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*Listening in the Field: Recording and the Science of
Birdsong* by Joeri Bruyninckx (review)

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It remains unclear what the ideal political community could even look like for Klages. For if *Geist* were eliminated, then there would no longer be anything for life to overcome, and the specter of the *posthistoire* emerges. In many ways, it seems as if his political sensibilities are motivated primarily by a horror of stillness, always conceived in terms of stagnation. In a more fanciful mode, it is easy to imagine the Klagesian body politic as something like the fast-moving zombie hordes depicted in the film *World War Z*. It is principally the way the hordes move in the film that attracts my attention. For the zombies move as a human swarm, boiling up over barricades and bursting through walls like a Dionysian force of nature. Unlike George A. Romero's shambolic zombies, these zombies are rabidly, relentlessly fast and vital. They function as a mere medium for the transit of life. They are "carriers of life" ("der Träger des Lebens," to use Klagesian terms), whose disturbingly manic gesticulations and total expression of *Antrieben* (or vital "impulses") rapidly causes the deterioration of the very bodies through which the virus of life proliferates.

I leave aside the irony implicit in the fact that the film's centerpiece depicts a mass attack by the horde upon the city of Jerusalem.

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Joeri Bruyninckx, *Listening in the Field: Recording and the Science of Birdsong*. Cambridge, MA: MIT Press, 2018, 237 pp. \$34.00 paper.

How does the practice of scientific observation change when scientists must close their eyes and trust their ears? *Listening in the Field: Recording and the Science of Birdsong* by Joeri Bruyninckx addresses the challenges of accuracy and authenticity in sound recording and traces the history of how standard practices for collecting, interpreting, and sharing those recordings were established. *Listening in the Field* offers a refreshing analysis of the science of birdsong by refusing to isolate science from aesthetics, and by examining the interdisciplinary networks of collaboration that contributed to the field. Focusing on major shifts in technology and method, Bruyninckx argues that sound recording practices offer science an opportunity to redefine itself and engage with a public audience.

Listening in the Field invites us to reflect on how the instruments scientists use are not as objective as we might think; rather, sound recording technologies and practices shape end results, impacting a listener's perception of sound. Listening to a recording of a thrush at the Cornell Library of Natural Sounds, for instance, one must critically examine the sonic context of the recording and the curative choices made by recordists. Bruyninckx, by tracing the history of sound recording from the late nineteenth century to the mid-twentieth century, emphasizes that recordings are not simply *found* in the field, as one might assume, but are, in fact, *made*.

Bruyninckx centers his study around key pivot points in sound recording, such as radical departures from traditional musical notation, and attends, in particular, to the implications of new inventions, such as the parabolic reflector, magnetic tape, and the sound spectrograph. In addition, Bruyninckx treats sound recordings as circulating knowledges in translation between fields of study and between recordists working toward very different goals in science, in libraries, in entertainment, and, in

NC: Duke University Press, 2016).

some cases, simply for the love of sound. Countless case studies reveal that birdsong is perpetually encoded and decoded across changing disciplines, from ornithology to ethology to anthropology, and recordings of birdsong are reshaped between academic scholars, amateur naturalists, and radio stations and filmmakers that draw from natural soundscapes. While *Listening in the Field* focuses particularly on technology and notable collaborations, it gestures toward larger theoretical questions of knowledge production; problems of authority and authenticity when recording in a breathing, living soundscape; the relationship between science and culture; and the ethics of ownership and access.

Bruyninckx begins in the late nineteenth century when attempts to capture the elusive qualities of birdsong in musical notation reveal the inadequacy of human musical notation for the task, mainly due to the limiting factors of human hearing and the standardized key and time of music. Efforts to notate nonhuman music led to elaborate visual illustrations that attempted to capture the multidimensionality of sound. The diverse attempts to narrate, notate, draw, mimic, whistle, and represent sound visually or through syllabic onomatopoeia demonstrate the difficulty in translating situated knowledge from the field to paper, nonhuman music to human understanding, and the aural to the visual. Would sound recording technology resolve these tensions? The answer Bruyninckx offers is, resoundingly, no.

Bruyninckx argues, for example, that an invention such as the parabolic microphone, which focuses closely on sounds coming from one direction at a time, generates a “perspectiveless close-up recording” (p. 88) that shrinks the perceived space between listener and sound producer in the listener’s experience. It also isolates the individual bird as a standard unit of analysis by eliminating other ambient sounds. Directional recording techniques contributed to what Bruyninckx calls the “laboratorization” of the field (p. 90). Although sounds were recorded as they were found, really, those recordings are not representations of “authentic nature” but, instead, have been artificially isolated and made to sound closer than they were in the field.

Once magnetic tape enters the scene, sound recording rapidly changes the field of ornithology by generating a large amount of data not just about individual birds but also about particular species and variations in songs. Illustrating ornithology’s growth from a narrow specialization into a broader discipline, Bruyninckx writes extensively on the collaborations between sound hunters, bioacousticians, the Cornell Lab of Ornithology, BBC, and others, delving into the politics of social capital, copyrighted material, and knowledge commons.

Listening in the Field, in its later chapters, explores the impact the sound spectrograph had on the science of birdsong and reflects, more generally, on human impact on birdsong. The question of scientific objectivity is raised once again when even the spectrograph required sacrificing accuracy in frequency for the sake of precision in measurements of time (p. 135). However, the sound spectrograph also pushed the science of birdsong to new heights, obliging scientists to focus on patterns, which ultimately generated research on larger patterns and shifts in bird singing behavior. Birds, as we now know, adjust their songs to account for noisy machinery, but as machinery increases in volume, there is less and less sonic territory available within the vocal ranges of birds to sing. Following the narrative arc of the history of sound recording, *Listening in the Field* ends by pointing to the kinds of knowledge sound recording conditioned and the kinds it did not (p. 165). This history reminds us that sound, no matter how many controls are put in place, is always filtered through the situated, embodied knowledge of scientists and shaped by the unique acoustics of the spaces in which sounds are produced, from the field to manufactured anechoic chambers.

Listening in the Field presents several problems of translation between the field, the

laboratory, and the entertainment industry. On the one hand, microphones are seemingly more objective than the human ear because they are unselective; they do not discriminate between the sound of traffic from the song of a bobolink, for instance. On the other hand, innovations in sound recording such as the parabolic reflector reintroduce elements of human subjectivity under the guise of precision. Some inventions such as this one came, surprisingly, from the entertainment industry: the parabola was used in sports broadcasting and movie productions before it was taken up by ornithologists. The laboratory, too, presented its challenges. While sound recording enabled listeners to slow down birdsongs to hear individual notes (more than could be heard with the naked ear), or even visualize sound, accuracy was sometimes compromised. Bruyninckx frames the field as informing the lab, and vice versa: for example, the laboratory exerts its controls in the field, and yet the field demands a reorganization of scientific approaches to interpreting data.

Bruyninckx highlights the interdisciplinarity of sound recording, which has attracted conservationists, musicians, amateur naturalists, ornithologists, ethologists, and many more of different plumage since the late nineteenth century. One notable takeaway from *Listening in the Field* is recognizing the generative possibilities of collaborations across the sciences, the humanities, and devoted laypersons. It was not one department or discipline but a network of individuals, universities, radio stations, engineers, and filmmakers that contributed to innovations in recording technology and shifts in methodology over time. Moreover, *Listening in the Field* poses a challenge to scientists to reconsider and perhaps reorganize their epistemic practices; efforts to achieve perfection in scientific study—seeking more standardization, more controls, and fewer variables—can produce skewed results and what Bruyninckx calls a “sterilization” of the field (p. 19).

Bruyninckx demonstrates that fieldwork, more generally, reorders epistemic practices in conventional laboratories. Specifically, sound introduces inherently more aesthetic, subjective elements to scientific study that bring to light the problems of assuming the objectivity of visual evidence. Although *Listening in the Field* is mostly concerned with the technical elements of sound recording, it gestures toward the theoretical, and even conjures Donna Haraway’s critique of science’s cyclops eye, adding its own twist: the benefit of having two ears to take in more information presents the problem of having to filter that information through situated knowledge and imperfect hearing. As far as this amateur sound recordist is concerned, I consider any discernment, even the identification of a sound’s source (e.g., is it the bird I think it is or is it a bird imitating another?), as reintroducing the subjective: situated listening is always tied up in the problems of translation.

Listening in the Field, in its depth of detail concerning sound recording technology, is somewhat limited, as Bruyninckx readily acknowledges, in geographic scope to North America, Britain, and Germany. Bruyninckx calls for a transnational history of the field, and we should be so lucky if his next book were to take up bioacoustic research in parts of the world that are not limited, in my view, by a bias for the Western musical canon. Bruyninckx’s approach to listening in the field, because he goes into remarkable detail, accurately captures many of the challenges and concerns sound recordists face today. *Listening in the Field* does not shy away from the difficulties of balancing scientific method with the realities of navigating multidimensional, living soundscapes, and demands that we reflect on our instruments to be more attentive and responsible recordists and listeners.

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