

This article was downloaded by: 10.3.98.93

On: 17 Jan 2019

Access details: *subscription number*

Publisher: *Routledge*

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: 5 Howick Place, London SW1P 1WG, UK



Edited by Michael Bull

The Routledge Companion to Sound Studies

Bull Michael

Sound waves of protest: noise abatement movements

Publication details

<https://www.routledgehandbooks.com/doi/10.4324/9781315722191-10>

Bijsterveld Karin

Published online on: 02 Nov 2018

How to cite :- Bijsterveld Karin. 02 Nov 2018, *Sound waves of protest: noise abatement movements* from: The Routledge Companion to Sound Studies Routledge

Accessed on: 17 Jan 2019

<https://www.routledgehandbooks.com/doi/10.4324/9781315722191-10>

PLEASE SCROLL DOWN FOR DOCUMENT

Full terms and conditions of use: <https://www.routledgehandbooks.com/legal-notices/terms>

This Document PDF may be used for research, teaching and private study purposes. Any substantial or systematic reproductions, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The publisher shall not be liable for an loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

8

SOUND WAVES OF PROTEST: NOISE ABATEMENT MOVEMENTS

Karin Bijsterveld

Searching for a paradise of sound

In 2006, Waikiki apartment resident Gary Holt and a few companions decided to revive an organization that had been established in 1970 but dissolved in the late 1980s: *Citizens against Noise of Hawaii*. Their island, they claimed, was close to paradise, if only its dazzling noise pollution—by motorcycles, boom boxes, car alarms, and bars—could be reduced (Vorsino 2006). The organization itself was not exactly an island though. It was one out of dozens of new citizens' initiatives against noise established in the 1990s and after, in the industrialized world and beyond. Today, many of these have websites with links to fellow activist centers.

Were these organizations any different from the flurry of noise abatement groups established in the late 1950s through 1970s? Or from the anti-noise societies that originated in the decades before World War II? Does it make sense to distinguish between waves of citizens' noise abatement movements, similar to the three feminist waves or, closer to the aims of the noise fighters, the recurrent upswing of environmentalism (Kroløkke and Sørensen 2006, Dunlap and Mertig 1991)? In terms of timing, noise abatement activism definitively followed a wave pattern: an initial concentration of actions in the early twentieth century and the interwar years, a second during the economic boom of the late 1950s–1970s, and a third in what might be called the “re-roaring” millennium turn. But what about the citizens' definitions of the problem of noise, their views on causes and solutions, their identification of those responsible for or fit to tackle noise, and their styles and strategies of campaigning?

I will answer these questions for the first two time periods—1900s–1930s and late 1950s–1970s—by drawing on publications about the history of noise abatement in the twentieth century, and for the more recent years by analyzing the websites of citizens' initiatives against noise. For the early stages, I will focus on the West, most notably the United States, United Kingdom, Germany, and the Netherlands—the four countries I studied in *Mechanical Sound: Technology, Culture and Public Problems of Noise in the Twentieth Century* (Bijsterveld 2008). For the 1990s and beyond, however, I will, very modestly, broaden my geographical scope, and include an example from India. This has inspired me to take one additional issue into account: the noise abatement movements' representations of the city. These conceptualizations of the urban, I will show, left their mark on the noise abatement campaigns and may account for some of the differences in today's noise abatement rhetoric between activists in industrialized and industrializing countries.

Against unnecessary noise: the first wave in noise abatement (1900s–1930s)

An important early representative of anti-noise citizen's activism, Julia Barnett Rice, had a medical background, was married to a successful business man, and lived alongside the Hudson River in New York. Her engagement with noise started from concern about the din produced by the intense use of steam whistles by riverboat staff at night. Although this likely affected her own life, her public concerns referred to assumptions about the negative effects of noise on the recovery of patients in the hospitals near the river. This made her establish the Society for the Suppression of Unnecessary Noise in New York in 1906 (Thompson 2002: 121).

Historian Emily Thompson situates this initiative in the context of social reform in public health and urban planning, as well as the rise of a new efficiency ideal in industrial labor and aesthetics. Engineers, indeed, started seeing noise as a sign of sub-optimally working machines in the early twentieth century (Bijsterveld et al. 2014: 29). In these years, Thompson explains, the focus was thus not on noise as such, but on noise that was considered unnecessary and preventable. It was the elite, however, defining *which* sounds were needless. These were not the sounds supposed to contribute to economic growth, but the sounds assumed to undermine the vulnerable lives of patients and, as Rice later added, school children. This approach to noise enabled her to secure assistance from business men in addition to doctors, clergymen, and university leaders. Rice made her Society's views public through *The Forum*, a magazine owned by her husband, and succeeded getting legislation accepted that banned needless whistle blowing in ports and harbors in 1907. Moreover, in the first half of the 1910s, many American cities established quiet zones around hospitals and schools (Thompson 2002: 121, 126).

In Europe, the German philosopher Theodor Lessing and the British surgeon Dan McKenzie published their own pamphlets against noise, and Lessing founded the German Association for the Protection from Noise (*Deutscher Lärmschutzverband*) in 1908 (Bijsterveld 2008: 101). They had similar concerns about unnecessary noise as the New York Society, but talked about a wider range of sources, varying from carpet beating and church bells to gramophones, telephones, automobiles, trams, and trains. In both Germany and the United Kingdom, these concerns were phrased in terms of an increasing nervousness, or neurasthenia, among the urban population resulting from overstimulation of the senses. Yet despite this backdrop of cultural pessimism, and apart from establishing lists of hotels that could function as silent refuges, the noise activists took most of the material organization of city life for granted. In contrast, its population, and most notably the lower classes, had to learn to behave in less rowdy ways—as they were considered to be less sensitive to noise than the refined upper classes (Bijsterveld 2008).

Behind these claims were anxieties about how noise might undermine the mental strength of those supposed to act as the intellectual leaders of their nations. Such preoccupations were not new. In the 1860s, mathematician Charles Babbage had teamed up with public intellectuals like historian Thomas Carlyle and writer Charles Dickens to combat the sounds of barrel organ players and other music makers on the streets of London. As John Picker has explained, their campaigns expressed the elite's fear and contempt of the many non-natives populating the trade of street musicians. But their concerns also resulted from the rise of a new class of professional writers—journalists, essayists, novelists—who had to find mental concentration amidst urban din (Picker 2003). The effect of their campaigns as well as later actions against shouters and vendors, in London, New York and elsewhere, was clearing the street from anything but traffic (Thompson 2002: 124).

While these people focused on man-made sounds, their twentieth-century successors increasingly focused on machine-produced sound, notably traffic noise. This was most evident in a campaign that was not a citizen's initiative, although it triggered a wide citizens' response

during and after the event: the 1929 campaign by the New York Noise Abatement Commission, chaired by the New York City Health Commissioner Dr. Shirley Wynne. This commission organized a newspaper questionnaire, answered by thousands of citizens, that showed how the noise of traffic and transport—trucks, automobile horns, elevated trains—were among the top of complaints, followed by radios, automobile brakes, garbage collection, street cars, and turnstiles. The commission also sponsored public radio lectures, and collaborated with scientists from commercial labs and other organizations to measure street noise with subjective and objective noise meters that had just been developed in the telephone industry (Thompson 2002: 157–168, Bijsterveld 2008: 104–110). Measuring noise did not immediately help the commission's cause, but it did generate an optimistic tone in the public debate. A 1930 New York City law requiring a permit for using a loudspeaker outdoors was one of its results (Thompson 2002: 151). Still, the commission believed that urban life could only become quieter if the general public would act in less noisy ways (Bijsterveld 2008: 110–117).

In the 1920s and 1930s, noise abatement organizations popped up in cities all over Europe. Metropolitan examples were the *La société pour la suppression du bruit* in Paris, and the Anti-Noise League in London. But Oxford also had a noise abatement committee, and in the Netherlands, a provincial capital like Groningen had a noise abatement committee just as well as Amsterdam (Bijsterveld 2008: 110–112, Bijsterveld 2013: 11–12). Engineers and physicists were among their spokespersons, fostering solutions in terms of noise insulation and the creation of silent artefacts such as the toilets and typewriters exhibited during the Noise Abatement Exhibition in the London Science Museum in 1935. Historian James G. Mansell, however, has recently stressed that in the United Kingdom medical experts like Lord Thomas J. Horder dominated the interwar noise abatement discourse. They revived the late nineteenth and early twentieth-century neurasthenia discourse in their noise abatement writings. While psychologists and psychiatrists had developed serious doubts about the usefulness of this diagnostic label by 1930, physicians kept stressing the prevalence of nervous breakdowns among men of letters, often attributing this to noise. In fact, they believed that the Great War had made modern man even more sensitive to sound than he had already been before (Mansell 2014).

The urban “silence” campaigns themselves predominantly focused on reducing traffic noise, and notably the needless use of the car horn. In the Netherlands, an intriguing discourse coalition between motorist organizations and noise abatement organizations fostered the slogan “Orderly Traffic promotes Silence,” intending to have pedestrians, bicyclists and motorcyclists behave more predictably so that motorists would have to use their horns less frequently. Moreover, the second half of the 1930s brought the first legislation banning the use of the car horn at night and installing maximum emitted sound levels for horns and cars in, for instance, the Netherlands and Germany. The result was, again, a street cleared from those who might block the smooth transition of cars and trucks. This was the tragic effect of actions that definitely reduced the hooting, but also gave the floor to an increasingly dense layer of motorized traffic (Bijsterveld 2008: 124–133).

Emily Thompson has noted that the New York Noise Abatement Commission (NAC) was dissolved in 1932, and that the city's anti-noise activism probably suffered from the Great Depression and shifts in the metropolitan political landscape (Thompson 2002: 166). Lilian Radovac has recently extended the time span studied. She shows that the Noise Abatement Council, established in 1934 to translate the NAC's recommendations into regulations, had indeed little success. In 1935, however, a new and larger organization, the League for Less Noise (LLN) took the Noise Abatement Council on board as one of its institutional members, and organized a conference on noise that very same year. Among the speakers were experts from the sciences, but also noise abatement activists from Europe, who seem to have been important

sources of inspiration. Together with the New York mayor and his police, the LLN campaigned in a style very similar to that of the Europeans. Its 1935 “Noiseless Nights” focused on civilizing the behavior of the urban population, including actions against honking at night or the rough handling of garbage cans (Radovac 2012: 293). In 1936, the LLN managed to get a code against the excessive use of automobile horns accepted that was modelled after a Paris ordinance, as well as a more comprehensive anti-noise code (Radovac 2012: 298, 294).

Anyone zooming in on the campaigns in different countries of the West will find, no doubt, subtle distinctions in aims and strategies.¹ The foci also changed over time. Protecting children and the sick from noise gave way, for instance, for protecting the health and productivity of the urban population at large, even though elite concerns kept predominating. When zooming out, however, it becomes clear that the pre-war noise abatement movements in the US and Europe shared a focus on educating and civilizing the masses, installing—notably local—regulations against “unnecessary” noise, and seeking assistance from science and technology to map the sources of noise and isolate their homes and appliances from unwanted sound. Noise was seen as an expression of chaos, and a well-ordered city had to enable a fact of life: that many lived and worked densely together, and could not easily escape from the city itself.

Restructuring society: the second wave in noise abatement (late 1950s–1970s)

In Europe, the postwar years were rather tranquil in terms of noise abatement activism, but life itself was full of sound. Roads and bridges had to be rebuilt, the shortage of housing to be remedied and public buildings re-established. The sounds of brick hammering, pile driving and concrete mixing contributed significantly to the postwar soundscapes of Europe’s inner cities. In this context of reconstruction, loud sound had positive connotations, and noise abatement did not appear to have top priority. The London-based Noise Abatement League, for instance, was dissolved in 1951 due to a lack of funds. And although the Netherlands officially had a Permanent Noise Abatement Committee (*Permanent Anti-Lawaai-Comité*) as of 1947, its members did not meet up anymore after the mid-1950s. It took until 1968 before the Dutch Congress for Public Health (NCOG) organized a conference on noise that raised quite some press attention. In the wake of this event, the congress’ president, a medical expert, initiated the Dutch Foundation for Noise Abatement, or *Nederlandse Stichting Geluidhinder*, in 1970 (Bijsterveld 2008: 197, 273–274).²

Other examples of postwar noise abatement organizations were the French Anti-Noise League (*Ligue Française contre le Bruit*, 1958), the British Noise Abatement Society (1959), the Norwegian Association against Noise (*Norsk Forening mot Støy*, 1963), the Austrian Noise Abatement Society (*Österreichische Arbeitsring für Lärmbekämpfung*, which had started as a section of the *Österreichische Arbeitsgemeinschaft für Volksgesundheit*, in 1958), and the, somewhat older German Working Group for Noise Abatement (*Deutscher Arbeitsring für Lärmbekämpfung*, 1952). Several of these initiatives combined their efforts in the International Association Against Noise (*Association Internationale Contre le Bruit*) in 1959.

These foundations, leagues, and associations against noise did not only differ from the ones established prior to World War II in their national rather than local orientation, but also in their framing of noise as a common, generalized issue of public health, and, from the late 1960s onward, as a problem of environmental pollution. Some of their spokespersons still talked about preventable noise, suggesting that not all noise was preventable. But even if it was not, it had to be diminished and tackled in an all-embracing approach. Many of them successfully lobbied for national noise abatement legislation, often framework-laws established in the 1970s and intended to tackle several sources of noise under one heading (Bijsterveld 2008). At the same time, the noise abatement initiatives fostered research and expertise, intended to raise

public awareness, and provided services to individuals such as legal advice and companions on noise measurement techniques, insulation materials, or silent restaurants, not unlike the earlier organizations. But whereas the pre-war movement had by and large accepted the status quo of industrial society and crowded cities, the postwar movement more critically assessed societal and urban life itself.

An example is its stance on airports. The arrival of jets at Heathrow prompted some members of the British Noise Abatement Society (NAS) to ring the doorbell of the Minister of Aviation on a Saturday morning in 1960, claiming that “the noise prevented them from sleeping and made life ‘unbearable.’” Whereas the Minister responded that such noise was unavoidable unless he would close down the airport, NAS president and business man John Connell later suggested to invoke the silent “power of thought” to solve the problem (both cited in Bijsterveld 2008: 198). In Germany, protests against aircraft noise grew way more grim, however. In 1964, the “environmental vicar” Kurt Oeser criticized plans for extending Frankfurt am Main’s airport with the argument that people’s quality of life should not suffer from economic growth. He established a local committee against aircraft noise, from which sprang the Federal Society against Aircraft Noise (*Bundesvereinigung gegen Fluglärm*) in 1967, providing a roof for the German aircraft noise abatement groups to follow (Brink 2013: 438). Despite a hunger strike, a slum village, huge petitions, and demonstrations in the early 1980s, Frankfurt’s “Runway West” opened in 1984. Three years later, a series of Sunday walks to the airport culminated in a clash between the police and militant demonstrators, which tragically and exceptionally took the lives of two policemen (Gerth 2008, Behr 2012). In terms of sound levels, technical jet engine noise control as well as the rise of regulations limiting night flights and establishing maximum noise emission and immission levels brought some relief, in Germany and beyond. With air traffic exploding, however, and perhaps a reduced tolerance for noise due to the perception of new technologies as risks—as health scientist Mark Brink has claimed with reference to Ulrich Beck’s work—citizens kept expressing concerns (Brink 2013: 441). Today, nearly each airport has its citizens’ watchdog.

Yet one particular source of aircraft noise has been banned quite successfully. As David Suisman (2015) has shown, actions against the sonic boom resulted in an early, yet nearly forgotten victory of the environmentalist movement. Remarkably, the 1970s Coalition Against the Super Sonic Transport (SST) program of the US government was as unlikely as the one against honking in the 1930s. The Coalition included the Citizens League Against the Sonic Boom (CLASB, 1967) and Friends of the Earth (FOE, 1969), organizations pointing at the health, material, and environmental damage caused by SST. But it also managed to involve a group of highly influential economists critical of SST’s economic prospects, and, ultimately, senators and congressmen of both democrat and republican denomination worrying about, for one, SST’s return on investment. Once again, groups of people with disparate aims successfully united to silence at least one source of unwanted sound.

Whereas many of the associations established during the first wave of noise abatement did not survive the two World Wars, most of the organizations established in the late 1950s and 1960s have survived until today, often with help of federal and state subsidies. Their initiators still had elite backgrounds, but now hired staff to answer the telephone calls of concerned citizens day after day. This enhanced the organizations’ professionalism. In style of campaigning, the noise abatement organizations showed several differences. The British NAS president John Connell, for instance, once deplored “the dispassionate attitude” of scientists, whereas one of the initiators of the Dutch NSG warned against expressing too much emotion.³ And while the NAS had many a business man among its advisors, the DAL most dominantly drew its leaders from medical science and engineering.⁴ In their rising professionalism, however, these noise-fighting organizations resembled each other.

This was also true for the second wave's conception of the city. It wasn't staged solely as a prison capturing its residents in work and services anymore. In contrast, it was increasingly seen as a place to flee from—with the countryside and wildlife as the new ideals. The ideas of the founding father of soundscape studies, the Canadian composer and environmentalist Raymond Murray Schafer, are a case in point. For him and his World Soundscape Project (WSP), noise was the keynote of industrial society. Redressing noise was impossible without questioning the principle behind it: capitalism. Rather than foregrounding the negative, however, Schafer wanted to document and preserve the sounds of nature and rural life, and to use sound design and composition to improve the urban soundscape (Schafer 1994 [1977]). This aspect returned in the playful tunes of the noise awareness initiatives popping up in the 1990s.

Play back: a third wave in noise abatement (1990s–now)?

An important offspring of Schafer's work is the World Forum of Acoustic Ecology (WFAE), established in Vancouver in 1993. This Forum and its sections in other countries have collaborated with the World Listening Project (Chicago, 2008), *La Semaine du Son* (Paris, 2004), and the Deep Listening Institute (Kingston NY, around 1996) in organizing the World Listening Day as of 2010. With this day on July 18, Schafer's birthday, the organizers intend to celebrate listening practices and create an awareness of the quality of acoustic environments through education, "sound walks, concerts, radio broadcasts, and internet streams" (Leonardson 2015: 117). In these events, sound artists, recordists, and composers have key roles. Many of them also contribute to the wealth of city-based and partially preservationist initiatives displaying the sounds of specific cities through sound maps (Ouzounian 2014).

It is good to note, however, that the World Listening Project (WLP) has no connections with the International Listening Association (Minnesota, 1979). This association's annual International Listening Awareness Month focuses on listening as the "super hero" of proper communication rather than acoustic awareness.⁵ And as of 1996, there has been an International Noise Awareness Day, usually organized in April by the Center for Hearing and Communication (CLC). In contrast, the WLP *has* links with bioacoustics experts like Bernie Krause (Leonardson 2015: 118). With his much-downloaded TED talk, Krause has been able to point out how noise endangers animal life on earth in the tradition of Rachel Carlson's *Silent Spring*.

Although acoustic awareness is considered to be a precondition for noise abatement by the WFAE and its companion organizations, anti-noise activism as such is not their key issue. This distinguishes them from the many post-1990s anti-noise groups that have their roots in Not in My Back Yard (NIMBY) activism. In fact, such and other noise abatement initiatives are so widespread across the globe now that it is hard to represent them in an accurate way. To get the picture nonetheless, I started checking out websites of national noise abatement societies that had survived from the 1960s and 1970s, as well as international web-based resources concerning noise abatement expertise, for links to citizens' initiatives against noise—so basically following the snowball method in a virtual world.

Among contemporary noise abatement groups are many organizations focusing on single noise issues such as leaf blowers, airboats, car alarms, boom cars, piped music, farm cannons, and, as said, airports and aircraft, including helicopters. Many of these initiatives express a "glocal" identity: while focusing their own actions on particular locations, they are well aware of noise abatement as a world-wide endeavor. They often call for civilized behavior, reminiscent of the first wave of noise abatement. And like the second wave organizations, they are service-oriented, but often with lower levels of professionalism and not as media-savvy as the longstanding multi-issue noise abatement organizations. These second wave institutions do not only focus

on new issues, such as raising awareness of wind turbine noise, but also seem to have taken elements of the “Schaferist” approach on board by making their actions more positive in tone, for instance through granting prizes.⁶

Some of the larger organizations, such as *Noise Free America* (NFA)—established in 2001 at the campus of UCLA—include naming and shaming in their strategies. NFA’s monthly Noisy Dozen for “major noise polluters” is an example.⁷ Moreover, some of the NIMBY clubs can produce harshly phrased accusations, in which the health card is played out loud.⁸ But that is as “violent” as it gets today, at least at the collective level. This may be related to changing conceptions of the city. Since the 1990s, the city is increasingly the place to be, embraced as an exciting and lively environment offering work and entertainment.⁹ Attacking noise too aggressively would be attacking a way of life now widely celebrated. Alternatively, the soundscape awareness approach seems increasingly attractive to those in favor of acoustic environmentalism. It allows for an urban life style combined with a positive and creative take on heightening people’s awareness of how the sonic environment co-constitutes the city.

So, whereas the first activists approached the city as an “inescapable place,” and many of their postwar successors defined it as a “place to flee from,” the city is now “the place to be.” I have noted an exception to this trend, however. This concerns noise abatement actions in the industrializing world, such as the Indian campaign Do Not Honk. “In India,” so campaigners claim, “unnecessary vehicular honking is the main reason for noise pollution. . . . Drivers show no respect to the law that prohibits the use of horns at traffic signals and other silent zones such as areas near hospitals.”¹⁰ Listening to these arguments is like listening to the first wave of campaigns once again, as living in cities is not a free choice for all.

Conclusions

We can safely speak about different waves of noise abatement activism. But whereas the identity of the noise abatement societies of the first decades of the twentieth century is clearly discernable from the ones established between the late 1950s and 1970s, the third wave is, as yet, less easy to capture. To be sure, the 1990s through 2010s produced many a new initiative, so in terms of the number of newly established noise abatement societies, the millennium turn certainly produced a new wave. Understanding a recent movement is also more difficult for a historian than characterizing a more distant past. Yet even when taking this into account, the identity of the third wave noise abatement groups seems less consistent than that of the first and second noise abatement waves.

The first wave of noise abatement movements was constituted by elites geared towards unnecessary noise that expressed a chaos from which no one could flee, but that could be tamed to create an orderly city. The second wave consisted of organizations run by the professional middle classes, relying increasingly although not exclusively on ideals of structural and environmental reform, often based on what the sciences had to offer. The third wave displays playful actions linked to artistic performances. Aggressive actions seem to be absent, or merely the work of individuals rather than organizations, and many of the local groups express themselves in terms of first and second wave rhetoric rather than something new. They list sources of noise, plea for civilized behavior, and refer to best practices. Creating noise awareness is also among the aims of organizations identifying themselves as representatives of the soundscapes movement. Their celebration of urban sound today appears to go hand in hand with a reevaluation of the city as a place to live a happy life. Where cities are populated by poor majorities, however, noise abatement discourses may return to a plea for reducing unnecessary noise—in a city from which no escape is foreseen.

Notes

- 1 In *Mechanical Sound* (2008), in fact, I distinguished between the noise abatement societies established in the first years of the twentieth century and those set up in the 1930s. I bring these under one heading now. This is not only because I cover a wider time frame in this article than in *Mechanical Sound* (which ended in the mid-1970s), but also because I think the pre-World War II organizations had a concern with health and civilization in common, see also Mansell (2014).
- 2 Archives *Nederlandse Stichting Geluidshinder* (NSG), Delft, File Establishment NSG, "Oprichtingsakte," March 24, 1970.
- 3 Archives NAS, Brighton, [Connell, J.] (1962), "Hon. Secretary's Report," *Quiet Please*, 1(3), pp. 9–10, at p. 9; Archives NSG, File Establishment NSG, NCOG Meeting April 24, 1969, p. 2.
- 4 Archives NAS, Anonymous (1960), "The Noise Abatement Society," *Quiet Please* 1(1), pp. 4–5; Archives DAL, Düsseldorf, Klosterkötter, W. (1972), "20 Jahre Deutscher Arbeitsring für Lärmbekämpfung," *Kampf dem Lärm*, 19(6), pp. 141–143, Springer, P. (1992), "40 Jahre gegen den Lärm: Aus der Geschichte des DAL," *Lärm-Report*, 3, no page numbering.
- 5 www.speaktolead.com/2013/03/listening-awareness-workshop.html (Retrieved November 20, 2015).
- 6 See, for instance, the NAS glossy E-zine *SoundScape* and its NAS prize (<http://noiseabatementsociety.com>) (Retrieved November 26, 2015).
- 7 www.noisefree.org/ (Retrieved December 3, 2015).
- 8 See, for instance, Victims of Airboat Noise Unived (VAN), at www.noairboatnoise.com/, and Ban the Cannons, at <http://bancannons.tripod.com/matsqui.html> (Retrieved January 28, 2016).
- 9 www.oecd.org/gov/regional-policy/urbandevelopment.htm and www.pbl.nl/infographic/de-stad-in-trek (Retrieved December 17, 2015).
- 10 <http://earthsaviours.in/node/18> (Retrieved November 26, 2015). See also "Govindpuri Sound," by Tom Rice, www.bbc.co.uk/programmes/p02hm1rx (Retrieved January 28, 2016).

References

- Behr, S. (2012) "Flughafen Frankfurt Startbahn West: Todesschüsse an der Startbahn," November 1, www.fr-online.de/flughafen-frankfurt/flughafen-frankfurt-startbahn-west-todesschuesse-an-der-startbahn,2641734,20768630.html (retrieved December 14, 2015).
- Bijsterveld, K. (2008) *Mechanical Sound: Technology, Culture, and Public Problems of Noise in the Twentieth Century*, Cambridge, MA: The MIT Press.
- Bijsterveld, K. (ed.) (2013) *Soundscapes of the Urban Past: Staged Sound as Mediated Cultural Heritage*, Bielefeld: Transcript Verlag.
- Bijsterveld, K., Cleophas, E., Krebs, S., and Mom, G. (2014) *Sound and Safe: A History of Listening Behind the Wheel*, Oxford: Oxford University Press.
- Brink, M. (2013) "Düsentrieb und Überschall: Der Himmel als Kloake und die Entstehung des Bürgerprotests gegen Fluglärm," in G. Paul and R. Schock (eds.) *Sound des Jahrhunderts: Geräusche, Töne, Stimmen 1889 bis heute*, Bonn: Bundeszentrale für Politische Bildung, pp. 436–441.
- Dunlap, R.E. and Mertig, A.G. (1991) "The Evolution of the U.S. Environmental Movement from 1970 to 1990: An Overview," *Society and Natural Resources*, 4(3), pp. 209–218.
- Gerth, S. (2008) "Startbahn West: Die Wucht des Widerstandes," April 12, www.spiegel.de/einestages/startbahn-west-a-946846.html (retrieved December 14, 2015).
- Kroløkke, C. and Sørensen, A.S. (2006) "Three Waves of Feminism: From Suffragettes to Grrls," in C. Kroløkke and A.S. Sørensen, *Gender Communication Theory & Analyses: From Silence to Performance*, Thousand Oaks, CA: Sage, pp. 1–23.
- Leonardson, E. (2015) "Sound and Listening: Beyond the Wall of Broadcast Sound," *Journal of Radio and Audio Media*, 22(1), pp. 115–121.
- Mansell, J.G. (2014) "Neurasthenia, Civilization, and the Sounds of Modern Life: Narratives of Nervous Illness in the Interwar Campaign against Noise," in D. Morat (ed.) *Sounds of Modern History: Auditory Cultures in 19th- and 20th-Century Europe*, New York/Oxford: Berghahn, pp. 278–302.
- Ouzounian, G. (2014) "Acoustic Mapping: Notes from the Interface," in M. Gandy and B.J. Nilsen (eds.) *The Acoustic City*, Berlin: Jovis, pp. 164–173.
- Picker, J.M. (2003) *Victorian Soundscapes*, Oxford: Oxford University Press.

Sound waves of protest

- Radovac, L. (2012) "The "War on Noise": Sound and Space in La Guardia's New York," in K. Keeling and J. Kun (eds.) *Sound Clash: Listening to American Studies*, Baltimore, MD: Johns Hopkins University Press, pp. 289–316.
- Schafer, R.M. (1994) *The Soundscape: Our Sonic Environment and the Tuning of the World*, Rochester, Vermont: Destiny Books (Originally published in 1977 as *The Tuning of the World*, New York, NY: Knopf).
- Suisman, D. (2015) "The Environmental Movement's Lost Victory: The Fight Against Sonic Booms," *The Public Historian*, 37(4), pp. 111–131.
- Thompson, E. (2002) *The Soundscape of Modernity: Architectural Acoustics 1900–1933*, Cambridge, MA: MIT Press.
- Vorsino, M. (2006) "Anti-noise warriors regroup," *The Honolulu Advertiser*, August 21, 2006, <http://the.honoluluadvertiser.com/article/2006/Aug/21/ln/FP608210326.html> (retrieved August 14, 2015).