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ARTICLE

# Vocal Arrangements: Technology, Aurality, and Authority in Qur'anic Recording

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**Abstract**

This article uses ethnography of a studio recording project underway at a Qur'anic school in Salé, Morocco, to offer new insight on sound, media, and religious authority in Islamic contexts. The aim of the project is to record the entire Qur'an incorporating all of its seven canonical, variant readings (*qirā'āt*), which are enjoying a small renaissance in Morocco. Several of the school's faculty, known as shaykhs, engaged as expert listeners and overseers of the process. I show how a historical model of such expert listenership, which I call "aural authority," is transformed by the technologies of the studio and then dispersed across a collective of productive agents that includes the reciter and the sound engineer. I argue that these transformations, along with erasure of the shaykh's role from the medium of circulation—the recording—presents significant challenges to the broader *qirā'āt* tradition and raises questions about its future.

**Keywords:** Islam; media; Morocco; Qur'an; sound

During one of my early visits to the Ibn al-Qadi school for Qur'anic studies in Salé, Rashid told me he had "some work" for me to observe—*shi khidma*, he said, initially in the Moroccan dialect, but repeated in standard Arabic for my benefit, *shi a'mal*. He led me past the school's reception desk and into the school's on-campus recording studio, nestled between the building's main staircase and the office of the director. Rashid turned on the light to reveal the control room, which was small but fully equipped, with two computer monitors and a pair of speakers set on the desk, just above a large mixing board. The sound booth, separated from us by thick glass, remained dark. Within minutes, the computer and other equipment were on, and we were joined in the control room by one of the school's faculty in the study of Qur'anic recitation, affectionately referred to as the shaykh, for a playback session of some previously recorded Qur'anic passages. Rashid controlled the playback while the shaykh listened, referring to a notebook containing handwritten Qur'anic text. Occasionally, he would ask Rashid to repeat (*'āwud*) a certain phrase, or to stop while he wrote notes or comments (*mulāhidhāt*) on a prepared comment sheet. Rashid, busy serving as the school's general media director as well as dedicated recording engineer, was suddenly needed elsewhere. He left the shaykh and I alone in the control room to discuss some of the finer points of *tajwīd*, the system of phonetic rules that govern Qur'anic performance, and the seven variant readings (*qirā'āt*) of the Qur'anic text, the shaykh's particular area of expertise.

When Rashid returned to the studio, the shaykh was adamant about some mistake (*khaṭā'*) he had heard earlier, perhaps hoping that Rashid could somehow fix it. Rashid instead enjoined the shaykh to just record it on the sheet (*sajjal fi-l-warqa*) and, perhaps predicting his services would again be needed elsewhere, proceeded to teach the shaykh the basic keystrokes and other computer operations for controlling the recording—space bar to start and stop, mouse to select where to start in the track visualized on one of the computer screens. Once the shaykh understood these operations, he was off on his own and quickly in a groove, playing back, stopping, writing on his comment sheet, repeating playback, writing some more. Meanwhile, Rashid drifted in and out between various tasks and other faculty at the school stopped by to listen or simply offer a greeting of *assalāmu 'alaykum*.

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The scene above says much about listening as a sensory mode for the cultivation of Islamic knowledge, something to which other anthropologists have drawn attention.[1] Indeed, the shaykh's attunement to mistakes in Qur'anic recitation speaks more broadly to the Islamic discursive tradition's concern with the apt performance of its ritual subjects.[2] And yet the recording studio itself, a space that has figured little into studies of sounded Islam or ethnographies of Muslim lifeworlds generally, seems to exert a certain influence on this discourse itself. Here, the shaykh's ear seems less attuned to the ethical ramifications of such mistakes than to the technical dimensions of Qur'anic vocality. Moreover, he identifies these mistakes based on his expertise in *tajwīd* and the *qirāʾāt*, performative Qur'anic disciplines with long histories; but he also listens with the help of other entities, not only his collaborator the sound engineer—a different mold of expert listener—but also the spatial and technological apparatus of the studio. The divergence between the shaykh's ability to listen and Rashid's ability to manipulate this infrastructure creates a momentary relation of confusion, perhaps even tension. This suggests a different type of relation between religious authority and technological reproduction than scholars of Islam, media, and sound have previously acknowledged. How do different forms of knowledge or expertise that encompass the religious and the technical coalesce in the production of a single media object? And what are the stakes of this process for the social reproduction of a broader embodied tradition, in this case the *qirāʾāt*?

What follows is an attempt to answer such questions with an ethnographic study of the production process at the Ibn al-Qadi school recording studio. Conceived as part of a broader category of pedagogical media (*wasāʾil*), the school's recording project aims to produce a sonic rendering of the entire Qur'anic text (*al-maṣḥaf al-kāmil*) in all seven Qur'anic readings (*al-qirāʾāt al-sabaʿa*) according to a distinctly Maghribi method of combining the variants into a single performance.[3] The *qirāʾāt* have figured little into previous ethnographies of Qur'anic recitation.[4] However, the field of *qirāʾāt* studies (known as *ʿilm al-qirāʾāt*), along with popular approaches to *tajwīd*, is resurgent in Morocco as part of what local Islamic scholars call a recitational revival (*ṣaḥwa tajwīdiyya* or *nahḍa tajwīdiyya*). Although mass media like radio and television are central to popular *tajwīd* pedagogy, the Ibn al-Qadi school and others at the vanguard of *qirāʾāt* study advocate for the discipline's revival by referring to centuries-old textual authorities. Therefore, although recent anthropological studies have focused on how sound media help maintain the continuity of Muslim ethical practices of audition and self-making, Morocco's recitational revival requires a much more critical engagement with the transformation of listening and recitational practices across time and from one medium to another.[5]

To offer a richer understanding of how studio production refigures structures of Islamic authority, I draw comparative examples from other ethnographies of studio labor in the Global South, as well as historical examples pertaining to the social reproduction of *qirāʾāt* practice in Morocco.[6] In particular, I show how the multistage process of studio recording refigures a traditional form of aural authority into a collective form of authority embodied by a scholarly committee (*al-lajna al-ʿilmiyya*). I suggest

[1]Charles Hirschkind, *The Ethical Soundscape: Cassette Sermons and Islamic Counterpublics* (New York: Columbia University Press, 2006); Deborah Kapchan, "Learning to Listen: the Sound of Sufism in France," *World of Music*, 51, no. 2 (2009): 65–89.

[2]Talal Asad, *The Idea of an Anthropology of Islam*, Occasional paper series (Washington, DC: Center for Contemporary Arab Studies, Georgetown University, 1986).

[3]The meaning of "Maghribi" here is complicated. Although this particular recitational practice refers to a historical tradition of textual production and exchange spanning much of North and West Africa, my interlocutors' discussion of this method of combining variants often seemed to cast this tradition as a manifestation of national Moroccan heritage.

[4]Kristina Nelson, *The Art of Reciting the Qur'an* (Cairo: American University in Cairo Press, [1985] 2002); Anna Gade, *Perfection Makes Practice: Learning, Emotion, and the Recited Qur'an in Indonesia* (Honolulu: University of Hawaiʿi Press, 2004); Anne K. Rasmussen, *Women, the Recited Qur'an, and Islamic Music in Indonesia* (Berkeley, CA: University of California Press, 2010). For a study of the early history and codification of the *qirāʾāt*, see Shady Hekmat Nasser, *The Transmission of the Variant Readings of the Qur'an* (Leiden: Brill, 2013).

[5]Hirschkind, *Ethical Soundscape*. See also Patrick Eisenlohr, *Sounding Islam: Voice, Media, and Sonic Atmospheres in an Indian Ocean World* (Berkeley, CA: University of California Press, 2018).

[6]For ethnographies of studio recording, see Louise Meintjes, *Sound of Africa!: Making Music Zulu in a South African Studio* (Durham, NC: Duke University Press, 2003); Paul D. Greene and Thomas Porcello, eds., *Wired for Sound: Engineering and Technologies in Sonic Cultures* (Middletown, CT: Wesleyan University Press, 2005); and Eliot Bates, *Digital Tradition: Arrangement and Labor in Istanbul's Recording Studio Culture* (New York: Oxford University Press, 2016).

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that the linking of aural authority to *ʿilm* expands the latter as a category of Islamic knowledge encompassing not just discursive contestation but sensory modes of engagement as well. At the same time, the following ethnography of the recording process reveals a technologization of the shaykh's listening practices within the studio context and the dispersal of productive authority across different actors and practices—a crisis of authority unfolding at the very site of technological reproduction rather than across decentralized networks of media circulation.[7] Moreover, whereas textual media of an earlier *qirāʾāt* tradition preserved a trace of aural authority, the sound recording obscures the authoritative voices of the shaykhs and engineer Rashid behind the singular voice of the reciter. This reveals not merely a fragmentation of authority, but the fragmentation of the very subject of this authority, interpolating a new mass-mediated subject by reducing collective authority to a monolithic voice.[8] In this way, the Ibn al-Qadi recording presents the material locus not merely for a revival of the *qirāʾāt* but for its dramatic transformation from within.

## A RECITATIONAL REVIVAL AND A MADRASA AT THE MARGINS OF THE STATE

During one of my early visits to the madrasa and my first encounter with the director, Shaykh Yahya al-Madghari, I noted that there seemed to be growing interest in recitational disciplines like *tajwīd* and the *qirāʾāt*. "Indeed," he confirmed, "there is today, in Morocco and worldwide, a recitational revival (*nahḍa tajwīdiyya*)," his use of *nahḍa* evoking the 19th-century renaissance in Arabic literature and thought. When I returned the next day for a more formal interview with al-Madghari, I used the same shorthand of *al-nahḍa al-tajwīdiyya*, only to be corrected by the shaykh himself. *Saḥwa*, he offered instead, "there is a *ṣaḥwa tajwīdiyya*." In effect, the shaykh had traded his original term denoting elite, literary awakening for one with broader social and political resonance through its association with a broader Islamic revival (*ṣaḥwa Islāmiyya*).[9] Although I came to notice the discourse of *ṣaḥwa* occurring more in subsequent discussions with recitation specialists, this slippage seemed to me an inadvertent acknowledgment of both elite and more popular trends in this recitational revival, as well as anxiety about the broader social relevance of the former.

Sound media have been crucial to both elite and popular trends in recitational practice. Throughout the 2010s, *tajwīd*-related programs have proliferated on the two state-funded religious TV and radio channels, *Qanat al-Sadissa* (Channel 6) and Mohammed VI Qur'anic Radio. How-to-recite manuals appear regularly on the shelves of bookstores in urban centers. All of these productions emphasize *tajwīd* over application of melodic modes and other aesthetics of performative expressiveness, and in many cases employ a call-in format as a sort of mediated pedagogical space that allows lay practitioners to receive feedback on their Qur'anic performances from experts on air.[10] In emphasizing *tajwīd*, these programs also highlight a localized recitational variant known as *riwāyat Warsh*, Abu Ruʿaym al-Warsh's oral transmission (*riwāya*) of the reading (*qirāʾa*) attributed to his teacher, Imam Nafiʿ, reciter of Medina in the second Islamic century.[11] The differences between the seven readings and fourteen oral transmissions amount to phonetic subtleties and do not affect matters of Qur'anic interpretation per se, nor are they directly related to the complex application of melodic modes (*maqamāt*, or more often *ṭubūʿ* in Morocco).[12] Nonetheless, *riwāyat Warsh* differs from the more common *riwāyat Hafs ʿan ʿAsim* in

[7]On this crisis of authority thesis, see Jon Anderson, "New Media, New Publics: Reconfiguring the Public Sphere of Islam," *Social Research* 70, no. 3 (2003): 887–906; and Brian Turner, "Religious Authority and the New Media," *Theory, Culture & Society* 24 (2007): 117–34.

[8]Emilio Spadola, *The Calls of Islam: Sufis, Islamists, and Mass Mediation in Urban Morocco* (Bloomington, IN: Indiana University Press, 2014), 15.

[9]Saba Mahmood, *Politics of Piety*: *The Islamic Revival and the Feminist Subject* (Berkeley, CA: University of California Press, 2005).

[10]See Ian VanderMeulen, "Electrosonic Statecraft: Technology, Authority, and Latency on Moroccan Qur'anic Radio." *American Ethnologist*, 48, no. 1 (2021): 80–92.

[11]The complete name of this variant is *riwāyat Warsh ʿan Nāfiʿ*. For a complete chart of all seven eponymous *qirāʾāt* and each of their two corresponding *riwāyat*, see Shady Hekmat Nasser, "Revisiting Ibn Mujahid's Position on the Seven Canonical Readings: Ibn ʿAmir's Problematic Reading of *kun fa-yakuna*," *Journal of Qur'anic Studies* 17, no. 1 (2015): 85–113.

[12]A reciter might plausibly choose to recite using *riwāyat Warsh* but employ one (or more) of the Eastern *maqāmāt* rather than the Andalusian modes often preferred in Morocco.

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ways that even a novice might hear, for example in omitting the second-syllable *hamza* on *mu'minūn* (believers) for a smoother rendering as *mūminūn*.

Since *tajwīd* and the *qirā'āt* are intimately linked, the state also has taken an interest in reviving study of the latter, for example by founding in 2014 the Rabat-based Mohammed VI Institute for the Qira'at and Qur'anic Studies (Ma'had Muhammad al-Sadis li-l-Qira'at wa-l-Dirasat al-Qur'aniyya), which offers graduate-level study in the application of the seven *qirā'āt* and fourteen oral transmissions. In short, the institute seeks to develop a new generation of specialists in this discipline who can serve as stewards of the more popular *tajwīd* revival and help ensure mass adherence to *riwāyat Warsh*. The Ibn al-Qadi school for study of the *qirā'āt*, named after the *qirā'āt* scholar Abu Zayd ʿAbd al-Rahman Ibn al-Qadi (d. 1671), plays a central role in this more elite revival, although its links to explicitly state-funded trends are somewhat more complicated. Several Ibn al-Qadi faculty teach across the river at the Mohammed VI Institute, and the school's founder, Shaykh Muhammad ibn al-Sharif al-Sahabi, himself covers its most advanced *qirā'āt* classes.[13] Shaykh al-Sahabi also enjoys a close relationship with King Mohammed VI, evidenced by a photo of the two hanging in the school's lobby, and is credited with soliciting the king's support for *qirā'āt* study. But the Ibn al-Qadi school operates somewhat independently from the state under the umbrella of a larger Islamic social services organization, or *jamaʿīyya*. State pedagogy is also authenticated through al-Sahabi's own scholarly genealogy, which he traces through some of the luminaries of Morocco's recitational past (including Ibn al-Qadi himself). In fact, Shaykh al-Sahabi's renown was so total that some other Salé residents I spoke with knew the madrasa not by its official name but as "Sahabi's school" (*madrasat Saḥābī*).

Additionally, the Ibn al-Qadi school runs a plethora of media initiatives whose robustness rivals the array of *tajwīd*-related programming funded by the state, but which speaks, distinctly, to a much more specialized audience. During one of my interviews with Shaykh al-Madghari, we talked not only about the studio production process—outlined in more detail below—but also the school's dedication to using the traditional writing board known as the *lawḥ*, whereas many other institutions learn recitation from the printed Qur'an (*mashaf*). "We use *all* media!" (*nstaʿmalū kull wasā'il*), al-Madghari declared, making a distinction between what he called traditional media (*wasā'il taqlīdiyya*) and contemporary media (*wasā'il ʿaṣriyya*).[14] By the latter term, the shaykh meant primarily the studio recording project, but he also could have been referring to other projects for which Rashid is primarily responsible. These include producing video recordings of special school-related events, such as weekly lectures by faculty or end-of- term exams; documenting national and international engagements of al-Sahabi and other shaykhs through photo and video; and distributing these materials through the school's Facebook page and dedicated YouTube channel. "Traditional media," meanwhile, figure into depictions of Moroccan heritage (*turāth*) in *qirā'āt* study. When representing Morocco at a Qur'anic studies exhibition in Kuwait, the Ibn al-Qadi school displayed a number of the aforementioned writing boards (*alwāḥ*, sing. *lawḥ*), writing utensils, and old manuscripts under the heading "the media used by Moroccans in memorization of the Qur'an."[15]

All of these media practices occupy slippery spaces between pedagogical use and cultural display, and between elite scholarly cultivation and wider social outreach. As such, they problematize prevailing conceptualizations of Islamic media, which either situate the problem of authority in the democratizing potential of mass circulation or stress the continuity of forms of Islamic discursive authority through new media. Other anthropological engagements with Islamic sound recordings and radio, for example, foreground the ability of such media to uphold an Islamic "recitational logocentrism" that attaches

[13]Shaykh al-Sahabi and the aforementioned Shaykh al-Madghari are publicly known figures and therefore referred to by their real names. For all others I use pseudonyms.

[14]Although *wasā'il* may take other translations, most notably "means," my choice of "media" is inspired not only by al-Madghari's linking of sound recording and traditional forms of writing, but also recent scholarship in sound studies that traces the genealogy of mechanical recording to earlier forms of sonic inscription. See, for example, Lisa Gitelman, *Scripts, Grooves, and Writing Machines: Representing Technology in the Edison Era* (Stanford, CA: Stanford University Press, 1999); and Ana Maria Ochoa-Gautier, *Aurality: Listening and Knowledge in Nineteenth-Century Colombia* (Durham, NC: Duke University Press, 2014).

[15]The full title was Ja'izat al-Kuwayt al-Dawli li-Hifdh al-Qur'an al-Karim wa Qira'at wa Tajwid wa Tilawa. The specific mention of the *qirā'āt* alongside related terms like *tajwīd* and *tilāwa* speaks to the global resurgence of *qirā'āt* study.

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authority exclusively to vocal utterance.[16] Patrick Eisenlohr in particular cites a "paradigm of isnad" to explain the preference of Mauritian practitioners of *na't* (a genre of sung praise poetry) for sound recordings since recordings more fully capture the voices of esteemed practitioners than textual media like songbooks ever can.[17] Although Eisenlohr's work arguably represents the deepest theoretical engagement with Islam-oriented sound recordings, his argument actually collapses the problem of authority's relationship to media form. In contrast to the isnad paradigm, for example, Emilio Spadola shows how the ritual efficacy of Qur'anic talismans meant for healing relies on the secrecy of their "mute letters" rather than their (more public) vocal utterance.[18] Therefore, the notion of digital sound recording and traditional writing tools as *wasā'il* that function as a means to some pedagogical end raises questions about Islamic scholarly authority at the convergence of human and technological agency.[19]

## REPRISING AURAL AUTHORITY: STUDIO PRODUCTION AND THE *LAJNA 'ILMIYYA*

The remainder of the article tracks problems of expertise and authority ethnographically across three different dimensions of the Ibn al-Qadi recording project. Although previous ethnographies of Qur'anic recitation note the importance of recording and other sound reproduction to Qur'anic pedagogy and performance aesthetics, few stress the production process behind such media objects.[20] Anne K. Rasmussen goes further than others in noting the "limiting and liberating" potential of sound recording technology among Qur'an reciters in Indonesia but quickly turns her attention toward the role of loudspeaker amplification in constructing an aesthetic of *ramai*—what we might think of as "noise as power."[21] But if mediated sound can carry such social power, what are the technological processes that give a vocal performance such aesthetics? As Louise Meintjes points out in her ethnography of studio recording in Johannesburg, South Africa, sound engineers do not so much capture or reproduce sound as "manipulate waveforms in order to give the *impression of weight, density, movement, and space*."[22] If sound engineers are *producing* sound as much as they are *re*producing it, then technological mediation should not be taken as an assumed aftereffect of Qur'anic performance, but examined closely as crucial to its very emergence.

In the case of the Ibn al-Qadi project, the difficulty of studio production is intensified by the nature of the mediated performance itself. The final aim of this project is a recorded vocal performance of the entire Qur'anic text (*al-maṣḥaf al-kāmil*), incorporating all seven readings and their corresponding fourteen oral transmissions (*riwāyat*, sing. *riwāya*). Since a given *riwāya* may differ, sonically, from its corresponding *qirā'a*, practitioners have a potentially dizzying number of variants to apply when grouping them into a single performance. To apply the variants in this way, the Qur'anic text is divided into shorter phrases, each known as a *waqf*, and the number of variants that apply to that particular phrase must be exhausted on that phrase before the reciter moves on. The result is a wavelike, undulating style of reciting, with each Qur'anic phrase heard multiple times with different tonalities and rhythmic inflections. The matter of variant ordering (*tartīb*) within each phrase is an important subtopic of *'ilm al-qirā'āt*, and a distinctive Moroccan method (*al-ṭarīqa al-Maghribiyya*) of performance takes a particularly

[16]Patrick Eisenlohr, "Materialities of Entextualization: The Domestication of Sound Reproduction in Mauritian Muslim Devotional Practices," *Journal of Linguistic Anthropology* 20, no. 2 (2010): 314–33; Dorothea Schulz, "Dis/embodying Authority: Female Radio 'Preachers' and the Ambivalences of Mass-Mediated Speech in Mali," *International Journal of Middle East Studies* 44, no. 1 (2012): 23–43.

[17]Eisenlohr, *Sounding Islam*, 31–37.

[18]Spadola, *Calls of Islam*, 64–80.

[19]Yasmin Moll offers a similar intervention, arguing that the effort of a cohort of new preachers (*al-du'ā al-judud*) to reconstruct Muslim religiosity in contemporary Egypt "involves the very forms of its mediation. The discursive and aesthetic possibilities afforded by televisual broadcast technologies prove key to this project." See "Television Is Not Radio: Theologies of Mediation in the Egyptian Islamic Revival," *Cultural Anthropology* 33, no. 2 (2018): 233–265, 235.

[20]See, for example, Kristina Nelson (*Art*) and Anna Gade (*Perfection Makes Practice*). Even Michael Frishkopf's important chapter on Qur'anic recordings is primarily interested in the impact of Saudi recordings on Egyptian performance styles rather than the circumstances of their production. See Michael Frishkopf, "Mediated Qur'anic Recitation and the Contestation of Islam in Contemporary Egypt," in *Music and the Play of Power in the Middle East, North Africa, and Central Asia*, ed. Laudan Nooshin (Farnham, MA: Ashgate, 2009), 75–114.

[21]Anne K. Rasmussen, *Women*, 44–53.

[22]Meintjes, *Sound of Africa*, 33, original emphasis.

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complicated approach to this problem that will be outlined later. Thus, whereas a typical vocal performance of the Qur'an in a single *riwāya* can run anywhere from eight to twenty hours, the added variation on such a performance of *al-qirā'āt al-saba'a* means that the final recording being produced at Ibn al-Qadi might easily exceed one hundred hours. Given this massive scale of the project, it is no surprise that one of the school's primary motivations in establishing an on-campus studio, according to the director, al-Madghari, was to avoid the commercial model (*namūdhaj tijārī*) most other recording studios follow, in which recordings must be completed within a determined time frame based on an hourly fee.

Participants add to this complexity by pushing the recording into new domains of recitational performance. In a separate interview, a younger shaykh at the Ibn al-Qadi school as well as at the aforementioned Mohammed VI Institute praised the "disciplinary and vocal capabilities" (*mu'ahhilāt 'ilmiyya wa ṣawtiyya*) of the reciter, Dawud. A graduate of the Mohammed VI Institute and thus an expert *al-qirā'āt*, Dawud also spent his younger years studying in Casablanca with one of the esteemed masters of the more dynamic, expressive style of Qur'anic recitation known as *mujawwad*.[23] He is a fixture at public performances where *mujawwad* is demanded, from the superogatory late-night Ramadan prayers known as *tarāwīh* to festival and competition stages, and brings a level of melodism and expressiveness to the recording project that is not usually heard in other performances of *al-qirā'āt al-saba'a*, for example those one might hear in the classroom at the Mohammed VI Institute. The avoidance of commercial constraints is all the more crucial given that the recording is not intended for sale or even wide distribution, but as a reference (*marji'*) for future students of the *qirā'āt*. Nonetheless, the expressiveness and Melodicism that Dawud adds to this project is clearly part of his appeal and makes the yet-unfinished recording novel in both realms of recitational practice. This raises potential questions about its reception that I return to in the conclusion.

To incorporate such performative complexity, the Ibn al-Qadi project unfolds through a painstaking process of piecemeal construction similar to other studio recordings, even those known for their particular sense of "liveness."[24] Shaykh al-Madghari described this process by outlining four distinct stages of authoritative review, or what he called *lajnāt* (sing. *lajna*) in Arabic. The first *lajna* is what other studio professionals would call the tracking stage, during which the reciter performs passages under the supervision of two different shaykhs while Rashid, serving in his role as sound engineer, records the passages for later compilation and editing. Either one of these shaykhs can stop the reciter if he hears a mistake and ask him to repeat the phrase. In this way they wind up with numerous recordings (*tasjīlāt muta'addida*), essentially an accumulation of recorded clips. Rashid had in fact invited me to peek in on one such session just before this early interview with the shaykh. One shaykh sat on a chair in the back of the studio, using a second swivel chair as a stand for a copy of the Qur'an and a number of other texts of reference. On the computer screen was the waveform visualization of a recorded track, a familiar sight from my own studio experience as a guitar player, displaying the vertical splicing marks that indicated it was already a composite, or "comp," of separately recorded clips (Fig. 1).

Al-Madghari went on to explain that the second *lajna* again involved two shaykhs, preferably a different group than those from the previous session, listening back to the previously edited comp and writing down notes about mistakes on a prepared comment sheet, as depicted in this article's opening scene. This is preparation for a third *lajna*, when the reciter returns to the studio to undertake correction (*taṣḥīḥ*) of all mistakes noted on the comment sheet, again under the supervision of two shaykhs. Studio producers generally refer to this kind of work as punching in, when a small, usually corrective clip is recorded and inserted, or punched in, to the comp. On other visits to the madrasa I caught faintly audible flashes of this process through the studio door, the alternation of short, recited phrases and moments of silence or barely audible discussion gesturing to this dialectical rhythm of phrase-by-phrase recording and review. The shaykh alluded, finally, to a fourth review step, perhaps still somewhat

[23]See Frishkopf, "Mediated Qur'anic Recitation," for a discussion of the *mujawwad* style and its opposite, *tartīl*.

[24]Thomas Porcello, for example, shows how the aesthetic of liveness that distinguishes the Austin, Texas, music scene from its country music rival Nashville is carefully curated through studio production. See "Music Mediated as Live in Austin: Sound, Technology, and Recording Practice," in Greene and Porcello, *Wired for Sound*, 103–17. My own ethnography was conducted over numerous visits spanning early 2018 to early 2019. During that time, participants finished the latter portions of *Surat al-Baqara*, the second and longest chapter of the Qur'an, and worked most of the way through the third chapter *Ahl al-'Imran*, a testament to the time-consuming nature of the project.

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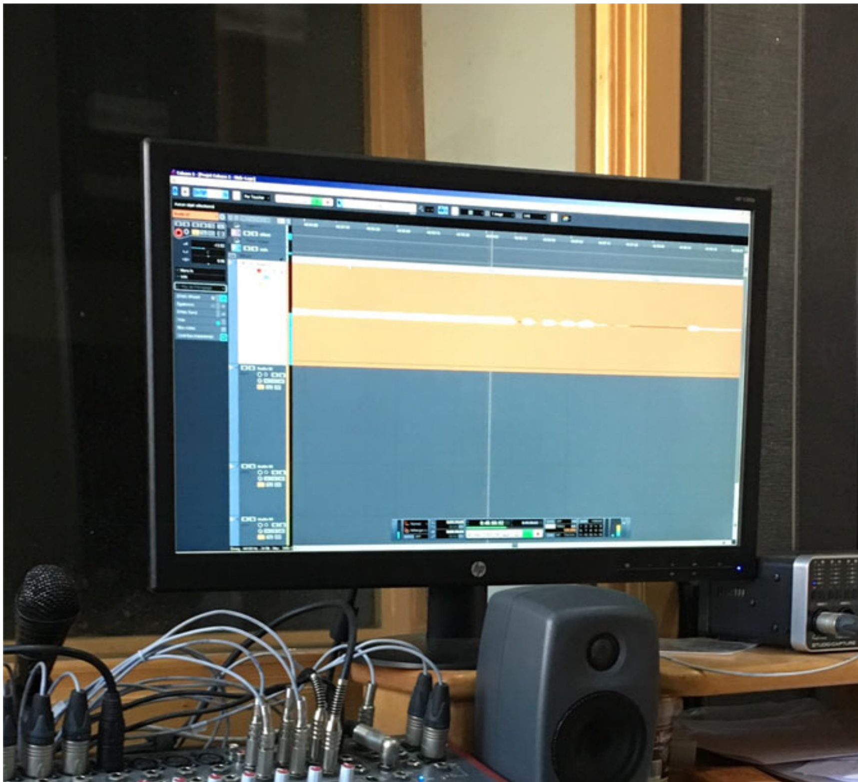

**Figure 1.** Waveform visualization of a recorded track, Ibn al-Qadi school. Photograph by the author.

speculative in this early stage of the project, in which the recording would be reviewed by *qirā'āt* specialists at other institutions and perhaps even outside of Morocco. Although al-Madghari referred to each of the four stages as a *lajna*, the younger shaykh I interviewed employed the term slightly differently, referring to the supervisory role of the shaykhs over the *entire* process, from tracking to outside review, as *al-lajna al-ʿilmiyya*.[25]

The director's summary clearly foregrounds the role of the shaykhs in the process. Although al-Madghari refers to Rashid as the producer (*mukhrij*) of the project, it is the shaykhs who serve a role akin to producers in the popular music recording industry, aurally evaluating the recorded performance as it comes into being to ensure it adheres to a particular standard.[26] In doing so, they reprise a centuries-old form of expert listenership inscribed repeatedly in biographical compendia—known in Morocco as *tarājim* (sing. *tarjama*)—by way of the *ijāza*, a document certifying a student's ability to teach a particular text or field of Islamic scholarship.[27] Whereas *ijāza*s in discursive fields like Islamic jurisprudence (*fiqh*) were often given if a student had memorized or otherwise mastered a particular text or pedagogical canon, in the case of *ʿilm al-qirā'āt* the student earned an *ijāza* based on a demonstrative performance known as the *khatma*, or seal of the student's training (Fig. 2). The typical *ijāza* in

[25]The term *al-lajna al-ʿilmiyya* also is used as a gloss for the review process governing production of state-funded, publicly circulated recordings of *riwāyat Warsh*. See, for example, the article "al-Tasjilat al-Sawtiyya li-l-Muqri'in," posted 7 November 2013 on the Ministry of Endowments and Islamic Affairs website, http://www.habous.gov.ma/3895-التسجيلات-الصوتية-للمقرئين حمل-القرآن.html.

[26]Meintjes (*Sound of Africa*) points out the politically charged (although different) connotations that the titles of engineer and producer take on in the context of Johannesburg, South Africa.

[27]For a more extended discussion of the importance of the *tarjama* to traditional Islamic scholarship in Morocco, see Dale F. Eickelman, *Knowledge and Power in Morocco: The Education of a Twentieth-Century Notable* (Princeton, NJ: Princeton University Press, 1985). For a similar historical-anthropological discussion of the *ijāza* in the context of Islamic jurisprudence, see Brinkley Messick, *The Calligraphic State: Textual Domination and History in a Muslim Society* (Berkeley, CA: University of California Press, 1993), 93–94.

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**Figure 2.** A student's *khatma* recitation of *riwāyat Warsh* with Shaykh al-Sahabi. Youtube, accessed 19 April 2021, https://www.youtube.com/watch?v=zjN-J0bMNYM.

*ʿilm al-qirāʾāt*, then, would include the shaykh's report of such a performance, beginning with his declaration that the student "recited for me" (*qaraʾa ʿalaya* or *talā ʿalaya*) such-and-such number of *khatma*s, in accordance with such-and-such variants. In this way, the shaykh's inscription not only validates the student's performance and ability to teach the *qirāʾāt*; by extension it also reaffirms his own ability to evaluate such a performance—what I call his aural authority.

The *ijāza* granted by Abu ʿAbd Allah al-Buʿnani (d. 1653) to his student Abu ʿAbd Allah al-Sharqi (d. 1669), and reproduced in ʿAbd al-Hadi Hamitu's massive seven-volume history, *The Nafiʿan Reading among the Moroccans*, offers a representative example.[28] It begins, as many other *ijāza*s of its time do, with invocations to God and statements praising the student, before commencing the report of al-Sharqi's recitations of the Qur'an for al-Buʿnani. The master declares that his student, "Recited all of [the Qur'an] for me [*talā ʿalaya jamīʿihi*], two *khatma*s from beginning to end, and a third time from where the Almighty says '*wa abtalū al-yatāmi*' until the end of the Qur'ān, combining the *qirāʾāt* of the seven well-known imams, God's grace upon them." The author al-Buʿnani continues that the student had furthermore demonstrated his incorporation of the known *riwāyat* of these seven variants, and that all of this was in accordance with the important primary texts in *qirāʾāt* study of the day.[29] Whereas al-Sharqi's performance consists of two recitations combining the seven main variants, other performances might include different combinations. For example, in an *ijāza* written for his son ʿAbd al-Rahman, Idriss al-Munjra (d. 1724) states that he listened to a total of twenty recitations, three of them including the seven *qirāʾāt* and fourteen *riwāyāt*, nine times applying only *riwāyat Warsh*, the preferred variant in North Africa, and the remainder featuring other combinations of variants.[30] Insofar as the shaykhs at Ibn al-Qadi exercise a form of auditory expertise consistent with this historical model, their listening practices differ crucially from those associated with sufism or the "pious counter-

[28]ʿAbd al-Hadi Hamitu, *Qiraʾat al-Imam Nafiʿ ʿand al-Maghariba min Riwayat Abu Saʿid Warsh: Muqawamatiha al-Banaʾiyya wa Madarisuha al-Adaʾiyya ila Nihayat al-Qarn al-ʿAshir al-Hijrī*, 7 vols. (Rabat: Wizarat al-Awqaf wa-l-Shuʾun al-Islamiyya, 2003).

[29]Ibid., vol. 4, 336.

[30]Muhammad bin Ahmed Huhuwar al-Timsimani, *Tarajim Qurraʾ al-Maghrib al-Aqsa, Khilal al-Qarnayn al-Thani ʿAshar wa-l-Thalith ʿAshar al-Hijjriyin* (Tangier: Dar al-Kattani, 2013), 123–24.

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publics" of the Islamic revival.[31] The shaykh's evaluation of his student does of course embody a form of aural literacy, but one oriented less toward the project of religious self-making. Rather, the shaykh aims at an objective evaluation of his student's performance and its sonic adherence to the authorized models of *ʿilm al-qirāʾāt*.[32] This suggests that we might think of *ʿilm* much more broadly as encompassing not just textual, rational, and discursive forms of knowledge but also experiential modes more commonly associated with the concept of *maʿrifa*, or "mystical" knowledge.[33]

But the comparison also reveals important shifts in how aural authority is remediated. In its older form, inscribed in the textual medium of the *ijāza*, the subject of aural authority is relatively singular: by verifying the quality of his student's *ijāza*-earning performance, the shaykh not only verifies a model of performance for future practitioners (much like the goal of the Ibn al-Qadi recording); he also reasserts his own aural authority and inscribes its trace in the text, often buttressed by dating and "witnessing" conventions endemic to Islamic jurisprudence.[34] By contrast, *al-lajna al-ʿilmiyya* hearkens back to this mode of aural authority while reenvisioning it as the collective manifestation of a committee (*lajna*) tasked with overseeing the recording's production. The younger shaykh's distinction between the reciter's disciplinary capabilities (*muʾahhilāt ʿilmiyya*) and vocal capabilities is telling in this regard, opening the door to the possible inclusion of new forms of vocal performance. Although the reciter Dawud is a graduate of the Maʿhad and thus possesses the practical knowledge—the *ʿilm*—necessary to teach the *qirāʾāt*, it is the shaykhs who provide the disciplinary oversight necessary to ensure the recording's adherence to *ʿilm al-qirāʾāt* and its specific Maghribi tradition. The voice-*ʿilm* distinction foregrounds the importance of *ʿilm* while recognizing other features that might not fit within the bounds of *al-lajna al-ʿilmiyya*, and subtly acknowledges the limits of aural authority in a way that destabilizes its subjective grounding in the textual tradition.

## "I HEARD A MISTAKE": THE TECHNOLOGIZATION OF AURAL AUTHORITY

Although al-Madghari's description already reveals an important shift in how aural authority unfolds, it is refashioned further within the technical and social space that Eliot Bates calls the studio assemblage. In his ethnography of recording studio culture in Istanbul, Bates points out how the emergence at the beginning of the millennium of all-in-one digital recording programs like ProTools have made incredibly sophisticated recording approaches affordable for a wider, global creative class. Thus, Bates argues, digital technologies allow Istanbul music producers to reconstruct supposedly lost or forgotten folk performances into "an arranged tradition" that, given the impact of the shift toward digital technologies, is ultimately a digital tradition.[35] These advances particularly benefit small operations like the Ibn al-Qadi school, which uses a similar software program known as Cubase 5 that also features vast multitracking capability and a panoply of onboard effects. In this context, however, where participants regard the technology as *wasāʾil*—pedagogical means—this digital infrastructure offers new possibilities for aural authority's enactment, to sometimes striking effects.

The Ibn al-Qadi studio space is small and simply equipped, yet more than adequate for the task of single-voice Qurʾanic recording. Like most studios, the space is divided into a recording booth, equipped with Sennheiser condenser microphones and a seat for the reciter; and the control room, containing a mixing board and a rack of preamps and effects, plugged into a Mac desktop and feeding a pair of small monitor speakers. Rashid referred to these respective spaces in Arabic as *bayt al-tasjīl* and *bayt al-taḥakkum*—best translated as recording room and control room, respectively. Although Rashid suggested this latter space could be shortened to simply *al-taḥakkum*, at other moments he seemed to use *al-taḥakkum* to refer to the entire assemblage of mixing board, computer, speakers, and other hardware that allowed the engineer to control sonic inputs and outputs. When I took a picture of the recording booth (Fig. 3), Rashid was quick to point that the space was not in order (*māshī murattab*). However, this disclaimer seemed to encompass two senses of order (*tartīb*): first, the correct placement

[31] Hirschkind, *Ethical Soundscape*.
[32] On the notion of aural literacy, see Kapchan, "Learning to Listen."
[33] John Voll, *Islam: Continuity and Change in the Modern World* (Syracuse, NY: Syracuse University Press, 1994).
[34] Messick, *Calligraphic State*.
[35] Bates, *Digital Tradition*.

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**Figure 3.** Recording booth, Ibn al-Qadi school. Photograph by the author.

of microphones and other elements of the studio's technological infrastructure; and second, more qualitative elements of place-making, such the embroidered cloth that I saw during tracking sessions draped over the reciter's chair, similar to the elaborate *kursī*s used in Qur'an festivals and competitions. This suggests that participants ascribe religious and cultural meaning to the technologized activities that reproduce the Qur'an sonically, and not merely to its circulation and public reception as God's message to humankind.

The studio's central placement also facilitates its integration into the Ibn al-Qadi school's social rhythms. The studio itself sits in between the office of the director, Shaykh al-Madghari, and the main staircase leading to the mosque and classrooms on the second floor. Opposite the studio on the other side of the director's office is a second administrative office shared by a number of the other shaykhs. Whenever work is going on in the studio, the sound of the reciter's voice drifts through the soundproofed door, reverberating into the school lobby or the director's office next door. Anyone going to or from prayer or class inevitably passes by the studio and hears some resonance of the work taking place inside. When Rashid leaves the door open during an editing session, something he does frequently, students and faculty often stop by on their way to or from other activities to chat with him and check up on the project. Although al-Madghari did not comment on the intention behind the studio's placement, it is worth noting that a more peripheral placement on the campus would have given the studio a greater degree of sonic isolation suitable to its technological function as a hermetically sealed, neutral "non-space."[36] Having its own studio not only freed the school from the financial constraints of commercial production, it also allowed studio labor to take on the general cultural contours of the school as a whole and reinforce a collective sensibility crucial to *al-lajna al-ʿilmiyya*.

A more extended look at the review session evoked in the article's opening gives a greater sense of this collective labor, and the opportunities the studio offers for focused, isolated listening. Sitting down at the back of the control room, I quickly noticed that the waveform visualization on the computer screen bore the vertical editing lines of a typical vocal comp—the result of what al-Madghari would call accumulated recordings (*tasjīlāt mutaʿaddida*) spliced together. As the shaykh and Rashid worked side-by-side, the

[36]Paul Théberge, "The Network Studio: Historical and Technological Paths to a New Ideal in Music Making," *Social Studies of Science* 34, no. 5 (2004): 759–81.

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former would often ask the sound engineer to repeat a certain phrase so he could listen again. Early on, the two had an extended two- to three-minute discussion regarding the pronunciation of the Arabic letter *lam*: the shaykh had heard an open *lah* sound, he said (as in the English "lock") in a Qur'anic context where it should be closer to the *laa* sound in the English word "lamb." They replayed and listened to the phrase a number of times, and when Rashid made his first exit from the studio session I had an opportunity to ask the shaykh about this particular performative issue. He elaborated using terminology germane to *tajwīd*: like many other letters, *lam* can be restricted (*muraqqaq*) or emphasized (*mufakhkham*) depending first on the sounds around it, as well as the specific *qirā'a* or *riwāya*. However, he explained, the *aṣl*, or natural state, of *lām* in *riwāyat Warsh* is *muraqqaq*, whereas he had heard it the other way.

Eventually we were joined in the studio by another older shaykh, introduced as a specialist in *rasm*, the discipline of Qur'anic orthography that is often taught in tandem with *tajwīd*. This shaykh took the other seat next to me at the back of the control room, tea and cookies were served, and work continued with the younger shaykh at the controls. The two worked in tandem, listening to long stretches of recorded material, or replaying shorter passages several times in a row, always attuned to the most minute deviations. "I heard a mistake according to Warsh," the younger shaykh declared at one point. The older shaykh immediately sat forward in his seat, peering at the younger shaykh's handwritten text. The younger shaykh replayed the phrase in question a number of times before he was satisfied enough to make a note of this mistake in the comment sheet. At issue, clearly, are minute matters of vocalization—the subtle inflection of *lam* or the timbre of another syllable according to *riwāyat Warsh*. Expert listeners like these shaykhs certainly can catch such mistakes in a more "live" setting; indeed, in classrooms at the aforementioned Muhammad VI Institute, where I also conducted fieldwork, I often heard teachers ask students in similar terms to repeat a particular phrase they had initially mispronounced. But the Ibn al-Qadi studio offers a more isolated listening environment and virtually limitless playback opportunities, both factors that assist the shaykhs in their aural evaluation. The expansion of onboard effects allows engineers greater sonic control, and enhanced sound definition overall makes performative mistakes more apparent. In addition to being cheaper than old-fashioned tape, digital recording affords seemingly limitless capture of multiple takes, edits, and corrections. Although the younger shaykh catches the mistake on the first listen in the example above, he clearly uses the playback features to verify the presence of the mistake in consultation with his senior colleague.

After roughly an hour of this playback and note-taking, the younger shaykh took his comment sheet across the hall to one of the administrative offices and gave it to another shaykh, also a teacher at the Muhammad VI Institute and, I would find out later, the main scholarly overseer of the recording project. A handful of other faculty and madrasa staff also were in the office, gravely discussing some matter with this shaykh, but he immediately turned his attention to the sheet that had just arrived. He reviewed the comments and even occasionally recited passages in question softly to himself. After making a few minor additions of his own to the comment sheet, he expressed his satisfaction with it and added it to an existing folder in the office, to be used in a later session of corrections. Indeed, when I saw the reciter Dawud a few days later making a guest appearance at Mohamed VI Qur'anic Radio, I asked if he had seen any of the comments, and he confirmed he did have "a lot of corrections" to make on the recording.

This admission suggests that studio recording solicits forms of aural authority in which mistakes are not merely heard or "caught," but actively listened for with the intention of future correction. This is a very different type of listening subjectivity than the "relaxed attentiveness from which one can nonetheless expect an ethical therapeutics."[37] The affordances of digital studio recording therefore infuse the collective labor imagined by *al-lajna al-'ilmiyya* with what we might call a more "technologized" model of aural authority. Although aural authority was always attuned to technical imperfections in vocal performance, studio recording transforms the listening practices underpinning aural authority into what Jonathan Sterne calls audile techniques: "a set of practices of listening that were articulated to science, reason, and instrumentality and that encouraged the coding and rationalization of what was heard."[38] The glossing of this shaykh review process as *al-lajna al-'ilmyya* seems to play across the dual meaning

[37]Hirschkind, *Ethical Soundscape*, 10.

[38]Jonathan Sterne, *The Audible Past: Cultural Origins of Sound Reproduction* (Durham, NC: Duke University Press, 2003), 23.

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of *ʿilm* in contemporary standard Arabic, evoking both the classical Islamic disciplines (*ʿulūm*) and *ʿilm al-qirāʾāt*'s transformation into a precise, technologically informed vocal "science."

Moreover, although featuring a single voice, the performance that is being constructed piecemeal from accumulated recordings is a result of the convergence of different forms of expertise. The *lajna al-ʿilmiyya* itself is of course already conceived in relational terms, with different shaykhs evaluating different stages of the production. But their aural authority is complicated by its encounter with the reciter Dawud's vocal capabilities (*muʾahhilāt ṣawtiyya*). Although relegated to the role of performer and subservient to the shaykhs who act as producers, Dawud nonetheless elevates *qirāʾāt* performance with elements of melody and dynamic expressiveness that overflow *al-lajna al-ʿilmiyya*. Additionally, Rashid's knowledge of microphones, preamps, amplifiers, and recording software—essentially absent from Shaykh al-Madghari's account—is crucial, first, for capturing a clear rendering of Dawud's voice; and, second, for rendering accumulated clips into a coherent performance that can be evaluated. In fact, as we saw in the opening, although *al-lajna al-ʿilmiyya* rests primarily on the shoulders of shaykhs, they are somewhat dependent on Rashid's technical aptitudes—until those aptitudes are transferred to the shaykhs.

Rather than a singular authority emanating from a central author of the project, then, I suggest that we might reconceptualize authority here as accumulating through a convergence of human and technological agency. This is not to suggest that Islamic authority was ever or is anywhere completely singular: as Muhammad Qasim Zaman points out, religious authority in Islam is best examined through its relationality, perhaps best exemplified in the jurisprudential concept of consensus, or *ijmāʿ*.[39] But although *ijmāʿ* may imagine authority as contested, the subjectivity underpinning authority's reproduction is never in doubt, since it continues to emerge out of a confrontation between identifiable authors and their opinions. The crisis of authority narrative of Islamic media transformation is ultimately still rooted in such a model, even if the networked field of such a confrontation is now more diffuse. Here, by contrast, a technologized form of aural authority relies so heavily on the affordances of digital recording as to no longer be rooted exclusively in the subject shaykh. In fact, the *qirāʾāt* performance is no longer mediated exclusively by the shaykh's ears, but is stored in the digital recording itself; meanwhile, the trace of the shaykh's aural authority is displaced from a medium of circulation, the *ijāza*, to the predetermined comment sheet confined to the school's private archive. The following section highlights further the dispersal of aural authority through Rashid's role as an expert listener, as well as his visual and tactile arrangements of the *qirāʾāt*.

## EDITING WITHOUT SOUND: DIGITAL TACTILITY AND VOCAL "ARRANGEMENT"

In addition to his reduction of Rashid's role in the four-stage structure of recording production, Shaykh al-Madghari's summary also omits an entire potential stage in which Rashid works relatively unencumbered. Editing—*al-taḥrīr*, as Rashid referred to it—might occur in between any of the other production stages outlined by the shaykh. In fact, we have already seen how editing is in some ways a part of the tracking stage itself. But Rashid also might reedit this accumulation of clips prior to a playback session like the one analyzed above, or following a corrective recording session, integrating the reciter's punch-ins into the existing comp. I want to linger on this productive stage in this final section because the tactical structure and visual references of audio editing suggest both surprising affinities with the core *qirāʾāt* tradition as well as conceptual challenges to the aural authority that has grounded it historically.

These editing sessions, or *ḥiṣṣās al-taḥrīr*, are characterized by repetitive, mind-numbing work (Fig. 4). To help us both pass the time, these sessions became an opportunity for me to ask Rashid about certain details of the recording and editing process, or simply about the Arabic terminology used to describe such operations. I was particularly struck, on one occasion, when Rashid referred to his sound engineering work as *muʿālija*, an Arabic term that can mean, generally, processing or handling, but in other verb forms especially carries a deeper resonance of medical treatment or a cure. Rather than a characterization of editing specifically, I took this notion of treatment to be a qualitative self-reflection on Rashid's manipulation of sound, and a contrast to other preferences for transparent sound reproduction.[40] Such

[39]Muhammad Qasim Zaman, *Modern Islamic Thought in a Radical Age: Religious Authority and Internal Criticism* (New York: Cambridge University Press, 2010), 32.

[40]Karl Neuenfeldt, "Nigel Pegrum, 'Didjeridu-Friendly Sections,' and What Constitutes an 'Indigenous' CD," in Greene and Porcello, *Wired for Sound*, 84–102.

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**Figure 4.** Editing session, Ibn al-Qadi school. Photograph by the author.

treatment necessarily required nuanced application of various effects to the recorded signal. The most important for this project, Rashid pointed out, were vocal compression and reverb. Once, Rashid took a momentary break from his editing work to subject the given track to roughly a dozen different reverb presets that came with the Cubase software to give me a sense of how they affected the reciter's voice. The version used on the recording seemed to be one of these presets, meaning that at least part of the recording's aesthetic was determined by the parameters of the technology itself.

Meanwhile, although Rashid did not elaborate on vocal compression, a sound engineer I spoke with at Mohammed VI Qur'anic Radio characterized it as absolutely essential for Qur'anic recitation, and I found it quite noticeable on the Ibn al-Qadi recording. As the term itself suggests, if certain dynamic peaks in a given vocal performance pass a certain threshold, the effect will reduce or compress these variations to give a more uniform volume across the entire performance. For many listeners, this can have the aural effect of making dynamic peaks seem thicker or "punchier." This has particular advantage for the reciter, Dawud, since it allows his natural strength in the upper-midrange frequencies to stay rich and resonant, rather than pinched, during the application of nasalization (*ghunna*). Aesthetically, this performative effect helps accentuate the sense of *ḥuzn* (sadness) that is sought by many reciters of Qur'anic verses with weighty topics.[41] But there are pedagogical advantages as well. Since compression lowers the volume of such peaks, sound engineers are able to raise the volume overall and bring more subtle vocal nuances to the fore. In terms of the Ibn al-Qadi project, this would aid the shaykhs in discerning even the smallest missteps in the reciter's application of *tajwīd*—like the slight mispronunciation of the *lam* syllable referred to above. Therefore, Rashid's ability to not only capture but also shape the sound of the unfolding Qur'anic reproduction is essential to the constitution of *al-lajna al-ʿilmiyya* and the aural authority on which it is based.

What struck me most about Rashid's work, however, were the visual referents he relied on to shape this sonic project. In his ethnography of Istanbul recording, Bates points out that a crucial aspect of the all-in-one digital audio workstations (DAWs) that come with recording software programs like ProTools (as well as the Cubase 5 program that Rashid uses) is the way they translate the ebbs and peaks of sonic

[41]See Nelson (*Art*, 21–22) for a discussion of nasalization within *tajwīd*, and for broader elaboration on the aesthetic of *ḥuzn* (91–98).

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vibration into the graphic medium of digital waveform images. Since each of the tracks in a given workflow are differentiated from the others through color coding, Bates notes that observing studio engineers edit a given track was like watching them "moving around colored blocks," and many seasoned pros undertook fairly complex editing tasks by sight alone, notably "editing the timing of a part without even listening to it." On a number of occasions Bates recalls engineers from another studio visiting a given session and, looking at the waveform image (but not having heard it), declare that the recording "looks finished!"[42]

Rashid often worked in similar fashion. He would begin a typical editing session by opening up the project in Cubase 5, generally whichever Qur'anic chapter or subsection participants had tracked previously. At the beginning of the session, the project file would be visualized on the computer screen as an empty first track at the top, and a sort of bank of recorded clips compiled at the back of the third or fourth track. Each clip might vary in length, from a single syllable to an entire *waqf*—the largest subsection of Qur'anic material to which a set of *qirā'āt* variants might be applied. Rashid would grab each clip one-by-one by clicking and holding with the mouse and dragging it to the beginning of the first track to start building his composite performance. Along the way, he would leave a slight space in between each clip that he would go back to later and fill in with a crossfade (*takhfīḍ* or *takhfīḍ al-ṣawt*).

Sometimes, but not always, he would listen to each clip before moving it from the bank to the composite track. His aim, however, was clearly only to affirm nothing was wrong with the clip, not to subject it to the kind of intensive review exercised by the shaykhs. Rashid often carried out this work without listening to the clips at all, relying entirely on their visualization on the computer screen. "Editing without sound (*tahrīr b-la ṣawt*)"? I asked on one such occasion. He shrugged simply, suggesting that this was apparently not all that rare. This visuality was also the main focus of discussion the one time I saw the school's founder Shaykh al-Sahabi drop in at the studio, as Rashid and I were finishing up. As Rashid explained which section he had just finished editing as well as plans for future tracking sessions, al-Sahabi seemed much more interested in Rashid's monitor setup. "You have two [*'andak jūj*]?" the Shaykh wondered. "Yes, two screens are necessary [ *jūj shalshalāt ḍarūrī* ]," Rashid replied, beginning to power down the electronics. "One screen is used for the editing and the other to control the effects [*mu'athirāt al-ṣawt*]," he continued. "Sometimes I might work from one screen, but I would be constantly switching between the two programs. This way is easier."

What distinguishes Rashid's work from what Bates calls digital multi-track arrangements of Turkish folk music, however, is the way a linear form of arrangement dovetails with a principle of variant ordering (*tartīb*) that is deeply rooted in the history of *qirā'āt* practice. In the Maghribi method in particular, the order of variants within a given phrase or *waqf* changes according to a principle of temporal abbreviation (*ikhtiṣār*). Since any given *qirā'a* or *riwāya* may agree with—or in emic terms abbreviate ( *yakhtaṣiru 'alā*) —some variants but not others on a given phrase, the order of variants is changed from one phrase to another to obtain the shortest possible performance overall. Although in practice, the phrase-by-phrase tracking and subsequent editing did not necessarily map onto distinctions between *qirā'āt* variants, theoretically each variation might be dealt with as a distinct clip. Therefore, any one of the shaykhs might conceivably request a reordering of variants within the recorded track at any time in the production process, in accordance with the principle of *ikhtiṣār*. This is a striking feature of the Ibn al-Qadi recording, for it shows that the domestication of sound recording is conditioned less by the theological implications of the medium and more by the way digital editing affords new engagement with the problem of *qirā'āt* ordering.[43] In short, digital recording is employed in a particular way because *'ilm al-qirā'āt* is already an arranged tradition.

Despite these affinities, Rashid's role in the production process and the visuality of variant ordering refashions *'ilm al-qirā'āt* and aural authority in yet more ways. For one thing, we have seen how Rashid plays an important role not only in capturing but, indeed, in shaping vocal sound in ways that aid the auditory techniques of the shaykhs. His intervention and his reliance on the sonic affordances of digital recording therefore complicate the problem of agency underlying aural authority. In fact, the "Qur'anic presence" no longer relies exclusively on the shaykh's "mnemonic possession" of the text; rather, a

[42]Bates, *Digital Tradition*, 155.

[43]See Eisenlohr, "Materialities," as an example of such a theology-focused analysis.

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collective form of aural authority involving Rashid as well has helped produce a sonic manifestation of the Qur'an stored exclusively in the sound recording, or more precisely the software's digital code.[44] Second, DAW waveform visualizations complicate aural authority further by offering Rashid and the shaykhs a parallel visual reference for *qirā'āt* performance, even the means to alter variant orderings (or other aspects of the performance) without sound. Like aural authority itself, however, the visual reference is transferred to the digital waveform, and therefore concealed exclusively within the means of production. On the whole, then, aural authority is refashioned not only by new audio technologies, but more broadly by "a distinctive *digital sensorium* and *sensibility* that results from a strategic *synesthesia* between listening, visualization, and kinesthetic tactile control."[45] Although aural authority was never strictly an aural discipline, interpolating a textual architecture related to the history of *tajwīd* and *qirā'āt* practice, digital recording transforms aural authority into an intersensory and instersubjective discipline of audio production.

## CONCLUSION: REPRODUCING ISLAMIC AUTHORITY

This paper has given an anthropological account of Qur'anic studio recording to gain new analytical purchase on the problem of Islamic authority and its mediation. By identifying a historically rooted form of aural authority articulated to the evaluation of *qirā'āt* recitation and tracing the unfolding of this form of auditory expertise in an environment of studio production, the paper complicates contrasting narratives that situate Islamic media at the center of either a crisis of authority or historically continuous forms of religious self-making. I have argued that the simultaneous dispersal of recording labor across different human and technological agents points to a fragmentation of religious authority not merely as a result of decentralized networks of circulation, but at the very site of media production. This suggests that scholars of Islamic media must attend to the exertion of discursive and sensory authority at multiple stages of media practice. In fact, this analysis shows that the problem is not rooted in the production or circulation stages exclusively. Rather, to be more precise, the project's authoritative grounding is destabilized by the shift from one stage to another, where the trace of authorizing practices essential to the recording's production is concealed behind the singular voice of the reciter on the medium of circulation. This alienation of aural authority from the final media object is the final step in what I have been describing as the subjective dispersal of religious authority in studio production. Although I wonder whether my interlocutors at Ibn al-Qadi have fully grasped the stakes of this shift themselves, the director, Shaykh al-Madghari, seems to invite this account by foregrounding the means (*wasā'il*) of the Qur'an's sonic and social reproduction in Morocco, past and present.

Although my primary aim here has been to show how technological infrastructures shape mediated Islamic authority, such an ethnography of Islamic media production has important ramifications for much broader debates about Muslim subjectivity as well. In one of the most groundbreaking and often-cited works on the subject, Saba Mahmood describes the Islamic tradition as "a mode of discursive engagement with sacred texts, one effect of which is the creation of sensibilities and *embodied capacities* (of reason, affect, and volition) that in turn are the *conditions for the tradition's reproduction*."[46] According to this model, the embodied capacities of the shaykhs as expert listeners ensure the Qur'an's reproduction—both socially and as material, sonic object—according to the authoritative tradition of the *qirā'āt*. But is the category of "embodied capacities" exhaustive here? How would such a model account for the shaykhs' reliance on the sonic manipulations of another agent (the sound engineer Rashid) or on the affordances (like limitless editing) of the mediating infrastructure itself? This should make one question whether scholars of Islamic media and lived Islam generally have attended adequately to the relationship between religious subjectivity on the one hand, and discursive agency on the other, technological agency in particular. Until we do, scholars of mediated Islam, like other scholars of religion,

[44]On mnemonic possession, see Eickelman, *Knowledge and Power*, 57.

[45]Bates, *Digital Tradition*, 157, original emphasis.

[46]Mahmood, *Politics of Piety*, 115, emphasis added.

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may continue to avoid the complex problem of technological agency by reducing it to a much more reductive narrative of technological determinism.[47]

Indeed, such fragmentation and concealment of aural authority within new media forms may have high stakes for current and future *qirā'āt* practitioners themselves, in Morocco and elsewhere. The problem is most palpable when we reconsider the convergence of *al-lajna al-'ilmiyya* and the reciter Dawud's vocal capabilities, iterations of vocal and aural expertise that are rooted in different embodied disciplines yet nonetheless fused within a single mediated performance. Although the studio infrastructure assists the shaykhs in their evaluation of the performance's adherence to *qirā'āt* standards, Dawud's own expertise also shines through on the little I was able to hear of the final recording, with the reciter not so much marching through the variations but soaring over them in melodic flourishes that would seem completely out of place in a *qirā'āt* classroom. This type of performative synthesis between *mujawwad* stylings and the *qirā'āt* would be difficult to imagine outside of such a meticulously constructed, mistake-free sonic production. This makes the concealment or erasure of the shaykhs' authority within the final media object all the more notable. Rather than the secrecy of a medium of inscription threatening the transparency of public communication, public circulation threatens a form of authority newly made secret.[48] How will future students of the *qirā'āt* react to such a fusion of *'ilmī* perfection and dynamic expressiveness? Will they recognize normative divisions between the *'ilm* and *mujawwad* style, or will they come to regard these latter flourishes as essential to *qirā'āt* performance? How these questions play out may determine further transformations of the *qirā'āt* for generations to come.

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[47]Jeremy Stolow, ed., *Deus in Machina: Religion, Technology, and the Things in Between* (New York: Fordham University Press, 2013).

[48]Spadola, *Calls of Islam*, 64–80.

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