292) while mobilizing and ordering protestors. In these cases, sound is used as a source of attraction, one that contributes to the “heightening of collective sensation” (Goodman, 2012a: 11) as a means to resist state power. This tactic is evident in the use of sound trucks by anti-nuclear protestors in Japan who use music and dance to create autonomous spaces of “playful empowerment” that encourage diverse expressions of dissent (Brown, 2016). Rave demo protests in Tokyo (Hayashi and McKnight, 2005), Reclaim the Streets protests in London (Holmes, 2009), and Anti-Trump marches in Oakland (Lefebvre, 2016) are only a few of the many examples of the deployment of mobile sound systems used to resist the social ordering of public space that police attempt to enforce around the world. By disrupting everyday soundscapes, Emma K Russell and Bree Carlton (2020) write of anti-carceral protests: “demonstrators temporarily reconfigured the ‘set rhythms’ of the prison soundscape with new patterns and flows” (308). These cases show the power of resisting and intervening in routinized soundscapes that pattern everyday life, bringing attention to the policing and carceral logics that produce and undergird these soundscapes. Following Steve Goodman (2012a), the politics of frequency is a battleground open to ongoing contestation and experimentation both in service to and in resistance against state power.

7. Conclusion: a politics of listening

By turning attention to the sonic, geographers can further contribute to political contestations that connect territorial practices of policing to sound. A growing number of methodological contributions to academic literature on sound in geography and beyond provide possible paths forward for this work. One could begin simply with the act of intentional listening, attentive to how sound enfolds in relation to policing. In this model, a researcher can still study the discursive, while focusing on, “knitting it into a mix of atmosphere, interaction, stuff, happenings, context, sensations” and other resonate acoustics (Bennett et al., 2015: 13). A similar practice of listening can be applied to field recordings produced during qualitative research. This would encourage broader audio sampling in order to capture sonic atmospheres, recognizing them as both “representational and affective vibrations” of space (Gallagher, 2015: 572). Additionally, listening suggests modes of analysis that do not merely settle on transcribing words from audio, but which also critically reflect on the quality of those sounds and their ambient contexts (Gallagher and Prior, 2014). In other words, the sonic qualities of speech are important in producing meaning and affective relations, which can easily be missed when simply focusing on signifying sounds.

The examples of gentrifying New York City and the favelas of Rio de Janeiro mentioned above remind us that the absence of sound, or what we might call a politics of silence, is also an important aspect of policing. Key MacFarlane (2020) argues for a sensory politics attentive to sound’s absence, recognizing that certain people are “cast into positions of silence” (298). In recognizing silence, we might find guidance in Trevor Paglen’s research on clandestine military sites (Paglen, 2010). While Paglen focuses on the obfuscated visibility of these ‘blank spots on maps,’ the silencing of those sites, those incarcerated, and the use of sensory deprivation as a technique of punishment (Volcler, 2013) all make silence a generative analytic. While Paglen’s objects are military sites, the long use of military technologies and techniques to police domestic populations creates strong resonances across the two institutions.

In addition to textual communications, the analysis of connections between sound and policing might find expressive form through various types of aesthetic interventions. Cartographic

engagements with sonic spaces, for example, offer a multitude of approaches for spatializing sound, ranging from pinning recorded audio on online maps to more complex, experimental practices that consider sonic relationality (Thulin, 2018). As an example of the latter, Duffy et al. (2016) deploy an exploratory, iterative process of producing ‘visceral sonic maps’ in collaboration with research subjects in order to capture the ‘lived experience of sound.’ In some cases, these explorations can benefit from digital analyses, like we saw in Abu Hamdan’s art and research works. For example, in order to record sound levels of acoustic weapons in decibels—levels that evade capture in normal audio recordings—there are a number of smartphone apps and devices made for that purpose (Carr, 2017). There are also smartphone apps that feature spectrograms, which allow for the visualization of frequencies over time, including those outside of the range of human hearing. Sound and silence, which always exceed systems of signification, offer a wealth of material for exploration and experimentation. Lockett and Middlebrook (2016), for example, produced a laboratory/performance space to experiment with police sounds in order to deconstruct and better understand them. Drawing from Augusto Boal’s “Theater of the Oppressed,” Lockett and Middlebrook use a performative methodology not only to understand the sound of the police, but also to challenge those logics. Taken together, these modes of data collection, visualization, and performance promise new ways of studying and theorizing the ‘politics of frequency’ related to policing.

As I have argued in this article, understanding the sonic qualities of police can give insights into the unfolding and contested politics of policing. As the logics of policing become increasingly ubiquitous, attention to sound provides insights into forms of state power that produce, modulate, and intervene in social and material relations that produce space. By experimenting with expansive methods of witnessing, analyzing, and communicating these sound relations, geographers contribute to deeper understandings of not only uniformed police, but also other forms of power that adopt the logics of policing. Attention to these sounds and soundscapes might also lead us to reimagine increasingly ubiquitous and invasive modes of governance, especially as they support forms of racialized state violence.

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