5

The Work of Transduction

Voice as Atmosphere

But what of the qualities of the voice? Those among my interlocutors who habitually listened to the naʿt genre offered a variety of descriptions for these qualities. Still, they found that the characteristics of voices were difficult to put in words. Doing justice to the importance they placed on vocal qualities requires a detailed examination of the voice in naʿt recitals, analyzing its sonic dimensions as atmospheres. To this end, I lay out the notion of transduction for studying religious vocal performances and their effects, applying it to religious sounds. Using spectrogram analysis, I compare examples of different styles of vocal performance of naʿt, focusing on those that my Mauritian Muslim respondents deemed to be especially authentic and powerful. In the process, the links between the transducive power of particular sonic events in performance, their tonal morphology, and states of religious experience become evident. Sonic events in the devotional contexts I analyze turn out to be atmospheres with "real," objective existence that devotees intermingle with through the transducive and immersive power of sound.

As noted earlier, the reciting voice and its qualities are a key site where the power of religious performance became manifest for my Mauritian Muslim interlocutors. Above all, this appears to be in line with the general centrality of the voice and its sonic dimensions in Islamic contexts (Messick 1997, Gade 2006, Jouili and Moors 2014). The voice is also central to the paradigmatic logocentric recitationalism explored in previous chapters. Concerning ideas about the voice, the Indian background of Mauritian Muslims should be considered, too. Not only did the voice develop into the most prestigious form of musical expression in an emerging "classical" canon patronized by middle-class modernity in India since the late nineteenth century (Weidman 2006), but there are also long-established

histories of vococentrism in South Asia, with accompanying hierarchies in favor of the voice, traceable to precolonial times (Wolf 2014: 12–13). At the same time, a range of scholars in the humanities working from European perspectives have considered the voice and its qualities enigmatic and inscrutable. In these intellectual circles, two aspects of the voice especially account for its association with the ineffable and the profound. These are the voice's links with the body and, conversely, its often-perceived "spectral autonomy" from speakers' bodies and subjectivities (Žižek 2001: 58).

First, following Roland Barthes's famous formulation of the "grain of the voice," the voice can be considered most intimately linked to a speaker's body, signaling in its unmistakable individuality the presence of the speaker's body, even against a person's intentions and subjectivity: "The 'grain' is precisely that: the materiality of the body speaking its mother tongue" (Barthes 2012 [1972]: 506). The voice is thus not only a permanent reminder of the embodied nature of discourse but also a direct and involuntary manifestation of body as such, indissolubly bound to and heralding its earthy existence. As a useful counterweight to the abstractness and antimaterial biases of Saussurean semiology, Barthes treatment of vocal performance reasserts the presence of the body, including its instinctive dimensions. According to this perspective, the voice thus features as a diagnostic of deeper bodily truths and expressions that are not controllable by human intentionality.

In contrast, several thinkers have taken the dissociation of the voice from bodies and subjectivities as a starting point for theorizing its nature and particularities. Instead of postulating a deep and involuntary connection between a speaker's body and her voice, they have been fascinated by the voice's spectral autonomy. This perspective on the voice takes issue with the long-standing tradition of viewing the voice as the innermost expression of an actor's subjectivity, the established logocentric viewpoint that is also behind the widespread anthropological use of "voice" as a trope for agency and subjectivity. One way to arrive at such a perspective on the voice is the experience of listening to one's voice in the moment of enunciation, with the frequent result that one's own voice is heard as an "other," or stranger (Waldenfels 2006: 198–199), an insight that resonates with Derrida's comment that "the voice hears itself" ("la voix s'entend"; Derrida 2011 [1967]: 65). Even in everyday experience, one's own voice, often assumed to be a core manifestation of the self, is thus haunted by an uncanny foreignness. One can listen to one's own voice while, in the process, a distance between the self and its voice opens up, betraying the aspects of the voice that cannot be encompassed by intentionality. The voice thus acquires features of an autonomous object, which from a perspective that takes for granted a deep link between voice and subjectivity is an unsettling experience.

Theorists such as Slavoj Žižek and Mladen Dolar have accounted for this autonomy of the voice from the subject in psychoanalytical terms. They have cast the voice as an embodiment of psychic dimensions that elude signification and the

control of a subject aware of itself. Dolar has drawn on Lacanian psychoanalysis in order to do so, specifically on Lacan's notion of the real. By this, the latter meant an undifferentiated wholeness of absolute presence that is forever lost as infants develop awareness of themselves as separate beings. Such undifferentiated wholeness can later be experienced only through traumatic gaps and inconsistencies of the symbolic order, the sociocultural array of semiotic differentiation and signification of which the chief paradigm is language. According to Dolar, the voice is the embodied trace of what Lacan called the *objet petit a,* or the unattainable object of desire that emerges as the result of the traumatic occlusion of the real through the symbolic order (Dolar 2006: 11). As a consequence, the voice is an "object" different from the subject to which it is often thought to belong, and it is characterized by otherness in corporeal terms.

Shifting from a psychoanalytic to a media perspective, the haunting otherness of the voice is also a feature often ascribed to the acousmatic voice, a voice separated from the body that produces it (Chion 1994, Macho 2006, Kane 2014). The acousmatic voice has become common through the spread of sound reproduction technology. It has long been an object of fascination and spiritual imagination, such as in reported experiences of hearing the voices of spirits, ghosts, the dead, or even God (Schmidt 2000). Jonathan Sterne has argued that desires to hear acousmatic voices, especially the voices of the dead, were an important part of the nineteenth-century cultural milieu in North America and Europe that motivated the development of sound reproduction technology (Sterne 2003). Other scholars have argued that the acousmatic voice, despite its mundane ubiquity in modern media worlds, still serves as a reminder of the voice's enigmatic and disturbing aspects: "It [the voice] deprives us of distance and autonomy. If we want to localize it, to establish a safety distance from it, we need to use the visible as the reference. The visible can establish the distance, the nature, and the source of the voice, and thus neutralize it. The acousmatic voice is so powerful because it cannot be neutralized with the framework of the visible, and makes the visible itself redoubled and enigmatic" (Dolar 2006: 79).

According to Dolar, the acousmatic voice is thus a reminder of the difficulty to submit voices to the control of subjects, and of voices' propensity to become objectlike and dissociated from selves. Acousmatic voices have also occasionally become the target of conservative critiques, such as in Murray Schafer's denouncement of "schizophonia" against which he posited his notion of organic, pastoral soundscapes (Schafer 1994 [1977]). As noted earlier, such voices decoupled from their sources that previously were the object of much awe and fascination have become an ordinary feature of present-day lifeworlds around the globe owing to the spread of sound reproduction technology. Nevertheless, listening to one's own recorded voice can be an experience of the "otherness" of one's own voice. In such contexts, the "otherness" of the voice is less a matter of Lacanian psychodynamics and more an instance of temporal and spatial displacement combined with the

circumstance that, for many, the recorded voice will sound different from one's own voice when it is listened to while speaking. The latter is the result of technologies of voice recording and reproduction, as well as of the listening habits that have become part of them.

In my investigation of voice, media, and devotional practices among Muslims in Mauritius, I avoid broad generalizations about the voice in terms of its presumed otherness, such as generalizations evident in the prehistorical and precultural characteristics ascribed to the voice by Dolar, Barthes, and others. Nevertheless, the theme of the otherness of the voice can play an important role in more specifically circumscribed historical and sociocultural settings. One way in which it is relevant to my analysis is its role in religious cosmologies. In my ethnography of voice and sound reproduction among Mauritian Muslims, the Qur'anic paradigm of the reciting voice as the site where God reveals himself is of obvious importance. There, the voice literally features as an "other," as the trace of the fundamental difference between God and human beings. The frequent shifting of the voice between its attachment to the self and its otherness is a common feature of Islamic ritual settings. In the previous chapter I sought to give a detailed account of this shifting between self and other in terms of participant roles, Bakhtinian polyphony, and different strategies of entextualization. Even though the performative recitation of na't poetry is not the same as the recitation of scripture, it became clear that an important dimension of such performances is the reanimation of the voices of other actors—most importantly the revered saint-poets that many Mauritian Muslims consider to be the composers and originators of the na't poetry they recite.

Highlighting the sonic dimensions of the voice makes it possible to approach the otherness of the voice from a different angle. The starting point is the observation made by a range of my interlocutors who stated that the most powerful moments in na't performances were those in which these listeners felt "touched" by a voice (cf. Schulz 2008: 180–184). The register of touch they drew on to describe the effects of the voice on their bodies suggests that the voice reaches and encounters bodies as an "other" from the outside. This chapter is dedicated to unpacking this phenomenon, elucidating this process of bodily encounters with voices in an Islamic setting, and analyzing its effects. In order to do these things, it is necessary to go beyond the frame of analysis I employed in the previous chapter, where I described voices mainly in terms of their social significance and the subject positions they summoned in interaction. It turned out that such voices enable Mauritian Muslims engaged in the cultivation of na't to inhabit different and shifting participant roles, thus taking changing positions with respect to other participants, and to align themselves, jointly with others, to specific religious and social values.

Complementing such an analysis of social semiotics, in this chapter I analyze na't performances as sonic events, where particular moments of felt sonic intensity lead participants to report strong effects on their felt-bodies, which they describe

in emotional and religious terms. In doing so, I draw on the analytic of transduction. Qualities of the voice, including timbral qualities, are decisive features of the sonic events I investigate. I also show how the performances as sonic occurrences result in the creation of particular atmospheres that my informants described as being charged with piety, with affection for the Prophet, and sometimes even with the Prophet's presence. Combining a sound studies perspective with phenomenological approaches, I trace how sound, in this case the sound of the reciting voice, can be understood as atmospheres, as events emerging and exuding from persons and objects.

In July 2010, I spoke with Shareef at his home about what he thought were good na'ṭ performances. Giving me an example, he recited a na'ṭ about thwarted attempts to go on the Haj. The devotee is left back home, year after year, because he has no means to go on the pilgrimage. He sees his friends departing, feeling desolate.

Ham madīne jāengen agle baras	We will go to Madina next year
Ham madīne jāengen agle baras	We will go to Madina next year
Har baras yeh sochkar ham reh gaye	Every year we thought so and we stayed

Shareef then remarked,

> The caravan [*kāfilā,* drawing on the traditional image of pilgrims traveling by caravan to Mecca] has departed, and you have just stayed at the airport. You have waved them [the pilgrims] farewell. With a heavy heart you return. . . . If you do not know how to recite this, then it will just be an ordinary thing. But if you put emotion in it, then, in that moment, with your voice, your tears will also flow; if your tears flow, all people who are listening, they will also start to cry. . . . Now, you do not just put emotions in it—how should I say—fabricated emotions [*ban emosiyon fabrike*], no. There are emotions, yes, and there are people who fabricate an emotion such as when, after a little while, you see them crying [and then] you suddenly see that they are laughing—they are fabricating emotions, right? But these [emotions in good recitals] are not fabricated emotions; these are emotions that come directly to you, just directly, and that creates an impact. That means there are two kinds of na'ṭ khwan: one whose voice just reaches your ear. And another [kind of] na'ṭ khwan, whose voice will penetrate your soul. But directly into your soul [*ruh*], and that soul shouts. Then there will be emotions, there will be physical transformations [*pu ena ban transformasyion fisik*]. And he will not be able to hold it back—he will cry, he will scream.

Shareef made a strong point here. According to him, the reciting voice has an impact on listeners far transcending the meaning of the discourse it conveys, as its sonic dimensions appear to play a crucial role. He even suggested that this impact is not a matter of persuasion but acts on listeners "directly," effecting "physical transformations," apparently exceeding the agency and intentionality of those listening. It is as if the sonic dimensions of the voice exert a powerful force as they literally make an impact on the felt-bodies of listeners, resulting in a transformation in them.

What does listening to recitation of naʿt bring about? What is the impact of the voice on the bodies of those listening, and what does it create? According to Shareef and almost all others I spoke to about the role of the voice in the recitation of naʿt, the sound of the voice, if performed properly, provokes feelings and emotions (*emosyion* in Mauritian Creole, *ehsās* in Urdu). According to Shareef, listening to vocal recitations of devotional poetry causes the emergence of feelings. Speaking in his usual Mauritian Creole with heavy use of Urdu loanwords and interspersed phrases, he pointed out that there is "physical transformation" (*transformasyion fisik*), because "something, a thing is born; one has a feeling" (*ek cīz paidā hotā hai; ehsās hotā hai*). One approximates feelings (*ehsās*) to things (*cīzen*) that are born in the body, provoked into existence by sound. But in order for this to happen, the sound of the voice needs to have particular qualities, a particular sonic profile.

In other words, Shareef and others among my respondents describe processes of transduction, in which sonic energy—the sound waves' deviations from the ambient atmospheric pressure—is converted into different forms of energy in the body, creating new psychological and sensational phenomena in the process. Note that their descriptions of the bodily felt effects of naʿt performances are not just about hearing as a distinct sense. The effects appear to go beyond the faculty of hearing in a strict sense, since they involve the entire body, its flesh, while provoking the emergence of something new. This bears a striking resemblance to Gilbert Simondon's analysis of transduction as a creative process. Simondon took transduction to be the chief mechanism for the creation of new entities, or "individuals," across a broad spectrum of phenomena, from the creation of biological organisms to psychological phenomena and states. With this, he described how an activity propagates through a given domain in a structuring move, moving from area to area in a manner so that the structuring effected in one area serves as the model for the structuring of adjacent areas (Simondon 1992 [1964]: 313). Transduction is thus an energetic movement that operates in such a way that the new areas reached by it are restructured in ways analogous to the areas of origin of the movement. Sonic processes of transduction are a good example, as variations of air pressure can propagate not just in air but also in other material media, such as water, metal, or body tissue. Here it is important to note that sonic transduction in the body does not simply occur in the hearing apparatus, which transduces sound waves into electrical impulses sent to the brain, but can also work in other parts of the body, such as tissue or bones, a sensation familiar to anyone who has literally felt the bass vibrate throughout his or her body in a dance club (Henriques 2003). What is common to all forms of transduction, including sonic ones, is the analogous relationship between the structuring movement propelling the transduction and the resulting material restructuration in spatially proximate regions reached by the transducive movement. That the sound of a reciting voice can literally make one vibrate in unison with it was also remarked upon by Mohamed in a

conversation about what qualities of vocal recitation actually move an audience at a na'ṭ performance:

> Patrick: What qualities does someone need in order to make people respond with enthusiasm [to a na'ṭ performance]?
>
> Mohamed: First, they have to know the right words. Second, they have to know the mood, or air [*ler*]. Third, the person who is reciting/reading[1] . . . well, there are two ways of reciting: one that comes out of the throat—when it comes out of the throat, you will see that in this person, there is no emotion. But there is another way [of reciting], that comes out of the heart. You can identify the one that comes out of the heart by the emotion in it. That means its sentiment passes through his throat; and when it comes out it causes this assembly to vibrate, you see, like Owais Qadri [a renowned Pakistani na'ṭ khwan] does. People such as him, when they recite they make you vibrate. Why? Because the way they are reciting, you will not feel you are here; you will feel you are in Madina, they have taken you to Madina.

In this quote, Mohamed drew links between the sonic impact of a voice on felt-bodies in terms of reverberation, the verbal expressions of heartfelt emotions, and the feeling of being literally carried away by a voice to a more desirable place. The impact of vocal performance as sonic event is likened to an energetic movement that makes the listeners affected by it "vibrate" while also being transported by it, in this case to Madina, the resting place and favorite city of the Prophet. This quote testifies to the entanglement between signification and sonic transduction. The former is evident in the references to the "heart" as the source of deep feelings, and to Madina as the destination of listeners of the vocal performance. However, the aspect of energetic movement central to vocal performance as sonic event, whether manifest in the vibration of bodies or the felt transportation to another place, appears to occur relatively independently from the discursive aspects of the event. Here again, the power of the reciting voice seems to lie in its impact on felt-bodies and the resulting transformations in them. In other words, the most salient and dramatic effects of the voice are grounded in the logic of transduction.

Another key aspect of transduction as energetic movement described by Simondon, the restructuring of a domain progressing from one adjacent area to the next, is also evident in sonic transduction. When talking about na'ṭ performances, some of my informants described something similar in terms of the contagiousness of the vocal performance's effects on listeners if carried out by a voice with the appropriate characteristics, transporting emotion in the process. For example, Shareef, elaborating on the sadness of having one's plans to go on the Haj thwarted, also remarked on the contagious nature of the sonic impact on bodies: "But if you put emotion in it, then, in that moment, with your voice, your tears will also flow; if your tears flow, all people who are listening, they will also start to cry." Remembering another occasion when he recited na'ṭ at the wedding

of the daughter of a recently deceased friend of his, he found that when he reached for the microphone and started reciting, the following happened: "So much crying. Not just the bride, but the entire hall full of guests. I was reading/reciting in my style, but this had such an effect that an entire hall full of people started crying."

The vocal performance worked as a sonic event whose effects rapidly spread like ripples on water, quickly radiating from the spot where a stone dropped in it. The process of sonic transduction that causes this spread of an emotion throughout an audience is akin to an energetic movement that restructures the areas it reaches in the process of spreading out. Simondon described transduction as a process spreading from place to place: "Each region of the constituted structure serves as a principle of constitution for the next region [Chaque région de structure constituée sert à la région suivante de principe de constitution]" (Simondon 2005: 32, cited in Combes 2013: 6). Sonic events turn around the emission and omnidirectional spread of sound waves, encountering and penetrating bodies, effecting changes in them analogous to the structures and shapes of the sound waves colliding with them. At the same time, the last example also shows that certain conditions must be met for the transducive sonic movement to have an effect in the milieu where it spreads. It is not an automatic process. Listeners must be receptive to the desired effects of the performance. This was the case at the wedding, when Shareef recited a naʿt evoking sadness and those attending the wedding all remembered the recent death of the bride's father.

Not only must the audience of a naʿt performance be receptive to its desired effects, but also the person reciting must be properly prepared, for the voice to have profound transformative effects on its listeners. In other words, the effects of sonic transduction do not depend solely on preconditions among listeners, similar to the sensitizing and attunement among listeners of cassette sermons in Cairo described by Charles Hirschkind (2006: 74–84), but also depend on the reciting performers. The body social both perceives the voice and is enunciated through it (cf. Feld et al. 2004: 341). For example, as Cassam, one of my interlocutors pointed out:

> Now, I say that if someone does not have *shariʿat* [proper or lawful Islamic conduct] in him, when he recites naʿt, it is dull [*fad*]. . . . [A]lso for a naʿt khwan, if you go and do your *ʿibādat* [worship], in your *ʿibādat* you will gain *shawkat* [dignity]. But if you do not even have *ʿibādat,* and if you are a great singer, you have a beautiful voice, yes; but for reciting naʿt, right, later you will see that at the time of the *zohr* [second] prayer, he is still eating, and you will never see him in the mosque. Now, you do not even know if he did *wuzu'* [ritual ablutions] or not. Well, all this counts—even if a good voice comes out, it is then all useless [*befāyda*].

That is, according to Cassam, even a beautiful, properly trained voice is worthless and will not have the desired impact on listeners if a naʿt khwan does not live according to the values and tenets of an Islamic way of life, including its outward signs. Continuing his explanation, Cassam further elaborated: "There has to be

shariʿat in you. For example, for a long time, many naʿt khwan did not have a beard. The first one who came [to Mauritius] and had one was Qari Fasihuddin Soharwardi [a renowned Pakistani naʿt khwan]—he had a beautiful beard. And then the people of the Daʿwat-e Islami came—they all have beards. And then all others started to grow a beard."

Other interlocutors also emphasized the need for a naʿt khwan to be recognizably pious. When talking about Maulana Elias Attari—the founder of the Daʿwat-e Islami movement, which is connected to Ahl-e Sunnat wa Jamaʿat and is based in Karachi, and who is known as a composer of naʿt poetry—Fareed, one of his Mauritian followers, said, "His naʿt are full of emotion, and somehow—how should I say—he just makes you desire to go to Madina. From top to bottom, he is steeped in the *sunnat* [the traditions of the Prophet]. He tells you to be practicing: you have to become a good, practicing Muslim in order to be a good naʿt khwan. If you are not a good, practicing Muslim, well, then, you cannot become a good naʿt khwan. . . . Like our Prophet said, "Do what I do; do not just do what I say."

For Fareed, it was clear that the naʿt khwan's voice alone cannot have the transformative effect that those taking part in naʿt performances often seek. A voice needs to be complemented by the full spectrum of pious discipline, including its somatic dimensions, in order to be effective. According to Fareed, reciting and listening to naʿt is like a "vitamin for the heart" but is secondary to obligatory forms of Islamic conduct, such as the five daily prayers (*namāz*):

> There once was a famished person. He went to the hospital, and the doctor said, "Take this medicine after meals." But the problem is that the famished person does not get any meals. In the same way, naʿt is only a fortifier [*enn fortifian*], an *energizer* to make your soul happy. But if you do not read namāz, then naʿt is like a pill on an empty stomach: it will not help the hungry person. It only works with the obligations, such as namāz. Otherwise it has no effect. But if a person is a good *namāzī* [somebody who prays regularly] and also recites naʿt, his voice is like a magnet: it will be manifest in his voice. The people who will listen will think, "I feel being transported elsewhere, carried away."

Others among my interlocutors specifically stressed the importance of sincere piety. Here, sincerity becomes both a precondition and the ground for a beautiful, moving voice. As Farhad pointed out, "You see, when a naʿt is recited by heart, without reading the text from a paper, you are expressing the love for the Holy Prophet when you are reciting. The love for the Holy Prophet can be seen by the people. You see: it can be seen, the love for the Prophet will become visible on your face. In this way it becomes clear that a naʿt khwan is reciting with sincerity [*khulūs ke sāth paṛh rahā hai*]. And such a naʿt grips you powerfully [*zor se pakaṛtā hai*]."

Naushad was among the first of my interlocutors with whom I had conversations about the qualities of the voice found in what he considered to be good naʿt performances. Putting his hand on his chest, he stressed the idea that "the voice

that comes from the heart has more effect. If you are a good servant of the Prophet, you feel it in your heart, it will come from the heart." According to Farhad and Naushad, sincerity is an inner condition of the self that must also become manifest through outward signs, such as a pious and moving voice, or a particular facial expression showing one's love for the Prophet. The ambiguities and tensions surrounding the problem of sincerity became clear when I asked Farhad about the visual dimensions of naʿt performances, given the increasing popularity of online videos of naʿt recitals. He replied that he did not think the visual dimension was very important compared with the sonic aspects of the voice. Imitating the gestures he had seen, he said, "People try to impress their audience. They throw their hands up and down, without *adab* [proper decorum]. But respect is most important. One must be properly dressed and seated, yes, but some throw their hands up and down as if dancing. This has been condemned by ulema."

There is tension between Farhad's assertion that visuality is unimportant at best, if not distracting or indicative of a lack of respect, and his earlier point that the sincere piety of a naʿt khwan can be read in the latter's face. The contradiction speaks to anthropological approaches to the dilemma of sincerity, which anthropologists have investigated primarily in Protestant settings. Sincerity in religious practice is also a key theme in Islamic modernists' critiques of traditionally established ritual practices (Bowen 1993: 80, 280–283). In those historical and ethnographic contexts, a distinction between interiority and the outer comportment of subjects is taken for granted, as is the case in settings influenced by Protestantism. But in Islamic settings historically influenced by the Sufi and Shiʿite inner-outer opposition between *bātin* and *zahīr* (Beeman 1986: 11–12, Buehler 1998: 245), sincerity can also be seen as a property of the interiority of an individual. It can, however, only be socially communicated and performed through the display of signs readable by others (Keane 2007: 197–222, van der Veer 2006). Apart from this familiar problem in the ethnography of sincerity in religious settings, sincerity also acquires special significance regarding the voice in naʿt performances. As I have shown, some of my interlocutors repeatedly described the voice as an expression of sincere piety in naʿt performances. Performers' need to express their piety is similar to the way Protestants need to perform certain visible or audible signs in order to be perceived as inwardly sincere. At the same time, my interlocutors also saw sincere piety as a *precondition* for an effective and good voice capable of provoking pious transformation and the accompanying sensations in others. They pointed out that an attractive and well-formed voice alone is worthless if it is not accompanied by pious sincerity.

The latter perspective is in tension with the great attention given to qualities of the voice considered necessary to achieve a transformation when reciting naʿt and in other religious performances. Or as Mohamed put it, "One has to make this gathering vibrate [*bizin fer vibre sa lassamble-la*], like Owais Qadri does, and take them to Madina." This is especially the case in relation to the observation that

pious states come about through the transducive impact of the voice, resulting in "physical transformation" and the condition of a "thing being born" in the body. Many conversations about the voice in the recitation of naʿt I had in Mauritius revolved around this tension between a preoccupation with sincerity—and therefore with the assumed inner intentions of the performers—and a much more materialist stance highlighting bodily sensations and the impact of sonic events and their energetic forces on felt-bodies.

SONIC ATMOSPHERES

My interlocutors often struggled to describe the impact of the voice during the recitation of naʿt, considering it both ineffable and profound. For them, there was something unfathomable about the power of the voice, such as its felt ability to transport one to Madina. Its power appeared to pervade performances but, at the same time, was difficult to pin down. One way in which some sought to capture this elusive quality was by referring to the *air* of a naʿt—that is, the tune, but also the performer's appearance and expressions suggested by it. For example, Shareef pointed out that he produced his first recordings of naʿt because "it is important to make sure that people know the original *ler* (akin to the French *l'air*) that one needs to put into it when reciting." Similar to the English musical notion of an air, the Mauritian Creole term *ler* refers to the vocal rendering of the poetry, more specifically to its tune but also to its aura and what is being expressed and suggested by the manner of reciting. And Nazeer, who has also released recordings of naʿt, confessed that he liked to listen to naʿt recordings in order to appropriate the parts he liked for his own performances. I had asked him about video recordings of performances and whether he preferred them to strictly audio recordings. He replied, "I am more interested in the sound. . . . If I only hear his [the naʿt khwan's] voice, I concentrate more, I get it just as he is reciting, because I need to steal that ler. If I am interested in the ler, I have to focus on this." Here, he suggested not only that the manner of vocal expression is of key importance to the performance but also that the kind of voice conveying a certain expression could be learned and appropriated.

I find it useful to draw a link between the ineffable but reproducible moods that naʿt recitation can create and the notion of atmosphere. Here I propose to interrogate vocally created sound as atmospheres, as understood by new approaches in phenomenology. Gernot Böhme, for example, has made the case that atmospheres are not subjective moods but quasi-objective phenomena that exude from objects, persons, and events (Böhme 1993, 1995). As sonic events involve the emission of sound waves (in my examples, differences in air pressure) that are transduced into different modalities of energy when they reach bodies, they provide concrete instances of objective phenomena emanating from persons and objects.[2] This also pertains to vocal sound. According to Böhme, "Voice is the atmospheric presence

of something or someone" (Böhme 2009: 30). Work in newer approaches to phenomenology has stressed how bodies intermingle with and thereby perceive atmospheres. As sound flows forth from objects, it provides a striking illustration of Böhme's analysis of atmospheres as "ecstasies of the thing" (Böhme 1993: 110, 1995: 31–34), and of Hermann Schmitz's description of atmospheres as "the occupying of a nondimensional space or area within the range of experienced presence" (Schmitz 2014: 30).[3] The diffuse potentialities of the voice are then something that others can literally bathe in.

In order to understand this process, it is useful to recall the distinction between Leib as the lived, felt body, and Körper as the physical body, which was first made by Helmut Plessner (1982 [1925]) and which became more widely known through its adoption by Husserl (1973: 57) and Merleau-Ponty (2002 [1945]: 329–330).[4] The felt-body, or Leib (Schmitz, Müllan, and Slaby 2011: 242), can extend beyond the boundaries of the physical body. According to Schmitz, its sensations can extend to phenomena that are outside the limits of the physical body but which still pertain to the Leib (Schmitz 1965). The intermingling of the felt-body with atmospheres is evident in the transducive immersion in sound as it collides with or, in the terminology of acoustics, sometimes even "attacks" bodies.[5] For Schmitz, the space of sound (*Schall*) is one of the foremost instances of a nondimensional space that can constitute atmospheres (Schmitz 2014: 31).[6] It is tempting to read my interlocutors' experiences of the reciting voice in this Muslim devotional context as revealed by their accounts through this phenomenological approach to atmospheres. When, for example, Mohamed recounted how a na't khwan's voice makes one "vibrate," and Shareef spoke about this resulting in a "physical transformation," their reported experiences strongly resembled the encounter with sonic atmospheres, which provoked bodily felt reactions among the listeners. The intermingling with sonically produced atmospheres is also recognizable in my interlocutors' explanations that the na't khwan's voice can "penetrate your soul." The social dimension of bathing in the same sound event together with others also lends itself to this analytic, as my interlocutors among Mauritian Muslims were aware of the contagious and intercorporeal (Csordas 2008) spread of moods and feelings among those engulfed by the same atmospheric forces emanating from the vocal performance they collectively listened to. As Böhme describes, in reference to the workings of sonic atmospheres, "Listeners will sense tones, voices, sounds as modifications of their own space of being. Human beings who listen in this way are dangerously open, they release themselves into the world and can therefore be struck by acoustic events. . . . Listening is a being-beside-yourself [*außer-sich-sein*]" (Böhme 2000: 18).

In being open to sound in such a way, persons attuned to the acoustic events that are unfolding do not react with feelings; but according to Hermann Schmitz, atmospheres themselves are feelings, often as ineffable as they are powerful, that persons encounter in a literal way. According to this phenomenological approach,

feelings and emotions (the term used by Schmitz is *Gefühle,* literally translated as "feelings") are not a matter of subjective interiority but are literally atmospheres exuding from objects, persons, and their constellations, filling a dimensionless space between the atmospheres' sources and human actors encountering the atmospheres. In Schmitz's words: "Emotions are atmospheres poured out spatially. An atmosphere in the sense intended here is the complete occupation of a surfaceless space in the region of experienced presence. This surfaceless space, apart from emotions, can also be occupied by the weather experienced as enveloping you or by (e.g., festive, pregnant or calm) silence" (Schmitz, Müllan, and Slaby 2011: 255).

My Mauritian Muslim respondents often remarked that the transformative potential of na'ṭ turning them into better Muslims revolved around its emotional impact, which they talked about as powerful but also as something difficult to grasp. At the same time, they described na'ṭ as moving them in concrete ways, such as in their portrayals of listening to na'ṭ as being carried away to a more desirable place. Shareef also referred to the experience of listening to properly recited na'ṭ poetry as "getting on a bus," while a performative failure to achieve the effective mode of recitation was like "having to get off the bus." For Shareef and others the impact of na'ṭ as a emotionally powerful technique of pious transformation centered on experiences of bodily movement. Even though my interlocutors found it difficult to verbally describe the sonic effects of na'ṭ recitation, they were not invested in an ideology of sonic ineffability. They did come forward with metaphoric descriptions of suggestions of movement effected through sound that bear a striking resemblance to the propositions of a theory of sonic atmospheres. For me, the deep resonance between my Mauritian Muslims interlocutors' culturally embedded descriptions of sonic perception and an analytic of atmospheres is a main reason to draw on atmospheres in order to account for the power of sound in the Islamic contexts I have investigated.

Against the background of sound as movements of transducive energy that bodies intermingle with, an analytic of sonic atmospheres adds the vital element of spatial movement that bodies experience in phenomenological, nondimensional felt space that is prior to the three-dimensional space of physics and other sciences (Schmitz, Müllan and Slaby 2011: 245). Writing about the question of emotional effects of music, Gernot Böhme proposes that the interaction between sonic atmospheres and bodies may hold an answer to it, beyond any culturally framed notion of "music": "The discovery that music is the fundamental atmospheric art has solved an old, always annoying and yet inescapable problem of musical theory, i.e., the question: of what does music's so-called emotional effect actually consist? . . . [T]he Aesthetics of Atmospheres gives a simple answer to the question: music as such is a modification of space as it is experienced by the body. Music forms and informs the listener's sense of self [*das Sichbefinden*], in a space; it reaches directly into his or her corporeal economy" (Böhme 2000: 16).

The notion of sonic atmospheres thus draws attention to the fact that the perception of sound always involves modifications of felt space by the body. In sonic performances, such modifications are often pattered, such as in rhythm, the rising and falling of pitch, or the growing and shrinking of the amplitudes of sound waves (volume). If we understand sound as fundamentally transducive and as a phenomenon that commingles with bodies, the encountering of sound as atmosphere involves modifications of felt space that are perceived as suggestions of movement (*Bewegungssuggestionen,* according to Schmitz), which are at the same time feelings. Hermann Schmitz argues that the dynamic characteristics of sound and the vital dynamics of the felt-body are closely interrelated (Schmitz, Müllan, and Slaby 2011: 245). The latter's dynamics revolve around an alternation of contraction and expansion, as in breathing.

> The dynamic volume of sound is the same as the volume of the vital drive pertaining to the felt-body [Leib] consisting in tension and swelling, as in breathing in, including the privative dilation that releases itself from the swelling, as in the state of fatigue. These kinds of volume come about through suggestions of movement. Such suggestions of movement correspond in the cases of felt-body and sound, and far beyond that, as they make communication through the felt-body [*leibliche Kommunikation*] possible. (Schmitz 2014: 85)

Sound's seizing of the phenomenological felt-body thus operates by suggestions of movement that interact with the felt-body's vital dynamics and movements. It is in this way that we can speak, in Böhme's terms, about sound reaching into corporeal economies, as sound's suggestions of movement are modifications of space sensed by the felt-body.

The links between perception, including sonic perception, and movement are a key theme that an analytic of atmospheres shares with Marcel Jousse's (1990 [1925]) gestural subject, which Charles Hirschkind has drawn on in his ethnography of cassette-sermon audition in Cairo (Hirschkind 2006: 76–79). Nevertheless, there are also significant differences between the two approaches. To begin with, Jousse does not distinguish between the felt-body and the material body. He is mainly concerned with subtle physiological processes in the material body provoked by external stimuli. These are micromuscular "gestures" that, for Jousse, are the ground for all expression and memory (Jousse 1990 [1925]: 23–30). "As the spectator at a fencing session follows the movements of attack and defence, each one of these movements repeats itself with lightning rapidity in his own musculature. Motor waves run through his whole body; in his own person he fights, attacks, fends off, wins or succumbs. The associated sensations of ease and well-being at the right movement, or embarrassment and pain at the wrong movements, are felt by him in the same way as by the fencers themselves" (Jousse 1990 [1925]: 23). Jousse draws a contrast between external phenomena (the dueling fencers) and gestures located in the musculature inside the material body that spontaneously

come about as quasi-physiological reactions to sensory stimuli from the outside. In contrast to Jousse's gestural subject, the notion of the felt-body (Leib) that is foundational for an analytic of atmospheres points to the blurring of the boundaries between inside and outside. As noted, the felt-body exceeds the boundaries of the material body and is the mingling ground of persons and atmospheres as "ecstasies of the thing." Jousse's gestural subject highlights processes of bodily stimulation through sensation indebted to a subject-object divide, while an analytic of atmospheres centers on the intermingling of humans and the world in the felt-body.

Also, unlike the sensations of Jousse's spectator at a fencing match, feelings do not occur only inside the material body. They are phenomena that also take the shape of atmospheres spilling out in nondimensional space (Schmitz 2014: 30), and therefore they are primarily entities outside the material body. Their *Einleibung,* or encorporation in the sense of becoming part of a felt-body, is therefore a process different from the reception of sensory stimuli triggering gestural reactions that Jousse called "intussusception" (Jousse 1990 [1925]: 232–233, Sienaert 1990: 95).[7]

This also points to another important distinction in Hermann Schmitz's work, between things and half-things (*Halbdinge*). The latter are often atmospheric, as they are phenomena that, in contrast to things, can be interrupted, such as the feeling of heat and cold, wind, pain, a voice, or musical figures. They appear and disappear, and "it does not make sense to ask where and how they have been in the meantime" (Schmitz 1998: 188); they can restlessly shift their location in space (Schmitz 2014: 75; see also Griffero 2017). Furthermore, unlike for things, where the cause of an effect and the action through which an effect is generated can be distinguished, for half-things cause and action coincide. That is, they are subject to a twofold scheme of causality (cause/action-effect), instead of the threefold Humean account of causality (cause-action-effect), where the action or causal link that mediates between cause and effect needs to be separated and specified. According to Schmitz, in atmospheres as half-things, such as in the weather, pain, or sonic phenomena, they themselves and the action they exert are one and the same (Schmitz 2014: 75). Pain, wind, or musical figures do not exist prior to or beyond their paining, blowing, or sounding. In contrast, take the example of a rock causing an injury. A rock preexists the action it carries out. In order to account for the effect of the rock as a thing, the action (e.g., the rock's fall) needs to be distinguished and specified in order to link rock and injury. This in turn points to a key difference between Jousse's gestural subject and an analytic of atmospheres. In sonic atmospheres' effects on the felt-body, the atmospheric phenomenon and its impact are identical; its existence and the action it carries out are indistinguishable as it generates its effect: the felt-body's state of being seized by something (*leibliche Ergriffenheit*).

In contrast, Jousse does not distinguish between the perception of things and half-things. Whether a body apprehends a thing, such as an image; a half-thing,

such as sonic phenomena; or an event consisting of an assembly of persons and things preexisting the event (such as the fencers and their equipment in Jousse's example above), Jousseian gestures come about as the effect of sensory phenomena in an external world that is clearly demarcated from the body. These have a specifiable impact that is distinguishable from the phenomena themselves: the internalization of sensory stimuli, such as acoustic stimuli. These internalized stimuli in turn trigger particular physiological processes that Jousse calls gestures, in a traditional threefold chain of causality (the external phenomenon as a cause, the internalization of stimuli as an action, and the gesture as the effect). Jousse therefore offers no means to distinguish the somatic effects of locationally stable and more or less perduring thinglike phenomena from the effects of atmospheric, floating, and vanishing half-things that become part of the felt-body, modeling the perception of the latter on the former.

Jousse's gestures are also different from the modification of the felt-body's sense of being in space that Böhme writes about and Schmitz's suggestions of movement, such as those proper to sonic atmospheres. Jousse's gestural subject inhabits a material body filled with micromuscular dynamics located in three-dimensional space. In contrast, atmospheric suggestions of movement unfold in the nondimensional space sensed by the felt-body. These are movements that do not involve changes in location in three-dimensional space, which is posterior to nondimensional or surfaceless (*flächenlos*) space (Schmitz 2012: 74): "Musical *Gestalten* are webs of suggestions of movement in the medium of tones, that is, foreshadowings of movement without movement enacted by the music itself (through a shifting of the source of sound)" (Schmitz 2014: 88).

In light of this discussion it is not hard to see that an analytic of atmospheres can invigorate anthropological approaches to the sensory dimensions of religion. As part of a larger shift away from a focus on belief and on the analysis and comparison of doctrinal content of religious traditions, anthropologists have called for the study of "aesthetic formations" (Meyer 2008), here meaning the sensory aspects of religious experience, including the culturally and historically contextual dispositions that generate particular sensibilities. The emphasis on the sensual also connects this line of work to the phenomenological insight that our perceptions and sensations of the world are grounded in the body (Merleau-Ponty 2002 [1945]), a suggestion that has also been productively taken up by anthropologists who have examined the "somatic modes of attention" (Csordas 1993) in a variety of cultural fields, including religion (Csordas 1990, Luhrmann 2004, Desjarlais and Throop 2011).

Such anthropological work on embodied religion speaks to the theme of sonic atmospheres with their bodily effects. Moreover, the phenomenological orientation of this approach by no means implies a focus on isolated individuals, as the bodily dependence of perceptions and sensations also rests on intersubjectivity as intercorporeality (Csordas 2008). Bodily grounding of experience of the world

always already involves the awareness of others as embodied beings, whose sensations of the world are an outcome of their embodiment, just as are our own. Our interactions with others and our orientations to them therefore are also intercorporeal in nature: we interact with others as beings who sense the world through their bodies in ways analogous to the way we do. Intercorporeality rests on this principle of imputed analogy, even if the actual sensations may turn out to be different. My ethnography of religious sound provides an illustration of this condition, since part of the power of listening and being seized by the reciting voice of the na'ṭ khwan rests on the awareness that listening is potentially, if not actually, a socially shared event. This is also evident from the earlier discussion of the contagious character of sonic transduction and its effects. The pious transformations that my informants talked about when reporting their experiences of listening to na'ṭ recitations center both on being seized by affection for the Prophet and on being summoned as Muslims, as part of a collective capable of having the same feelings for the Prophet Muhammad, striving together to emulate his example.

The embodied and intercorporeal dimensions of religion also remind us that socially attuned bodies with established habits of listening or other forms of perception perceive sonic atmospheres. As I described earlier in this chapter, my Mauritian Muslim interlocutors pointed out that the effects of a na'ṭ khwan's voice also depend on pious attitudes and sensibilities among both performers and listeners. My interlocutors took for granted what anthropological engagements with listening have also recently highlighted—namely, that the perception of sound is socially and historically embedded, because bodies are never neutral absorbers of sensory data but instead are culturally and socially shaped (Stoller 1989, Downey 2002, Erlmann 2004, Hirschkind 2006). Auditory cultures, such as those that I learned about through listening to my interlocutors' descriptions of sonic perception, mediate the power of sound. This insight also aligns with phenomenological work on atmospheres, in which actors' receptiveness to atmospheres is not taken to be self-evident. Hermann Schmitz, for example, has distinguished between atmospheres that are feelings which bodily seize someone, and those that are merely observed (Schmitz 2014: 86–87). That is, a certain attunement and receptiveness is also necessary in order to be powerfully affected by an atmosphere.

While the intersubjective, and therefore also intercorporeal, qualities of listening to na'ṭ are relatively obvious in devotional events as well as in their mediated circulation, it is important to remember that their embodied effects are not limited to the faculty of hearing. The experiential context of religious sound is not confined to listening in the strict sense of the word, as sound can envelop and enter the body in its entirety, a fact best captured through the notion of the felt-body. Sound as atmosphere becomes bodily sensation through the modifications of felt space it brings about. These modifications are in turn effected by suggestions of movement that sonic events revolve around, and ultimately rest on the transducive qualities of sound. In the remainder of this chapter I examine the recitation of na'ṭ as a sonic

event that foregrounds such suggestions of movement. As vocal sound moves and touches listeners, the voice enacts movements that go beyond the metaphorical. Drawing on spectrogram and waveform analysis, I specifically focus on four acoustic dimensions of performance that na't khwan manipulate in order to create powerfully charged atmospheres—loudness, fundamental frequency, timbre, and reverberation—for the purpose of tracing such emotionally powerful suggestions of movement. Suggestions of movement emerge from the coinciding of several such parameters, creating an overall mood of intensity.

ACOUSTIC PARAMETERS, ATMOSPHERES, AND SUGGESTIONS OF MOVEMENT

My interlocutors' insistence that the effects of a well-done na't recitation are as powerful as they are difficult to describe poses a distinct ethnographic challenge. How is it possible to give an ethnographic account of the power of religious sound if such power and its consequences cannot be fully verbalized by one's interlocutors in the field, and if its effects on one's respondents are not altogether accessible to the ethnographer by direct observation? This challenge is particularly pronounced in the study of atmospheres—which are often characterized, in the words of Hermann Schmitz, by "holistic internally diffuse meaningfulness" (*ganzheitlich-binnendiffuse Bedeutsamkeit*)—as atmospheres seem to be telling us more than can be discursively specified. They appear as distinct, whole entities whose characteristics blend into each other to such a degree that they are difficult to single out by way of definite description (Abels 2016, Schmitz 2005: 104). The powers of sound as atmosphere seem to be at least in part grounded in this diffuseness, resulting in a combination of ineffability and power. If sound as atmosphere is effective because of the suggestions of movement it contains, such diffuse meaningfulness also applies to the movements suggested. Keeping in mind the insight that such movements are powerful in their effects precisely because they are diffuse and cannot be exhausted by discursive description, I do not aim at an impossibly complete analysis of meanings and effects connected to such movements. Nevertheless, several acoustic parameters involved in the production of suggestions of movement can be identified and described. Juxtaposing my respondents' comments on the voice in the na't genre with the analysis of acoustic features of the sounds of vocal recitation that I undertake here, I consider it possible to draw links between my interlocutors' verbalization of how they perceive the effects of the voice of the na't khwan, and sonically suggested movements, resulting in the identification of at least some components of meaningfulness that can be rendered in discursive form.

In the first part of this chapter, I noted how my Mauritian Muslim interlocutors described the sonic aspects of na't recitals in their conversations with me, emphasizing the crucial importance they accorded to the qualities of vocal sound.

At the same time, in order to do justice to sound, its formal analysis is indispensible in order to avoid the immediate reduction of sonic phenomena to language in the analysis. This is the reason I have included diagrams of spectrographic and waveform analysis in this and the following chapter (figures 6–11, 12–15, respectively). Necessitating other forms of access besides discursive description, sonic movements can be brought to light though such formal analysis in ways that are not possible through discursive means. The following analysis in the remaining part of this chapter is thus an attempt to take sound seriously in its own right and to attend to the sonic as a separate mode of knowledge and signification. While stressing that the sonic can in principle operate independently from language and generate knowledge and meaning of its own, my analysis also shows that the sonic and discursive dimensions of na't recitation are in fact closely interlinked.

Also, as I hope to make clear in the remainder of the book, such formal analysis of sonic events by no means sidelines what my interlocutors told me about the sonic aspects of na't recitals. I do not include the spectrographic and waveform diagrams and my discussion of them in order to establish a scientific "truth" about sound that competes with what my interlocutors told me about the sonic dimensions of a na't khwan's voice. On the contrary, such formal analysis complements and builds on my interlocutors' insistence on the transformative and literally "moving" aspects of sonic experiences. As a trained linguistic anthropologist, I take a cue from that subdiscipline; linguistic anthropologists engage in grammatical and other formal analysis of languages used by their interlocutors in the field, even if the latter are not fully aware of such categories and cannot fully verbalize their uses of them, however consequential they may be. Of course, instances of such grammatical analysis can be found in chapter 4. Certainly, the purpose of such an analysis is by no means to render what my interlocutors said less important, but to complement it. In similar ways, a formal analysis of sonic events does not render what my interlocutors told me less relevant but, instead, emerges from the ethnography. When some of my interlocutors said that the sound of a performer's voice carries them away to another place, or that listening to such a voice is like getting on a bus that takes one elsewhere, the striking congruence between such descriptions of sonic effects and neophenomenological approaches to atmospheres points to the necessity of a closer engagement with sonic dynamics, including formal analysis, to get at what such sonic suggestions of movement consist of.

No single approach to the sonic, whether discursive or the formal analysis of sonic events, is sufficient in itself. Just as discursive approaches to the sonic are inherently limited, as scientific representations the spectrograms and waveform analyses also have limits because they represent sonic movements as unfolding in a three-dimensional space. They do not exhaust what Hermann Schmitz has described as atmospheric suggestions of movement unfolding in a non- or pre-dimensional space. From a phenomenological perspective, the latter is upstream to the three-dimensional space of the sciences. The spectrographic and waveform

diagrams, therefore, do not provide direct access to space as sensed by the felt-body; rather, they are signposts intended to show how movements of sonic energy, unfolding along several acoustic parameters, can generate suggestions of movement that are central to atmospheres. This is because the felt-body senses sonic movements as unfolding in nondimensional space, despite the fact that such movements' scientific representations tie them to a three-dimensional space. All this points to the necessity to work with several approaches to the sonic simultaneously.

Listening to recorded na'ṭ performances and paying attention to their acoustic particularities, I find that one of the most striking aspects of the recitation is the deployment of an echo, or reverb effect, that has become an integral part of the recording technique. As I show in greater detail below, an important overall effect of the blanket use of reverb in na'ṭ recordings is the multiplication of the na'ṭ khwan's voice, including the peaks and concentration of acoustic energy it consists of. The latter, in turn, are central to the emotionally powerful suggestions of movement that sonic atmospheres center on. The spatial effect of the echo is directly linked to the spatial logics of atmospheres. First of all, it strongly reminds Muslim listeners of the reverberating sound of the azan (the Islamic call to prayer) in a built environment. This acoustic marker interacts with an aural archive among Muslim listeners, and it flags an institutionalized link to Islamic ritual practice by evoking a common acoustic feature of the azan as it is amplified by contemporary sound-reproduction technology from mosques and their minarets. This is the sound of the call echoing through a Muslim neighborhood, being refracted many times by the surfaces of buildings while the amplified call from other, more distant mosques joins in at the same time. The reverb effect that underlies the na'ṭ recording directly cites this common aesthetic feature of the azan, acoustically aligning the recitation of na'ṭ with a core element of sonic Islamic practice. At the same time, the echo effect of the recording strongly sets off the performance of na'ṭ poetry from other, everyday discursive events, giving it a special, ethereal air. The reverb aesthetic thus marks na'ṭ recitation as being in line with established core discursive and sonic practices of Islam, in this case the azan, while simultaneously giving it a distinct, otherworldly quality.

The logic of atmospheres as a spatial phenomenon, exuding from people and objects while enveloping and intermingling with bodies, is also evident in the rapid alternation between spatial contraction and expansion that is part of the reverb as a sonic phenomenon. The echo effect imitates the reverberation of sound when it is reflected by surfaces, such as those of walls or buildings. Sound waves then reach the ear of a listener directly from their source, and also as objects or surfaces reflect them, often multiple times. If the resulting delay between the original sound and its reverberation is more than sixty milliseconds, most humans process the two sounds as separate (Benade 1990: 210), and they hear additional delays as echoes. This presupposes a sufficient distance between the source of an acoustic impulse and reflecting surfaces. Of course, several other conditions have to be met, as the

scattering of reverberations, such as by furniture in a room, can also neutralize the echo effect of reverberation. Rapidly repeating series of reverberations may also resolve themselves in a whine or buzz in a large, uncluttered room, a phenomenon known as flutter echo (Benade 1990: 210). At any rate, the reverb effect now commonly applied to na't recordings creates the sense of being in a very large hall or other spacious built environment where distances are great enough for the voice to audibly reverberate, and where the size of the space in question is large enough for the reverberation time—that is, the time it takes for a sound to die away when being reflected—to be sufficiently long (Howard and Angus 1996: 241). In other words, the echo effect creates the sonic sensation of distance and the dilation of sound in a large space.

Another key parameter in the production of sonic atmospheres is loudness, or the perceived intensity of acoustic energy (the pressure level of sound waves relative to the ambient atmospheric pressure). This is not strictly the same as the pressure amplitude of a sound wave, as perceived loudness is also dependent on pitch and, at tone intervals of less than a second, on duration. Moreover, in the case of complex sounds ranging across a broader range of frequencies, such as those produced by a voice, psychoacoustic research has shown that the brain appears to add the responses of the hearing apparatus of individual critical bands, so the complex sound is perceived as louder, even though the total acoustic energy remains the same (Howard and Angus 1996: 90). Loudness as the perceived intensity of acoustic energy directly relates to how the encounter of sound with bodies is felt, and with what energy a sonically created atmosphere affects and intermingles with felt-bodies. It is an important measure of the intensity of a sonic atmosphere and of the feelings spread through it.

Fundamental frequency is a measure that tracks the rising and falling of pitch, which—when combined with loudness, on which it also has a crucial influence—is another key parameter in the manipulation of felt space that sonic events revolve around. The increase and decrease of pitch, together with the dynamics of loudness, contribute to the suggestions of movement in sonic atmospheres as they intermingle with felt-bodies. Finally, timbre relates to the formant structure above the fundamental frequency that makes up the specific character of complex sounds, such as those produced by a voice. Formants are concentrations of acoustic energy along particular frequency bands that make up the character of a complex sound. The formant structure makes it possible not only to distinguish a voice from other complex sounds with the same fundamental frequency but also to distinguish between individual voices. The perceived characteristics of the reciting voice that my interlocutors described as "clear," beautiful," or "moving" are also the result of distinct patters of formants, or overtones, that can be made visible on a spectrogram. Timbre interacts with the movements of loudness and fundamental frequency to produce the moments of felt acoustic intensity that are the hallmark of a sonically produced pious atmosphere and its associated feelings.

The following discussion examines these dimensions while analyzing their interplay in terms of its effects on the felt space and suggested movements—that is, the way in which sonic performance affects the corporeal economy and its movements of contraction and expansion. To illustrate the acoustic dimensions I have mentioned, the diagrams below feature a spectrogram in their upper half to show movements in timbre and fundamental frequency, the x-axis measures time for all values, and the y-axis of the spectrogram measures the frequency of sound waves in hertz.[8] The acoustic energy of complex tones, such as vocal sounds, is not distributed continuously across a spectrum of frequencies but coalesces along particular frequency bands, thereby building formants above the fundamental frequency of the sound that look like layers on a spectrogram. Furthermore, some formants, or overtones, contain significantly more acoustic energy than others, which the spectrograms make visible by coloring.

The spectrograms should be read as follows. The spectrograms visualize the complexity of acoustic events across a stretch of linear time. The latter is represented by the x- (horizontal) axis of the spectrogram, which stands for the value 0 on the y- (vertical) axis. The y-axis measures the patterning of sonic energy across a range of frequencies (measured in hertz) for a given point in time. In addition, the coloring of the points in the coordinate system indicates the amount of acoustic energy at a given point, on a continuum ranging from green (low) to yellow (medium), to orange (high). As noted, the acoustic energy of complex sounds is not uniformly spread across a given range of frequencies but, instead, typically coalesces around certain frequency bands, some of which may contain significantly more energy than others. The bottom "layer" of such a sound indicates its fundamental frequency, and all "layers" together visualize its timbre.

A waveform progression can be found below the spectrograms in this chapter, the sound waves are centered on a 0-axis, representing the given atmospheric air pressure, while the waves extend between hypothetical 1 and -1 values that stand for the waves' pressure. The greater the amplitude of a wave, the greater its pressure differential and, therefore, also—with some qualifications—the greater the volume of the sound is. Below the waveform, a graph additionally tracks the fundamental frequency of the vocal sounds.

Let us consider an audio excerpt (figure 6, audio clip 1) from a Mauritian CD recording of na'ṭ,[9] beginning with the dramatically rendered phrase *koī husne 'amal pās mere nahīn* (I do not have any beautiful [i.e., meritorious] actions [to my credit]). The na'ṭ khwan begs for the Prophet's help and intercession on the Day of Judgment. Looking at the spectrogram of this approximately eighteen-second excerpt, the waveform, and the graph tracking the fundamental frequency, we find a striking example of what acousticians describe as the "attack" of a sound envelope, as one encounters a sudden intensification on several dimensions. An examination of the distribution of frequencies in the spectrogram shows that the formant, or overtone, structure of the voice forcefully builds up to the ninth harmonic, the

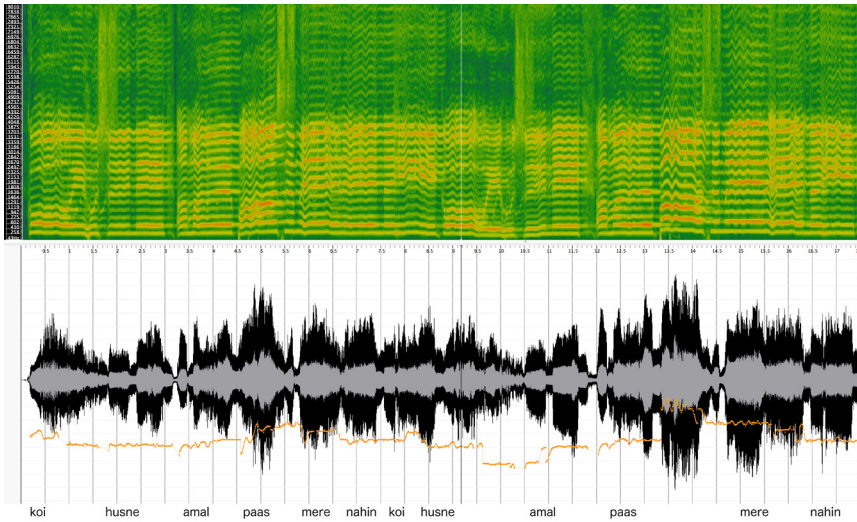

FIGURE 6. Spectrogram and waveform of "husne 'amal." Illustration by the author.

AUDIO 1. "Husne 'amal."

To listen to this audio, scan the QR code with your mobile device or visit DOI: https://doi.org/10.1525/luminos.53.1

spectrum resembling a pattern that Johan Sundberg (1974) has called the "singer's formant," a concentration of acoustic energy between three thousand and four thousand hertz that accounts for the particular power of the reciting voice.[10]

The rise in the fundamental frequency (which is tracked by the graph below the waveform), combined with a peak in loudness (greater amplitudes of waves) on the second rendering of *pās mere nahīn,* adds a dramatic effect that the modulation of pitch on *pās* further underlines. This also shows the close orientation of the recitational performance to the poetic text, with *pās mere* (akin to "I have") dramatically pointing to the "I" of the devotional discourse—here the subject's lack of meritorious actions to his credit on the day of judgment and, as a result, the appeal to the Prophet for help and intercession in his despair. The alternation in timbre, between a concentration of energy in the frequency range of the singer's formant and moments with a drop in the acoustic energy in the same bands, suggests a movement that, given the transducive nature of sound, is markedly felt by the bodies it encounters and envelops. The effect is reinforced by the combination of the rise in acoustic energy in the bands of the singer's formant, the overall increase in loudness, and the constant doubling and multiplying of acoustic events

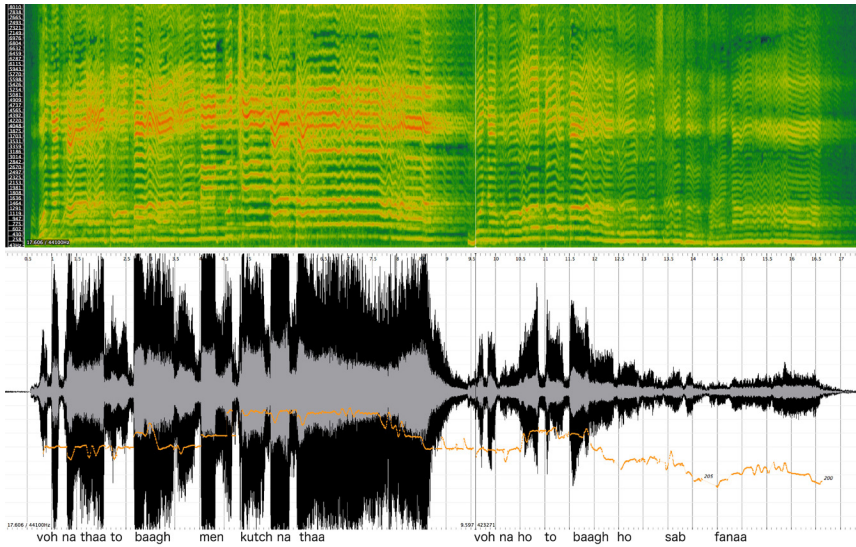

FIGURE 7. Spectrogram and waveform of "voh na thā." Illustration by the author.

AUDIO 2. "Voh na thā."

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and peaks owing to the reverb underlying the entire vocal performance. What this example shows are pronounced increases of movements along several acoustic parameters—timbre and pitch as well as loudness, reinforced by the reverb effect—resulting in powerful suggestions of movement among those affected by the acoustic event. The sonic movements then also provoke a felt connection to others affected by the same event as the same movements seize them. This is made possible by the transducive effects of sound waves, which lead to sensations of "being beside oneself," highlighting the permeability of bodies and selves and the fleeting nature of their boundaries in the felt-body's movement toward enrapture. In the Islamic context at hand, this transduction takes the shape of a sonic event, as a summoning of felt-bodies, a call for community with others sensitive to the event, and ultimately a summoning of this collective by an other, the divine.

Let us consider the following twenty-second-long audio example (figure 7, audio clip 2): *voh na thā to bāgh me kutch na thā, voh na ho to bāgh ho sab fanā* (If he [the Prophet] were not there, nothing would be in the garden; if he did not exist, the garden would be complete devastation).[11] This excerpt, too, was taken

from an audio CD recording produced in Mauritius.[12] Eulogizing the Prophet and enouncing utter dependence on him, the na't khwan Fardeen Maraye peaks on several dimensions of vocal acoustics while uttering the words *to bāgh men kuch na thā.* There is a pronounced rise and peak in loudness, combined with a rise in pitch, visible as an increase in fundamental frequency, while the formant structure features a marked concentration of acoustic energy in the singer's formant, here between three thousand and five thousand hertz. This results in a voice that is perceived as carrying far and wide. This sonic reaching out into space is then further reinforced by the reverberation effect evident in this recording, adding a further means to sonically create a great widening of space. The second part of the phrase features a decline in acoustic energy, as the singer's formant largely disappears and the movement carried out by the voice slows and, finally, concludes. The marked reverb effect, which my interlocutors always referred to as "echo," is visible on the spectrogram as a fading into the short break after the first part of the phrase concludes with *thā.* Also, at the end of the recited phrase, the spectrogram displays the continued reverberation of the voice even after the na't khwan has fallen silent. This means that every sonic event, every peak of acoustic energy, is doubled, if not multiplied, resulting in the effect of sonically opening up felt space as sounds are decaying. Here again, the three parameters loudness, pitch, and timbre, as well as reverberation, converge to produce an atmosphere of intensity that generates a feeling of being elevated and carried away, concluding with a return to one's starting position.

In the following audio excerpt, which is approximately thirteen seconds long (figure 8, audio clip 3)—*kāsh mehshar main jab unkī āmad ho aur* (If only at the day of resurrection when he [the Prophet] arrives, and I)[13]—we can discern the workings of the reverb particularly well. Much like in the previous example, the echo effect not only reverberates into the pause in its middle but also is visible at the end of the phrase. A particularly striking feature of this audio clip is the long extension of the second syllable of *mehshar* (day of resurrection), where Fardeen Maraye, the na't khwan, holds the complex tone with the same fundamental timbre and loudness for roughly five seconds while extending the syllable into a modulating movement for nearly another three seconds afterward, before pausing briefly for approximately nine hundred milliseconds. In the short pause, the spectrogram provides a clear image of the marked reverb effect employed, which is also evident at the end of the phrase, showing a reverb time of approximately two hundred milliseconds. This is far above the threshold of roughly sixty milliseconds, above which most listeners start to perceive sounds as distinct events, resulting in a powerful echo effect that multiplies the voice of the na't khwan, underlining its force. The na't khwan then resumes with heightened emphasis, his voice peaking on *jab unkī,* where a rise in loudness and the fundamental frequency coincides with yet another concentration of acoustic energy in the formants of the three-thousand-to-five-thousand-hertz range. A detailed look at the spectrogram also reveals an

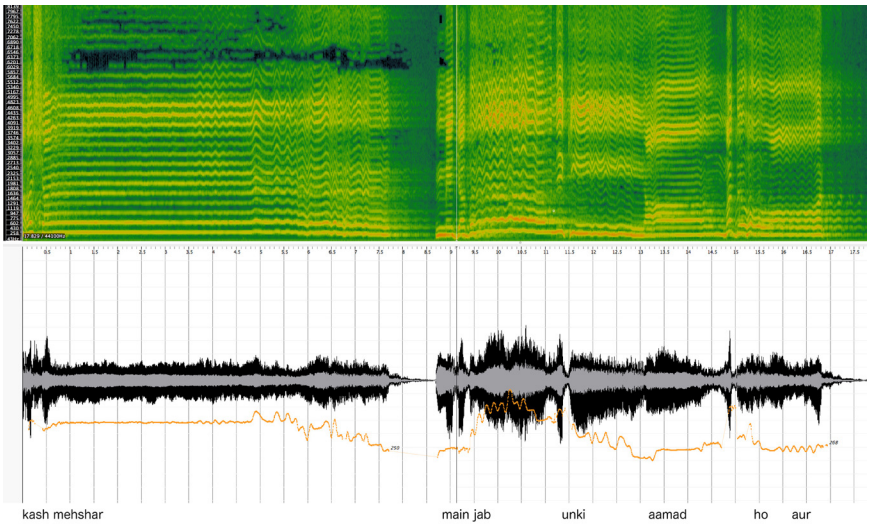

FIGURE 8. Spectrogram and waveform of "kāsh mehshar." Illustration by the author.

AUDIO 3. "Kāsh mehshar."

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extreme vibrato on all harmonies of the spectrum, underlining the acoustic energy of this peak. The long extension of one syllable with its vibrato and modulation at the end, followed by a pause and an abrupt peaking of acoustic energy immediately after, provides a strong sense of movement that sonically enacts being enraptured and carried away, which at the same time is also a movement of transcending the self through the powers of sonic transduction.

In the next audio excerpt, which is approximately twenty-three seconds long (figure 9, audio clip 4)—"*yā Allāh, terī qudraton kā shomār kyā, teri wusʻaton kā hisāb kyā*" (O God, what is the number of your [innumerable] powers, what is the reckoning of your [incalculable] vastness)[14]—we encounter a similar drawing out of a syllable, the final one of "*yā Allāh.*" From the outset, this articulation features a dramatic combined peak of loudness, pitch, and timbre structure displaying the pattern resembling the singer's formant well up to around five thousand hertz. As in the previous example, the drawing out of the syllable breaks into modulation, increasing the forceful movement of opening up space, suggesting the carrying away of those enveloped by it. Extreme vibrato, which can be detected on the spectrogram, reinforces this progression as the naʻt khwan cries out the name

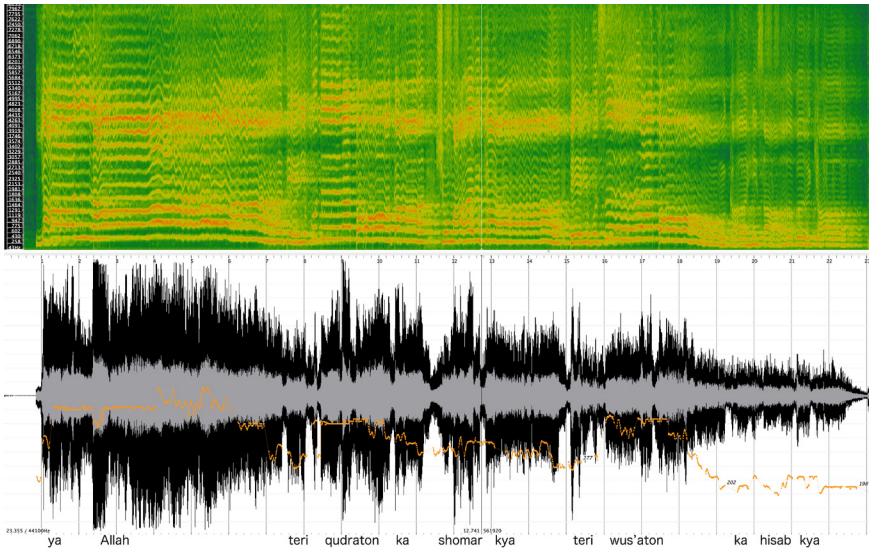

FIGURE 9. Spectrogram and waveform of "terī qudraton." Illustration by the author.

AUDIO 4. "Terī qudraton."

To listen to this audio, scan the QR code with your mobile device or visit
DOI: https://doi.org/10.1525/luminos.53.4

of God. On top of this, the reverb effect is again deployed throughout. The overall movement suggested by the phrase is also striking. It begins with a sharp rise and contraction of *yā Allāh* that is sustained until *wus'aton,* when the poetic reiteration of the phrase *kā shomār kyā* as *kā hisāb kyā* opens and expands, which is also evident in the near disappearance of the singer's formant at the end of the sequence. The "I" of the poetic discourse takes a stance of utter devotion to God, and the movement suggested by the voice in conjunction with the poetic text is again one of transcending the self, of leaving its boundaries behind and extending itself in the quest for the divine. This concludes the bodily felt movement—which is also a spiritual journey—returning to a state of relaxation.

Similarly, in the next audio example (figure 10, audio clip 5)—*past voh kaise ho saktā hai, jisko haq ne buland kiyā* (how can the one whom God has elevated [the Prophet] be lowly?)[15]—the technique of drawing out the syllable *hai* with modulation and pronounced vibrato is central to the creation of a sonic atmosphere that transcends the self while opening up bodily felt space, enabling a movement elsewhere, to a more desirable place. Another important dimension of the suggested

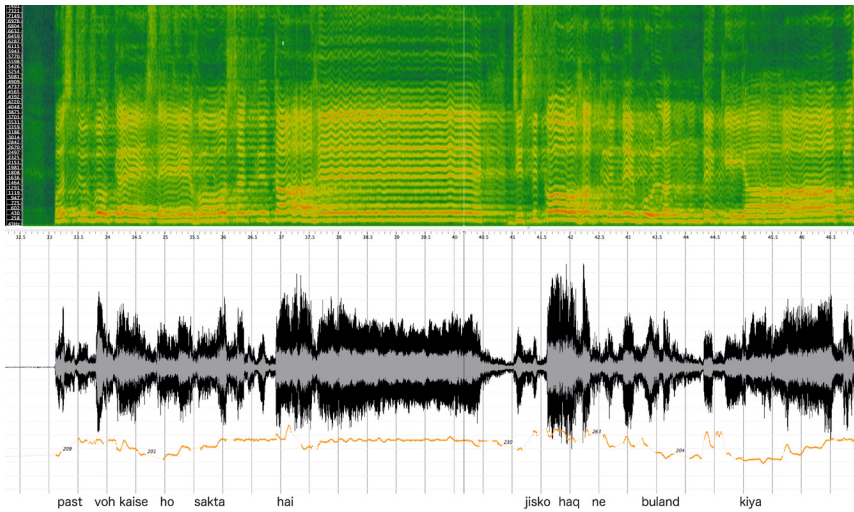

FIGURE 10. Spectrogram and waveform of "past voh kaise ho saktā hai." Illustration by the author.

AUDIO 5. "Past voh kaise ho saktā hai."

To listen to this audio, scan the QR code with your mobile device or visit DOI: https://doi.org/10.1525/luminos.53.5

movement in this clip of approximately fifteen seconds is, again, the concentration of energy in the singer's formant, between three thousand and four thousand hertz, that is otherwise missing in the phrase, and that also ends with the syllable. As in the other examples, the trademark reverb is present, and it is most easily discerned on the spectrogram at the end of the drawn-out *hai.* Here, the reverb time is approximately two hundred milliseconds, a figure comparable to reverb times in the previous examples, providing the sense of a multiplication and amplification of the na'ṭ khwan's voice.

Another audio example, approximately twenty-four seconds long (figure 11, audio clip 6)—*unke dāman se wābasta merī najāt, un pe qurbān merī hayāt-o-mamāt* (my salvation is tied to the hem of his garment [his intercession], I sacrifice my life and death [my entire being] for him [the Prophet])—further illustrates the drawing out of a recited syllable (the first syllable, *wā,* of *wābasta*) here with a pronounced modulation and vibrato.[16] The formant structure features a concentration of acoustic energy between thirty-seven hundred and forty-eight hundred hertz coinciding with a rise in pitch and loudness sustained in a plateaulike fashion,

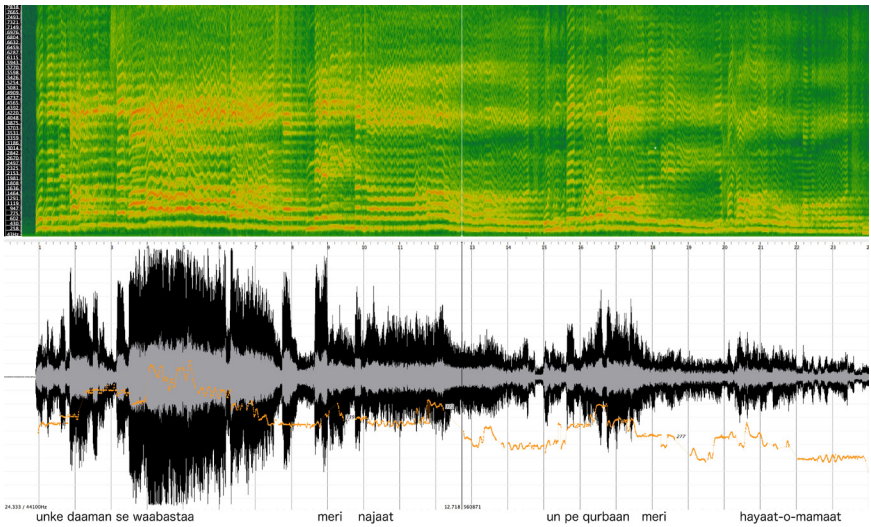

FIGURE 11. Spectrogram and waveform of "unke dāman." Illustration by the author.

AUDIO 6. "Unke dāman."

To listen to this audio, scan the QR code with your mobile device or visit DOI: https://doi.org/10.1525/luminos.53.6

the modulation then extending into the next two syllables, *ba-sta,* before breaking off. Much like in the previous example, the overall pattern of the suggested movement is a striking enactment of overcoming the boundaries of the self and reaching out in spiritual terms, and it is followed by a return to the starting point of the movement.

In these examples, I have tracked enactments and suggestions of bodily felt movement found in naʿt khwans' voices. These movements often coincide with the textual dynamics of the poetry, but they operate in modalities different from those normally found in the study of textual and social semiotics. The vocal and atmospheric enactments of the movements I have described unfold in a manner that is autonomous from the workings of discourse and the social alignments the latter produces. Nevertheless, my analysis also shows the strong interconnectedness between atmospheres, as vocally performed suggestions of movement, and the discourses of a religious tradition and its structures of ritual participation. Atmospheres, such as those produced by vocal sound, may always remain diffuse to a considerable degree. However, the juxtaposition of my Mauritian Muslim respondents' comments on the voice in naʿt recitation, the poetic discourse, my

observations of the performance of the poetic discourse, and the acoustic analysis of movements suggested by the reciting voice enables me to situate sonic atmospheres in a particular religious and historical context. From such a perspective, the movements of pitch, loudness, and timbre enact spiritual journeys in search of the Prophet, often to his favorite city, Madina, and as a temporal overcoming of the boundaries of the reciter's self. At the same time, given the shared nature of the sonic experiences, these sonically suggested movements with spiritual loading are also resolutely social, as they not only enable a single devotee's travel to a desired destination but also summon a community of Muslims to this quest. In the examples discussed, sonic contraction and expansion build suggestions of movement, of being carried away and transcending the self. I have described these movements as part of an objective atmospheric condition created by the sound of the vocal performance and its technical manipulation in the recording process, especially evident in the marked reverb effect. But as became clear through my Mauritian Muslim interlocutors' descriptions of vocal sound and its perception, the transformative effects of the performing voice also depend on historically and culturally contextualized dispositions that are responsible for receptiveness to such atmospheres.