“It is known that most people have thirty-two teeth.” So begins the Karabaş *tajwid* manual, an Ottoman-era guide to proper recitation of the Qur’an, probably written in the 16th century. While its provenance is uncertain, its prevalence in modern Turkish society is not: most any religious bookstore in Turkey or the Turkish diaspora today will carry copies of the Karabaş Tajwid (or *tecvid*, in modern Turkish), sometimes reproducing the original Ottoman Turkish text alongside a modernized version. The first two pages of the dense, 14-page manual in Ottoman Turkish are devoted to the anatomy of the mouth and especially the teeth. It lists the Ottoman Turkish names of teeth in both the singular and plural (front teeth, incisors, canines, bicuspids, molars), followed by various anatomical features in the mouth, throat, and even the nasal cavity. The centerpiece of these preliminaries is a large diagram on the second page labeled *mahrec tasvīrī*, literally a diagram of “exit points” (Arabic, *makraj*, pl. *makhārij*), featuring a mouth with designations for particular Arabic letters and the locations in the mouth from which they should be articulated. The various organs described on the preceding page give rise to 17 distinct points of articulation. Only on the third page does the text include a title, Karabaş Tajwid, followed by the expected invocations *bismillah al-rahman al-rahim*, in the name of God the Merciful the Compassionate, with pronouncements of praise to God and blessings on the prophet Muhammad, his family, and his companions. The manual then reverts quickly to the task at hand, launching into a kind of Socratic dialogue on sacred vocal timbre: “It is known that there are three long vowels or letters (*harf-i med*), vāv (ą, or ū), yā (ṣ, or ī), alif (l, or ā). But when does a vāv become a long vowel? When it has no short vowel markings following it and the

---

1 Karabaş, in Eser n.d. (2014):39. All translations are the author’s unless otherwise noted.
vowel before it is “u,” it is a long vowel.” Similar questions and answers then elaborate tajwid, the extensive set of rules governing the proper phonetics and performance of Qur’anic recitation.²

[Insert Figure 1, caption: Ottoman-era diagram of the points of articulation, from Karabaş Tajwid (Eser 2014)]

[Insert Figure 2, caption (could be slightly later): Modern Turkish rendering of points of articulation, from Karabaş Tajwid (Eser 2014)]

But of course, Qur’anic recitation is a living tradition, accessible not only through manuals but also the tens of thousands of recitations taking place daily around the globe. One hot July day in the middle of Ramadan, I accidentally wandered into an unusual recitation at the Fatih Mosque: the Turkey International Holy Qur’an Recitation and Memorization Competition. The encounter was serendipitous. I had in fact been trying to attend a more local version of Qur’an recitation held daily during Ramadan, known as mukabele, a recitation of the entire Qur’an in its thirty parts (one per day), usually performed by two reciters after congregational prayers for anyone who wants to listen and/or read along. In this case, however, a four-day international competition had interrupted the regular recitation schedule, with roughly 100 participants competing in two different groups, one focusing on hafızlık, or the complete memorization, the other on güzel okuma, literally “beautiful reciting,” or in other words, tajwid. The tajwid competition took place simultaneously in Sultan Ahmed Mosque, also known as the Blue Mosque. As ridiculous as it may sound, I must confess that I was initially rather crestfallen by these circumstances. I had been following along with the daily mukabele recitations and was eager to complete a hatim, or reading of the complete Qur’an. But at these events, small portions were chosen for the reciters on the spot, and they then recited, making it impossible to read along

² By way of comparison with Eser’s version of the Karabaş manual, some other Turkish manuals include the mouth diagram for the points of articulation (e.g., Kılıçaslan 2014), some do not (e.g., Gülle 2005, 2006).
with them. As I settled into listening, I found my attention shifting from the recitation itself to the particular qualities of the recitation in the mosque. The lengthy reverberation of these cavernous mosques, coupled with the amplification systems used for the recitation, produced a complex layer of additional timbre: if the rules of Qur’anic recitation conceptually shape the vocal timbres used in recitation, the reverberation of those vocalizations in a reverberant space created new set of timbral combinations resulting from these echoic temporalities. This contrast was especially audible to me for rather circumstantial reasons: the mosque in which I had most recently been listening to *mukabele*, Bayezid Mosque, was under construction, so prayers and recitations took place in a small, partitioned side of the mosque with low ceilings and a very simple sound system.

In these two examples we see two timbral configurations that offer a useful set of poles to consider the place of timbre in Qur’anic recitation: on the one hand, the interior, conceptual, rule-based space of the mouth; and on the other, the exterior, physical, highly variable architecture of mosques. In both cases, timbre plays a critical role in making Qur’anic recitation recognizable, even to untrained ears, and even if (especially in the case of mosques) that predominant, stereotyped setting is not necessarily representative of the tradition more broadly. Within the course of a single Thursday during the competition, I heard not only these competition recitations, but also the more intimate *mukabele* in Bayezid Mosque, as well as several different recitations during the course of an evening of zikr and prayers at a local Sufi lodge. In the case of the Sufi rituals like zikr, the recitation of names and attributes of God (many of which come in the form of phrases from the Qur’an), the ritual is not only in a much less reverberant space, but also requires participation from the congregation, which includes both men and women (though separated from one another). Physical contingencies like architecture,
gender, vocal range, age, proficiency in Arabic, and even the ability to produce some of the more idiosyncratic, guttural sounds of certain forms of zikr, also shape the timbre of Islamic recitation in this case. Given the religious injunction that each individual recitation—what we might think of as a lower-case *qur’ān*, literally simply “recitation”—adhere as closely as possible to the Qur’an, the instantiation of the Qur’an as it was revealed to Muhammad. This unitary version of the Qur’an, as I will show here, proved elusive in the early centuries of Islam, precisely on grounds of timbral, phonetic and dialectal questions. At the same time, the elaborate design of rules for proper recitation has been so fully developed in the last millennium that they have become a kind of cultural technique, a rule-based algorithm that imposes on human performers a set of media-like operations. Indeed, recent computer science and engineering has fully embraced the algorithmicizing of vocality and timbre to the point of creating a number of software platforms designed to reproduce or assess the proper application of these rules. In all these different trajectories—mouth, mosque, and media—the alphabetics of the Qur’an play a central role in transducing a sacred text into the contingencies of the material world, from the incisors, gums and tongues of reciters to the granite and marble of mosques, and even to the seemingly dematerialized world of computer software.

**On Alphabetics**

As a theoretical note, by alphabetics, I mean the interplay between letters as a written (or at least writable) sign system that gives rise to sonic performance as well as a set of sonic transcriptions. An outgrowth of that dualistic function of alphabetics is a theoretical corpus and set of sonic performance conventions that have emerged as the Islamic science of recitation (*‘ilm al-tajwīd*). In focusing on alphabetics and timbre in Qur’anic recitation, I hope to bring together
two distinct trajectories in existing scholarship: ethnographic (especially ethnomusicological) accounts of Qur’an recitation generally and recent media theory on the alphabet as an audiovisual medium or cultural technique. Kristina Nelson’s seminal work, *The Art of Reciting the Qur’an* (1985) remains the definitive work on this topic. Expanding geographically beyond Nelson’s focus on Egypt, as well as more recent work by Michael Frishkopf (2009) showing interconnections between reciting in Egypt and the Gulf States, Anne Rasmussen (2010) and Rachel Harris (2014) have added significantly to this literature with their work on women’s recitation in Indonesia and Uyghur China, respectively. While not strictly musicological, a few recent linguistic studies have also addressed Qur’anic recitation with a sharp focus on phonetics, such as Mohammed Elashiry’s exploration of vocal register and prolongation among Egyptian reciters (2008) and Saeed Alsurf’s videofluorographic (X-ray) study of pharyngealization (2012). Similarly, within religious studies and other kindred disciplines, William Graham (1987), Michael Sells (1999), and Navid Kermani (1999, translated into English 2015) have further emphasized the sonic, aesthetic, and (implicitly, at least), timbrally rich nature of the Qur’an.

This essay also responds to increased attention over the past decade-plus to the question of the alphabet not as a given, but as a site of techno-sensory slippage. Of course, these two trajectories need not be bifurcated: as Friedrich Kittler in the introduction of *Gramophone, Film, Typewriter*, Islam, and especially the revelation, recitation and transmission of the Qur’an, has much to say to media studies. He even goes so far as to describe the Prophet Muhammad, traditionally understood by Muslims to be illiterate, at the moment of the Qur’an’s revelation as having “miraculously alphabetized eyes” (1999:7), allowing him to read/recite the divine word, which is itself a command to read/recite, *iqra*! (Qur’an 96:1). But in the mid-2000s, the study of the alphabet as a form of communications technology came into its own, with works like Sybille
Krämer’s discussions of writing as a visual phenomenon that cannot be simply taken for granted as discourse (2005, 2008) and the first volume of Kittler’s *Musik und Mathematik* (2005), a speculative history of the Greek alphabet as a multimedia operation of sound recording, musical notation, mathematics, and, less obviously, love. But the particular alphabeticics of the Qur’an recitation provide a useful counterpoint to the theoretical thinking of Krämer, Kittler and their peers. On the one hand, much of Krämer’s arguments seems less applicable in Islamic contexts, where the alphabet in the Qur’an and Arabic language more generally were always self-consciously marked. The Qur’an itself highlights the uniquely sacred status of Arabic within it: “Lo, We have sent it down as an Arabic *qur’ān*, so you may have understanding” (Qur’an 12:2).

As we saw already from just a cursory glance at a tajwid manual, especially for non-native Arabic speakers (as is the case with the Karabaş manual), the precise values and qualities of individual letters are highly regulated. Furthermore, calligraphic tradition makes abundantly clear, writing was visualized. On the other hand, Kittler emphasizes Greek’s ability to literally and phonetically—or perhaps even phonographically—transcribe sound, thanks to its inclusion of complete voweling, in particular. But Qur’anic recitation shows how productive a very different alphabetic system can be, precisely because it requires a supplement of knowledge and vocalic, timbral rules in order to reconstitute the text as sound. That sonic supplement also places particular demands on breathing and other bodily practices—themes that appear commonly in other parts of Kittler’s oeuvre but less so with regards to alphabeticics—giving Qur’anic alphabeticics and timbre an important anchor in the body. Furthermore, at least for devout Muslims, these multiple strata of alphabetic systems (i.e., the written Qur’an, the rules of tajwid,

---

3 A small burst of collected volumes emerged in the mid-2000s from (mostly German) scholars working on these questions of writing as technology, audiovisual medium, and cultural technique. See the entire collections of essays, *Schrift* (Grube, Krämer and Kogge, eds., 2005) and *Bild-Schrift-Zahl* (Krämer and Bredekamp, eds., 2008), as well as *Die Geburt des Vokalalphabets aus dem Geist der Poesie* (Ernst and Kittler, eds., 2006).
and arguably the moment of performance, as well) not only accurately reproduce language, they accurately reproduce a divine system of revelatory media transduction from God’s Preserved Tablet to the angel Jibril to Muhammad to his followers, a chain of transmission I will discuss below. In short, Qur’anic alphabets are both more emphatic and self-conscious (pace Krämer) and more sonically dynamic (pace Kittler) than the writing systems they choose as their models for analysis.

**Timbral Histories I: Muhammad’s *qur’an***

The Qur’an itself and the *hadith* collections of oral traditions of the words and deeds of the Prophet Muhammad repeatedly highlight the timbral, phonetic and alphabetic concerns at the heart of Qur’anic recitation. Beyond the self-referential moment of its initial revelation (96:1-5), mentioned above, the Qur’an calls for recitations that adhere to *tartīl* (73:4), generally understood to mean a slow, measured tone. Indeed, in contemporary contexts, *murattal*, the adjectival form of *tartīl*, is usually contrasted with *mujawwad*, the adjectival form of *tajwīd*, to give a sense of the two major styles of recitation: *murattal* is relatively quick, maximally intelligible, with little melodic embellishment, while *mujawwad* expands temporally (i.e., can frequently slow down) to allow for a variety of sonic gestures to add to its expressivity (cf. Nelson 1985:105ff.).

From the numerous *hadith* traditions that similarly touch on questions of reciting the Qur’an, I draw on two examples that illustrate some key notions about timbre and alphabetics, as well as the complexities and stakes of recitation. The first is an account of Muhammad himself reciting, as recounted by a chain of witnesses who transmitted the account with performative recitations:
Shu’ba narrated that Mu‘awiya bin Qurra reported that ‘Abdullāh bin al-Maghaffal al-Muzani said, "I saw Allah's Messenger (peace and blessings be upon him) on the day of the Conquest of Mecca, riding his camel and reciting Sūra al-Fath (48) or part of Sūra al-Fath. He recited it in a resonant and pleasant voice (fa-rajja‘a fiha). Then Mu‘awiya recited as ‘Abdullāh bin Mughaffal had done and said, "Were I not afraid that the people would crowd around me, I would surely recite in a resonant and pleasant voice as Ibn Mughaffal did, imitating the Prophet." I asked Mu‘awiya, "How did he recite in that tone (kayfa kāna terji‘uhu)?" He said, “āh, āh, āh.” three times. (Sahih al-Bukhari, 97:65)

The key verb here, rajja‘ (or tarjī‘), is a highly disputed term that describes some kind of vocal quality, probably akin to vocal trilling or melisma, though some have speculated it refers to the rhythmic vocal inflections resulting from riding on a swaying camel (Nelson 1985:78-81). But equally interesting in considering the history of this moment is its meta-narration and -recitation: Mu‘awiya recites and imitates the vocal qualities of ‘Abdullāh bin Mughaffal, who in turn had recited and imitated the Prophet. When the narrator of this account, Shu‘ba, asks for clarification, Mu‘awiya highlights the particular way the Prophet inflected the long āh sound that recurs in Sūra al-Fath. In short, the Prophet’s timbral treatment of a particular vowel in recitation becomes not only an informative point, but something to be imitated and transmitted from one generation to the next.

If this hadith suggests the aspiration for a unified, mimetic reproduction of the Prophet’s recitation, other hadiths show the rich, oral diversity that characterized early qur’ān—again, that is to say, the early and not fully systematized forms of reciting. Perhaps most famous among these is the following dispute over recitation told by ‘Umar ibn al-Khattab, the second caliph in Islam after the Prophet:

‘Umar ibn al-Khattab narrated [that] he said: “I heard Hishām ibn Hakīm reciting Surat al-Furqān when Allah’s Messenger was still alive. I listened to his recitation and noticed that he recited in several different ways that Allah’s messenger had not taught me. I was about to jump on him during his prayer, but I controlled my temper. When he completed his prayer, I put his upper garment around his neck, seized him by it, and asked: ‘Who taught you this surah that I heard you reciting? He said: ‘Allah’s Messenger.’ I said: ‘You are lying, for Allah’s Messenger has taught it to me in a different way.’ So I dragged him
to Allah’s Messenger and said: ‘I heard this person reciting Surat al-Furqān in a way that you have not taught me.’ On that, Allah’s Messenger said: ‘Release him! Recite, O Hishām!’ Then he recited as I had heard him reciting before. Then Allah’s Messenger said: ‘It was revealed in this way,’ and added: ‘Recite O ‘Umar.’ I recited it as he had taught me. Allah’s Messenger then said: ‘It was revealed in this way. This Qur’ān has been revealed to be recited in seven aḥruf, so recite of it whichever is easier for you.’” (Sahih al-Bukhari, 44:9).

Numerous other hadith traditions make similar claims, if less dramatically: that the Qur’ān was revealed in seven aḥruf, a word whose meaning has provoked centuries of debate in Islam but is often translated as “style,” “dialect,” or even “recitation.” Before considering the timbral consequences of these various aḥruf, it bears mention that the word is literally a plural form of the word harf, mentioned briefly above, meaning most simply “letter,” but often also “word,” “dialect,” “utterance,” or even a “way” or “manner” of doing something. Their existence seems to attest to a polyphonic alphabetism in the Qur’ān itself, at least historically—the question of whether these seven aḥruf are still somehow embedded in the Qur’ānic text remains an open question. Traditional interpretations suggest that the aḥruf might refer to different ways of pronunciation, different meanings, using substitutable synonyms, seven Arabic dialects, or varieties in style of recitation (Al-Imam 2006:6-13). Drawing on theories of oral poetry, Yasin Duton (2012) has recently suggested that these aḥruf might refer to a broader set of oral-formulaic expressions (where seven is not an exact number but a symbol for a sizable quantity). Given contemporary claims that the Qur’ān is singular and unchanging, the most palatable of these explanations for devout Muslims are those in which the fixity of the text remains greatest (i.e., the aḥruf entail differences in pronunciation and style of recitation). In such a case, the

---

4 Although it has little to do with sound or the vocalized aspects of recitation, Shady Hekmat Nasser has recently suggested an intriguing philological explanation for the meaning of aḥruf /harf as it relates to the manuscript history of the Qur’ān (2013:29-30).
variability in these seven *ahruf* could be expressed as a being principally a question of timbral difference, emphasizing divergent pronunciations of a text that is otherwise phonetically fixed.

Whatever they are understood to mean, and whether they continue to exist in the present, these *ahruf* apparently existed in Muhammad’s day prior to the systematic transcription of his revelations, which took place during the rule of two of his successors, the caliphs Abu Bakr and ‘Uthman.⁵ Although the ‘Uthmanic codex resulted in a single text, it too allowed for some flexibility in recitation for two reasons, one alphabetical, the other performative. Alphabetically speaking, the codex, sometimes called instead a textual “skeleton” (*rasm*), initially lacked diacritical marks (i.e., the points above and below letters to distinguish them from each other, as in the letters ـ [n], ـ [th], and ـ [t]) and voweling to indicate precise pronunciation.

Performatively speaking, traditions of recitation were already taking hold, such that eventually a handful of relatively stable systems of pronunciation came into being, known as *qiraʿāt*, literally “readings” or “recitings,” from the same root as *qurʿān* itself. The tenth-century Islamic scholar, Ibn Muhāhid, began to identify a core group of such variant readings, which he numbered as seven, tied to particular geographies and reciters from the eighth century (e.g., Nāfiʿ of Medina, Ibn Kathīr of Mecca, Ibn ʿĀmir of Damascus, et al.).⁶ Later scholars would identify 10 or 14 readings, and each of these canonical readings then has further branches allowing for other particularities of recitation.⁷ My point here is neither to consider the particularities of those recitational differences nor to emphasize variation within the Qur’an per se, but rather to

---

⁵ Once again, Nasser’s reading of *ahruf* (2013) is intriguing, as he tries to tease out a more nuanced history in which the notion of such *ahruf*, or at least the idea that they were systematic and multiple, is a historical construction in the century after Muhammad.

⁶ For more on Ibn Muhāhid’s role in canonizing these seven readings, see Nasser 2013:35-78.

⁷ Over the ensuing centuries, these various readings have been mostly streamlined into a small handful. The most commonly used reading today by far is that of ʿĀsim as transmitted by Hafs, with limited usage of the reading of Nāfiʿ as transmitted by his students Warsh and Qālūn, as well. For an overview of these *qirāʿāt* readings, see Qadhi 1999:184-206, Al-Imam 2006:74-111, and Dutton 2012.
highlight the vocal variation in recitation to which the Qur’an has given rise from its earliest inception. This spirit of variability within carefully delimited constraints typifies the sonic guidelines of the science of tajwid as it would become codified in the centuries that followed.

**Timbral Histories II: The Audible Science of Tajwid**

By the turn of the tenth century, Islamic scholars began formulating distinct tajwid rules in a variety of formats, from poetry to academic manuals, that codify the sounds and procedures of proper tajwid. The form that science of reciting, or ‘ilm al-tajwīd, takes is itself remarkable as a kind of media recursion. As Kristina Nelson points out, not only is tajwid instruction generally transmitted orally, despite the existence of these manuals (1985:xviii). As such, tajwid rules are also intended to be memorized and be recitable, not unlike the text of the Qur’an. She recounts that “when I told a reciter that I had begun a study of the qirā’āt [authorized Qur’anic readings] and mentioned the title of the text I was using as reference, he asked me, ‘To which line have you memorized?’” (55). For this reason, one of the best known tajwid texts is a poem, commonly known as al-Jazariyyah by one of the foremost tajwid scholars in Islamic history, Ibn al-Jazarī (d. 1430 CE). In 93 couplets, it presents “a systematic introduction to what a qāri’ reciter of the Qur’an should know” (the full title of the poem), beginning with two sonic-alphabetic categories: first (again), the points of articulation of letters, and then the sonic characteristics of those letters. This latter category comprises a critical part of the science of tajwid with important implications not just for understanding timbre in Qur’anic recitation, but also for thinking about the possibility of creating a language—systemic or otherwise—to address the timbral qualities of sound.

---

8 Unsurprisingly, one of the easiest ways to experience this poem is to search online for recordings of it (“al-Jazariyyah” or “tajweed poem”) being recited (e.g., on YouTube).
After the usual invocations (ll. 1-3), Ibn al-Jazarī states his titular aim of giving an introduction to the things a reciter must know (l. 4):

5 For it is absolutely necessary for them / to know first of all before beginning (to recite)

6 The points of articulation of letters and their characteristics / so they can pronounce (them) in the most eloquent of languages

7 Showing mastery of tajwid and the stops (mawāqif, i.e., pauses in reciting) / and everything inscribed (rusima) in the (original ‘Uthmanic) manuscripts

8 Concerning every cut and joined compound in them / and the feminine ِtā’ (ذ) that was not written with a (س)

Having introduced the points of articulations of letters and their characteristics, he proceeds with extended sections on both these topics:

9 There are 17 points of articulation of letters / according to those who determined that by examination

10 From the cavity of the mouth and throat (jawf): the letter alif (ا) and her two sisters (i.e., long vowels waw (و), yā’ (ي)) / the prolonged madd letters that stop with (the stopping of) air

11 Then from the lowest part of the throat: hamza (س) and ُhā’ (ه) / and from its middle is ‘ayn (ع) and ُhā’ (ه)

The poem then follows the tongue from the throat/pharynx outward (i.e., toward the edges and front of the mouth) as it reaches the teeth, palate and then the lips, culminating not in an actual letter but a critical sound for tajwid: “And the nasal sound (ghunna): its point of articulation is

---

the nasal passage (\textit{khayshūm})” (l. 19).\textsuperscript{10} This oral-alphabetic trajectory more or less follows the same anatomical path as the Karabaş tajwid manual described above, but in reverse (throat to mouth to teeth and lips).

The following section, “The Characteristics of Letters,” then delves into the heart of tajwid’s systematization of sound and timbre in recitation. The core set of descriptors for these characteristics is a set of five paired descriptors (mostly adjectives) that constitute the “permanent characteristics” of given letters:

- audible, aloud (\textit{jahr}) vs. whispered (\textit{mehmūs})
- soft (\textit{rikhwa}) vs. strengthened, explosive (\textit{shadīd})
- lowered (\textit{mustafīl}) vs. elevated (‘\textit{alwa}, elsewhere isti‘ilā’)
- opened, separated (\textit{munfatiḥ}) vs. touching, in contact (\textit{muṭbaqa})
- sharp, articulated (\textit{musmata}) vs. flowing, easily exiting (\textit{mudhlaqa})

Ibn al-Jazarī then includes for each characteristic either simply a sequence of letters or more often, short mnemonic phrases like “Then someone prompted him (to speak), but he remained silent,” “Be lenient, ‘Umar!” or “I found Qat [a woman’s name] crying” (cf. Gaibie 2009:49ff.).

Again, we see multiple sonic and alphabetic strata that coproduce symbolic meaning and literal sound as \textit{qur‘ān}: short mnemonic phrases symbolizing the rules for proper recitation of letters in the Qur’an that symbolically represent the sounds of Muhammad reciting what he heard (or perhaps “read” in some more figurative sense) from Jibril who received this revelation from God’s eternally inscribed Tablet.

\textsuperscript{10} Gaibie addressed the inclusion of \textit{gunnah}, saying, “Why have scholars like Ibn al-Jazarī then included it in the chapter of \textit{makhārij} when it clearly is not a letter? The answer would be that those scholars who consider the fact that it has a \textit{makhraj} of its own, like Ibn al-Jazarī, would include it in the chapter of \textit{makhārij}, while others, like Ibn Barrī, who consider that it is an attribute, mention it in the chapter of \textit{sifāt}” (2009:46-47). For this reason, Ibn al-Jazarī’s list of non-paired attributes has one fewer than, say, that of Hafs Al-Gazzi (2014).
In addition to these five pairs of characteristics, another six are given without opposites: whistling (ṣafīr), softening (līn), drifting (inhirāf), repeating (qalqalah), spreading/diffusing (tafashī), and lengthening (istutil). (In other sources, nasalization (günnah) would appear here also, rather than in the section on points of articulation.)

Are these characteristics plausible timbral descriptors? That is, do they give us a language we might use to think timbre? The answer is not entirely clear. On the one hand, most of these terms are descriptors not actually of sound but rather of physiological processes that take place in the moment of recitation. For example, “lowered” (mustafil) does not refer to pitch or tone color in any direct way, but rather to anatomy: “This means that we lower the tongue or make the tongue flat whenever the remaining letters appear, in order to keep it from touching the roof of the mouth” (Al-Gazzi 2014:97-98). Unsurprisingly, its paired characteristic, “elevated,” is similarly a description of tongue position. So too with “opened, separated” and “touching, in contact,” which describe the relationship of the tongue relative to the palate. These terms may still be useful in describing the sounds that result from these physical positions, but as so often happens with timbral descriptions, they stand one degree removed from sound itself.

On the other hand, many of these characteristics clearly do describe sound, and become especially evocative within the clustering of language here, especially the paired characteristics, but also in the case of certain unpaired characteristics that relate closely to one another. For example, the pair “soft” – “strengthened, explosive,” are immediately evocative of sound, even without knowing precisely which letters might correspond to these categories. In particular, they point to the onset, or attack, of a sound—or lack thereof—and its relationship to the continuation of that sound. “Soft” here means “that we allow a continuation of flow of sound (not breath) during our recitation” (Al-Gazzi 2014:96). Three characteristics from the unpaired list offer
another cluster of useful examples: “repeating,” “spreading/diffusing,” and “lengthening.”

Despite perhaps appearing to describe physiological actions, these all related to the sound produced by very particular letters: “repeating,” which only includes the sound $r$ ($\mathring{r}$), “means that there is a light vibration of the tongue” in pronunciation; “spreading/diffusing,” which only includes $sh$ ($ش$), “means that the sound of the letter under this rule is spread throughout the mouth” in pronunciation; and “lengthening,” which only applies to $d$ ($ض$), “means that…there is an extension of sound over the entire side of the tongue” (Al-Gazzi 2014:100). However limited they may be in their application (i.e., each only holds for one letter), these characteristics all describe particular phonetic sounds. In this case, the physiological component is less about what a particular organ is doing and more about the dynamic interface of sound at that site. Although these characteristics are considered “permanent” because they are (or should be) present in every instantiation of a given letter in recitation, they seem potentially useful as a model for generating timbral language precisely because of their changing, transformative (and transforming) properties.

Of course, tajwid manuals foreground these two aspects—the points of articulation and the characteristics of letters—in different ways. Although the Karabaş manual opens with points of articulation, it never clearly delineates the characteristics of letters. Instead, it immediately jumps into the practice of elongation of certain sounds ($madd$), another important sonic operation in recitation. In contrast, one contemporary manual I have found (Muhammad 1997) not only lists the attributes, but presents a table showing every Arabic letter (vertical axis) as they relate to the characteristics (horizontal axis).\textsuperscript{11} Every letter necessarily has one or the other of the paired characteristics; some have up to two of the unpaired characteristics as well. Such a table may not

\textsuperscript{11} Kılıçaslan 2014 makes a similar chart, if not diagrammatically laid out.
seem revolutionary, but it allows us to invert the sonic attributes of alphabetics: with a full complement of these characteristics, one could hypothetically reverse-engineer the Arabic alphabet, such that the sum of a particular set of (mostly) binary phonetic options generates a letter. The alphabet is no longer the smallest unit of measure in the Qur’an; it too can be sonically deconstructed.

**Oral Alphabetics: Nasality and Elongation**

These foundational aspects of alphabet, phonetics and orality give a critical overview of how the intonation of Arabic more generally happens, but many of the techniques of tajwid are particular to the recitation of the Qur’an, including nasality (ġunnah) and elongation (madd), two of the most recognizable features of Qur’anic recitation.12 As described above, Islamic scholars have long debated whether to classify it as a point of articulation because it fundamentally relies on the nasal cavity (i.e., a particular point for sound to “exit” the mouth, as the word makhraj literally means) or as a character of certain consonants. In one memorable passage the Egyptian tajwid scholar, Shaykh Muhammad Makkī Nasr suggests it belongs to the characteristics, then describes its sound: “It is said that it [nasality] is similar to the cry (ṣawt, also ‘sound’ or ‘voice’) of gazelles when a fawn gets lost” (Nasr 1976 [1930]:75). Nelson, who relies heavily on Nasr’s manual, describes nasality more prosaically as, again, an alphabetic predicament unique to Qur’anic recitation:

One of the most obvious characteristics of Qur’anic recitation is its nasal quality. This is not to be attributed to custom, aesthetics, or natural voice quality (although it may be intensified in a nasal voice), but to the rules of tajwīd. These regular what phonemes and syllables are to be articulated through the nasal cavity. Nasality (ġunnah) governs geminate /m/ and /n/, the phonetic phenomena of [assimilation with other consonants and syllable-final position]. An example of the geminate consonant nasality would be in such

---

12 Most any tajwid manual will deal with this larger set of issues. For a useful summary of several more techniques/rules that deal with the characteristic sound of Qur’anic recitation, see Nelson 1985:21-31.
words as *inna, Muhammad*, and so forth. Although phoneticians would argue that these consonants are naturally articulated through the nasal cavity, the rules of *tajwid* single out the geminate consonants for nasality, with the result that they are pronounced with an intensified and conscious nasality” (1985:21).

While this nasality seems straightforward enough, it transforms certain constructions that seem pedestrian or old fashioned in English translations, such as “*inn*,” usually translated as syntactical intensifiers like “lo” or “behold,” into special moments of sonic intensity, as well.\(^{13}\) My first Qur’an teacher, a Turkish imam living in Berlin, would demonstrate what *günnah* feels like by having me say /n/ and hold it for a few seconds. He even encouraged me to place my hand by my nose (or even to plug it) to feel the passage of air through it.

If nasal consonants play an oversized role in the rules of *tajwid*, the long /a/ does so for vowels through elongation (*madd*). As described above, all three long vowels may be part of that elongation process but /a/ plays a special role. The *hadith* tradition about Muhammad riding on a camel while reciting the Qur’an is suggestive, since the letter /a/ becomes the focus of whatever the particular tale being passed along is. (“I asked Mu‘āwiya, ‘How did he recite in that tone (*kayfa kāna terjīʻuhu*)?’ He said, ‘āh, āh, āh,’ three times.”) The precise rules for elongation are complex but grow out of a simple, binary premise: all syllables are long or short. Long is twice as long as short (though there is some debate about whether it is the combination of two connected short vowels or not, an esoteric question of some consequence later on, Elashiry 2008:194). Again, turning to Nelson, “The duration of syllables in Qur’anic recitation range from one to six beats (*harakāt*) or longer. The rules governing duration are detailed and comprehensive and account for an overall rhythm unique to the recitation of the Qur’an” (1985:24). These durations are proportional to one another, thus allowing for passages to expand

\(^{13}\) See Sells 1999:188 for more on this idea of parallel sonic and syntactic intensification, specifically in the context of *Surah al-Qadr*, which I discuss below.
or contract, depending on the pace of recitation. The terminology of pacing is also codified within the science of tajwid, but in recent years it has also come to mark a larger geographical/cultural split, especially in the Sunni world. In short, pacing serves as one of the major telltale signs for the distinction between recitation in *mujawwad* (that is, *tajwīd*) style and *murattal* (or tartīl). These categories, in turn, are often informally mapped geographically onto Egypt and Saudi Arabia, respectively.

Thought of in a slightly different way, this system of beats and length allows for a fairly simple form of time-stretching, conceptually in the same spirit as musical notation or contemporary beat-mapping software enable. The same Qur’an teacher who asked me to feel the air coming from my nose had a similarly embodied approach to elongation. From some of our earliest meetings, he would have me hold my hand flat on the table where we sat. As I recited words, especially those with more complex sound patterns and elongations, I would lift and drop a finger, counting from left to right. Although some recitations, especially in the more performative *mujawwad* style, may push the limits of these counting systems, they remain important for recitation. In other words, it is not possible to simply extend sounds as long as you may want—when reciting the Qur’an. The recitation of the *adhan*, or call to prayer, is different for precisely this reason, in that there are no clear rules on elongation (though there are *hadith* traditions suggesting that at some point it may become too much like singing). In any case, for Qur’anic recitation, long vowels in certain configurations with surrounding consonants provide opportunities for more melismatic pitch-based explorations of a given mode/*maqam*. As Elashiry points out, these shifting registers in more elaborate recitations ostensibly involve changes in pitch, but because of the changing qualities of the voice in different registers, they become bring out important timbral changes in reciters’ voices. Elongated passages or phrases recited in the
highest registers of trained reciters’ voices are in many ways, like nasality (which can itself be elongated to a more limited degree), some of the most identifiable attributes of tajwid.

**Timbre as Revelation as Sound: Meccan Suras**

As these tajwid techniques suggest, trained reciters of the Qur’an are ultimately making a limited set of decisions during the course of recitation within the confines of the kinds of sonic rules described above (e.g., nasality and elongation) and, critically, of the text of the Qur’an itself. Michael Sells has offered perhaps the most compelling analysis thus far in English of the interplay of sound and text in the (chronologically) early revelations to Muhammad—known as Meccan Suras because they were revealed before he and his followers fled to Medina, where he received the majority of the Qur’an.¹⁴ Sells describes the way those early Suras are saturated in sonic thinking and practice, inhabiting a phonocentric logic that abounds throughout:

> The early Meccan Suras are hymnic. The complex Qur’anic sound patterns and the relation of sound to meaning—what we might call the “sound vision of the Qur’an—are brought out and cultivated in Qur’anic recitation. […] In the Qur’anic context, the lyricism is related to the use of “signs” (āyās), clues to the mystery of reality. These signs include the patterns of day and night, male and female, odd and even, singular and plural. (1999:16)

To this lucid encapsulation of the sonic profile of the early Meccan Suras, I would add that the one of the most central of ayahs (or āyās, for Sells) is the ambiguity between verse and sign. At risk of sounding too McLuhanian, the message of early Islam was often the question of medium:

---

¹⁴ Sells focuses primarily on the early Meccan Suras, which he describes as “focus[ing] on existential and personal issues,” as opposed to later Meccan Suras that include “more extended discussions of sacred history and the prophets known in the Biblical traditions.” In contrast, the Medinan Suras “reflect Muhammad’s new position as a political, economic, social, and military leader and so address a wider range of societal, historical, and legal issues” (1999:14). In short, they start to systematize what being Muslim might entail as a theological, ritual and social practice.
often not so much a question of what was revealed, but how, meaning both “by what means” and “with what qualities.” Sound is a central part of the answer to both.

As an example, take Sura al-Qadr (qadr means “power,” though Sells prefers a more esoteric translation “destiny”), which figures prominently in his analysis. I reproduce his model of the text and very literal translation, which lays out several key sonic and structural devices (rhyme, vowel patterning, repetition) in the sura:

In his prose analysis, Sells clarifies his diagrammatic approach, emphasizing the recurrence of long /ä/, which creates numerous occasions for elongation, and the presence of nasality as a feature of its poetics—by which I do not mean that the text is poetry (it adamantly is not), but rather its overarching approach to sound patterning in constructing meaning. Here is Sells commentary on nasality in this sura:

(Qur’an 97, Sells 1999:187)
**Ghunna.** An example of the untranslatability of the Qur’anic sound and idiom occurs in the very first phrase of the Sura: *innā anzalnāhu*. The unit *innā* in Arabic is a combination of two words: *inn*, a particle of intensity sometimes translated (lamely) as “indeed” or “lo,” and *nā*, which is the pronoun for “us.” The two words are combined in a way that forms a very strong ghunna (nasalization) in Qur’anic recitation and the madd or elongation of the ā at the end of the *innā* increases the intensity. Then that key combination of *n* and *a* is picked up and used in the next word in various combinations: *anzalnā*. In verse 2 it is the mā sound which is the key. In Qur’anic recitation *m* and *n* are so closely related the *n* must be substituted for *m* under certain circumstances during the recitation. These same sound combinations of *n*, *a*, and *m* are found in verse 3 and open verse 4: *tanazzalū l-malāʾika*. (188)

Sells suggests that the semantic and spiritual core is the descent of *rūḥ* in the fourth verse, which I agree with but for different reasons. For Sells, the appearance of *rūḥ* (spirit, breath) at moments of revelation, creation and judgment is critical (201). Yet he hardly mentions that this sura is describing the moment of revelatory transmission, the night of power when the Qur’an was passed from God’s Preserved Tablet to the lowest of the seven heavens where Jibril would then relay it to Muhammad. It is the pinnacle of divine signal processing and while it certainly entails a special moment of *rūḥ*—could we call it Beyond-This-World-Breath, drawing on Friedrich Kittler’s notion of World-Breath?—I find my ear and eye drawn not only to content/message (*rūḥ*) but just as much or more so to transmission/medium (*anzalnā* in verse 1, *tanazzalu* in verse 4). This is, again, a sura about revelation itself. It seems fitting that the poetics of revelation and the poetics of recounting the revelatory process might blur. Furthermore, as a physiological note that probably needs no mention: Qur’anic recitation entails very careful

---

15 For Kittler, “World-Breath” (*Weltatem*) is both a particular media-theatrical technology associated with Wagnerian opera and also perhaps Wagner’s larger embrace of and quest for such devices. While it may seem superficially sacrilegious to compare Wagner to the sacred notion of *rūḥ* in Islam, they both are bound up with a kind of world-generating power, even if Wagner’s world-generating is all mimetic. Kittler’s idea of *Weltatem* surely attests to the quasi religious veneration shown to Wagner, but the idea of a techno-inspirational breathing seems to fit the Qur’anic context well. Kittler writes, “The name of ‘World-Breath’ encompasses all of Wagner’s innovations in just such a precise and technical manner. It offers proof of Wagner’s thesis that ‘music’ is the ‘breath’ of ‘language’” (2014:135). A similar trifecta of sound (if not necessarily “music”), breath and language lie at the core of the Qur’an and its unique alphabetics.
control of breath, such that the science of tajwid includes specific rules about where a reciter may pause, breathe, and begin again within a sura.

This intersection of sound, revelation, revelatory process, alphabetics and recitation features prominently in another early sura which Sells does not discuss but might have: Sura al-Nās (Mankind), the 114th (final) sura in the Qur’an as it was ultimately arranged. Like Sura al-Qadr, Sura al-Nās makes extensive use of the elongations on a long /a/ and nasality, but with even more frequency (and I would suggest, intensity) than Sura al-Qadr. In the definite form of the titular word nās (human, mankind), the definite article al assimilates with the /n/ of nās, producing “an-nās,” which is then incorporated into a series of epithets for God: the lord of mankind, the king of mankind, the god of mankind. With each iteration of these names, the reciter is given space temporally and linguistically to explore. The entire naming process is also an act of uttering praise for God, a frequent command within the Qur’an, most famously in its opening sura and the common phrase of gratitude and humility, al-ḥamdu lillāh (all praise be to God). But the verbal layers of the sura go further still: it begins with an imperative command (qul, “say!”), followed by a form of isti’adha, the formulaic seeking of refuge. A slightly different form of isti’adha is stated prior to reciting the Qur’an or praying, as well. In short, Muhammad is commanded to say to others this formula of refuge, itself a model for how his followers should seek refuge, especially when reciting such a text. The power of refuge is made clear sonically through the repeated, highly tajwidic naming of God. And to make even more emphatic the sonic power of godliness, the sura then contrasts that power (and its sounds) to the thing or people from whom refuge is sought: “from the evil of the whisperer / who whispers in the breast of mankind” (114:4-5). These verses depict a kind of sound clash between God, who reveals key utterances for the protection of the devout, and the evil whisperer. That whispering is
also given a clear sonic profile, marked by a sudden increase in sibilants and especially “w*s” combinations (e.g., was, wās, wis). I largely follow Sells’ transcription conventions here, though I mark not only the long /ā/ syllables (in **bold**) but I use *italics* not to show rhyme (which I hope is clear) but rather nasality, and I **underline** sibilants.

*Sura al-Nās (Qur’an 114, author’s translation)*

[General invocation before reciting]

a‘ūdhu bi  
llāhi  
min ash-shayṭānī  
ar-rajīm
I seek refuge with  
God  
from *shayṭān* (Impure One, Satan)  
the expelled (stoned) one

[Incipit of sura]

bi smi  
llāhi  
r-rahmānī  
r-raḥīm
In the name  
of God  
the Compassionate  
the Caring

1 Qul  
a‘ūdhu bi  
rabbi  
n-ḥās
Say:  
I seek refuge with  
the lord  
the Impure One

2  
maliki  
n-ḥās
the king  
the expelled (stoned) one

3  
ilāhi  
n-ḥās
the god  
the expelled (stoned) one

4 min sharri  
l-waṣwāṣī  
l-khannāṣ
from the evil  
of the whisperer  
the retreating one

5 alladhī  
yuwaṣwiṣū  
fi ṣudūrī  
n-ḥās
the one who  
whispers  
in the breast  
the Expelled (stoned) one

6 mina l-jinnati  
wā  
n-ḥās
(both) from among the jinns  
and  
among mankind

This sura too has close connections to breathing and breath. Several *hadith* traditions talk about how Muhammad used to breathe or blow on his hands while reciting Sura al-Nās and Sura al-Falaq (sura 113), known together as *al-Mu’awwidhāt* (i.e., the two injunctions to seek refuge),
and “then pass his hands over his body” (Sahih al-Bukhari 80:16). In a similar hadith, ‘Ā’isha, one of Muhammad’s wives, highlighted the healing power of this kind of recitation: “Whenever the Messenger of God became sick, he would recite Sura al-Falaq and Sura al-Nās [both of which begin with the isti’adha] and then blow his breath over his body [‘alā nefsihi yaqra’u bal-mu‘awwidhāt wa yanfuthu]. When he became seriously ill, I used to recite (these two suras) and rub his hand over his body hoping for its blessings” (Sahih al-Bukhari 66:38). The sura retains these connections to breathing and health today. On one occasion during my own research in 2015, a man had been in an accident and came to a Turkish baba (an older spiritual leader in the Halveti-Cerrahi order) for help. The baba asked for a glass of water, then instructed everyone in the room to quietly recite Sura al-Ikhlāṣ then Sura al-Nās three times each. He then passed the glass of water around and everyone blew into the glass, after which the injured man drank the water in a single gulp.

On another occasion in 2013, I was filming with a colleague, Kythe Heller, in a Muslim congregation in Philadelphia associated with the late Sri Lankan teacher Bawa Muhaiyaddeen. Heller had received a small amulet from a member of the community, and prior to deciding to wear it, she showed it to one of the more knowledgeable elders there. He looked at it then, unprompted, recited Sura al-Nās in a near-whisper, pausing between the fourth and fifth verses to breathe on the amulet. Holding the amulet up, he said, “To get rid of all the magnetic field that disturbs you and bring out Allah’s perfection in this. There should be nine [counting aloud], yes, nine knots, to keep you comfortable with Allah, with your Father—whatever the intention that you carry, to bring it out.” He then gently clasped the amulet around her neck. Again, breathing plays a major role in pacing and phrase length in Qur’anic recitation. But these examples of breath and breathing also raise other questions: What happens to the breath during recitation and
what kind(s) of alphabetic and/or spiritual excess remain post-recitation that might be transmitted to water or an amulet? And what about when suras are themselves recited in a whisper or even silently—how does that transform them sonically, theologically and socially? And speaking of silence, how do the (sometimes very) long pauses between phrases in mujawwad-style reciting affect the psychoacoustic experience of hearing timbre? Does that experience change dramatically when audible reverberation is dramatically different (e.g., a large, domed mosque versus the Prophet’s sick bed)? These last questions point to the importance of physical space in reciting, and especially the role of mosques in cultivating reciting traditions, though certainly reciting the Qur’an takes place as much or more in other less public settings. I turn then to the intersections of breathing, whispering, and even reciting silently with the materialities of the built environment.

**Architectural Alphabets: Body and Stone**

As a final example of the applied alphabetics of Qur’an recitation, I return to the Turkey International Holy Qur’an Recitation and Memorization Competition, but from 2016. Once again, Fatih Mosque hosted the event during Ramadan (this time Sultan Ahmed Mosque did not participate), and once again, an Indonesian reciter won first place in tajwid with a Filipino reciter in second. The contest ran all day June 11-16, 2016, with winners announced on Friday, June 17. The 2016 tajwid winner, Zainal Abidin, then made multiple appearances as a guest reciter on the Ramadan nighttime program, *Bereket Vakti* (The Time of Blessing), held in Aya Sofya (Hagia Sophia) and broadcast on TRT Diyanet, the national television channel for the State Directorate of Religious Affairs, including an appearance shortly after the competition ended, and then again
on July 2nd, *Laylat al-Qadr*, the Night of Power mentioned in Sura al-Qadr. This evening, celebrated by Sunnis on one of the last nights of Ramadan (in Turkey, usually the 27th night), entails special congregational prayers—beyond the standard nightly *tarawih* prayers Sunnis pray each night of the month—in remembrance of the sacred night on which the Qur’an began to be revealed. In earlier appearances on *Bereket Vakti*, Zainal Abidin had recited short sections from Sura al-Rum (Qur’an 30) and Sura al-Isra (Qur’an 31). On the night of Laylat al-Qadr, he included some portions of Sura al-Rahman (Qur’an 55:1-25), known for its inimitable beauty, and Sura al-Fatir (35:29-35), as well as two different recitations of Sura al-Qadr (Qur’an 97) in its entirety.

Having two nearly back-to-back recitations of a single sura by such a reputable reciter offers interesting possibilities for analysis of the recitations themselves on a variety of levels, most of which I will forgo here. I would mention only one aspect for now, namely the point on which Michael Sells and I somewhat disagree about message versus medium, especially in the fourth verse (*tanazzalu l-malāʾikatu wa r-ruḥu fīhā*). In the first recitation, Zainal Abidin leaves considerable space between each verse, which heightens the intensity of the attack and release of each phrase. Each verse seems to build in intensity from the one before it. But the high-point of vocal register, volume and timbral focus comes, as I hear it, at the beginning of the fourth verse, *tanazzalu l-malāʾikatu*, the angels descended. The angel messengers are the centerpiece of the proto-revelation of the Qur’an, as I suggest above. In the second, the intensities of timbre, volume and register remain relatively more constrained until this verse, at which point Abidin

---

16 TRT Diyanet has posted videos of both performances online. For June 19, see: [http://www.diyanet.tv/bereket-vakti/video/bereket-vakti-ayasofya-14-gun](http://www.diyanet.tv/bereket-vakti/video/bereket-vakti-ayasofya-14-gun) or [https://www.youtube.com/watch?v=dNoJ-IgPqFA](https://www.youtube.com/watch?v=dNoJ-IgPqFA). For July 2, see: [http://www.diyanet.tv/bereket-vakti/video/zeynel-abidin--kuran-tilaveti-3u92v5c11r](http://www.diyanet.tv/bereket-vakti/video/zeynel-abidin--kuran-tilaveti-3u92v5c11r) or [https://www.youtube.com/watch?v=tZqz_zK5b8k](https://www.youtube.com/watch?v=tZqz_zK5b8k). (All clips accessed December 1, 2016.)

begins to rapidly intensify the phrase. Not only the phrase but the entire sura seems to culminate at the word \textit{r-ru\textsuperscript{h}}u, very much in accordance with the kind of structure Sells suggests.

[PM: If possible technically and legally, it would be nice to include both clips here. I'm working on cutting versions from YouTube for now.]

My primary interest here, however, is how Zainal Abidin’s body and voice interact with the mosque space around him. As I note in the opening of this article, during the 2015 competition I found myself acutely aware of the interplay between the reciter’s embodied voice and the cavernous space of a large mosque or, in the case of Aya Sofya, a former church-turned-mosque-turned-museum, with these recitations offering during Ramadan offering a kind of false sensory reminder—presumably almost no one living today remembers anything about what Aya Sofya was like before the Turkish Republic secularized the premises.

As such, the first thing I noticed about these recordings was that they have the reverberations wrong—that is, by using careful microphone placement, \textit{Bereket Vakti} has managed to create a moderately reverberant space but one in which the recitation is still relatively clear. No one holds a microphone, generating a sense of artifice (even if lapel microphones are readily visible on every participant): the sound is natural, in some sense. It does not come from a microphone. And yet, of course, to have such neatly controlled reverberation, it is necessary to have close-mics on every reciter and participant.

The phonetic structure of Sura al-Qadr is especially helpful in hearing architectural acoustics because its verses all end with double consonants, which make for clear endings to verses, especially when ending with the word \textit{qadr}, which makes the final word all the more
clear as it echoes through Aya Sofya. The shift from Fatih Mosque to Aya Sofya proves fruitful, precisely because of reverberation. Thanks to the groundbreaking work of Bissera Pentcheva and Jonathan Abel with Stanford’s “Icon’s of Sound” Project, we know the standard reverberation time in Aya Sofya is about 10 seconds, depending on the frequency (i.e., pitch) and amplitude (i.e., volume) of the sound (Pentcheva 2011:101-104). Pentcheva methodically works through a whole host of physical materials used in Aya Sofya’s construction—especially marble and gold—both to re-read historical texts and also to imagine how past occupants/users of the building might have perceived it. She asks, “Did the sixth century visitor recognize the reverberant acoustics of Hagia Sophia?” (104). Pentcheva’s answer lies in an embodied encounter between song, breath and the Holy Spirit—a combination that shares much in common with the actors in our contemporary Qur’an competition, albeit with different terminology. For Pentcheva, speech is immediately a problem: “Reverberation time in the range of ten to eleven seconds is extremely long. Not only does it make recitative speech unintelligible but it also affects singing by causing strong dissonant effects” (104). She goes on to speculate in powerful ways about how the idea of *pneuma*—in Greek, breath, musical chant, and the Holy Spirit, as well as a breeze and even incense—all collide in the multisensorial moment of the Eucharistic liturgy. Bodies melt into a metaphysical non-place, united with God and angels and the material church itself. Reverberation begins to break down the human: “The reverberant acoustics of Hagia Sophia transform the human voice into an emanation, no longer focused on the intelligibility of words but on their sensual perception. […] Human breath emptied as chant becomes a reverberant sound perceived as a divine *acoustmère* [in film, a voice with no visible body] and consumed by bodies and clothing” (105-106). Angels, breath, chant: apart from the Eucharist, it sounds not so different from Ramadan 2016.
Christian-Muslim analogies aside, what I find most interesting in Pentcheva’s description is not speech intelligibility, angels, or her emphasis on marble (though I appreciate all those things), but rather the “strong dissonant effects.” The long reverberation time in Fatih Mosque or Aya Sofya ultimately function like a kind of piano damper pedal held down in perpetuity. Skilled reciters are certainly taking advantage of these spatial features, but even so, the perpetual wash of reverberation means that as soon as a reciter slides to a different pitch, he or she will continue to hear some trace of the preceding pitch for up to 10 seconds. I made my own crude timings based on Bereket Vakti and estimate that after three or four seconds, enough of the original sound has dissipated that its pitch no longer is distinctly audible, at least to my ears. And really only when two “dissonant” pitches occur in less than two seconds do I have a clear sense of the simultaneity implicit in Pentcheva’s comment. (I welcome more precise measurements of these psychoacoustic and physical phenomena.) But in any case, the possibility of having two tones sounding simultaneously opens the door to dissonance.

Both dissonance and the general thickening of a sound’s spectrum by virtue of this intense reverberation raises important questions about timbre: What kind of spatial dimensions does timbre have? When we hear the same sound produced in two very different environments—say, a Qur’an reciter in a massive mosque in Istanbul compared to being at a cemetery or a home—is the audible difference a part of timbre? Are “dry” and “wet” less descriptors of space and more descriptors of tone quality? And if an architectural space has been built with a particular reverberation and set of timbral qualities, what does it mean to introduce microphones and loudspeakers? Jonathan Sterne has written about “space within space,” or precisely this technical reconfiguration of space to generate new recording or performance spaces (2015). Whatever we decide, these issues point out just how contingent timbre, and by extension, so
much of the sonic world of Qur’an recitation can be. A single reciter who had mastered tajwid and could hypothetically reproduce a given recitation identically would still produce substantially different sonic products if she were to recite in two dramatically different spaces.

Once we start imagining the impact of architecture and sound systems, a whole host of other materialities follow, especially related to the body, including race, gender, ability, and so on. In place of Zainal Abidin, we might imagine the voice of another reciter from Indonesia, Maria Ulfah, in an account of a public recitation by Anne Rasmussen:

She was handsomely clad in a light purple floor-length dress with matching jilbab complemented by a dark purple tunic. She wore, as she usually does, makeup, including, lipstick, blush, and eye shadow. [She began with a lecture]: “Before I recite from the holy verses of the Qur’an, I would like to ask your forgiveness for all imperfections. Perhaps when I was younger and slimmer my breath was longer, but now I am fatter and I have eaten, and perhaps my breath is not as long. I am going to demonstrate various styles of reading from the seven styles.” (Rasmussen 2010:225)

The lecture/recitation not only featured recitation from multiple styles, it included also Maria Ulfah imitating the voice of Muhammad talking with Jibril: “Angel, it turns out that in my community…there are some that can and some that can’t [recite]. Could you add some more models for reciting?” (226). After that, she describes how Muhammad received the revelations in more styles and she proceeds, remarkably, to recite according to the rules of all seven Readings/qirā’āt. The combination of voice impersonation, clothing, commentary on her own body and the way it impacts her ability to recite all highlight ways the gendered and gendering space of Qur’an recitation constrain her recitation, despite her virtuosic ability.

---

18 Ulfah tells Rasmussen that these were performed in the seven ahruf, though she seems to mean Readings/qirā’āt, since she explicitly names the Readings on “way” (tarā‘) of Hafez and Warsh. Writing decades earlier about the situation in Egypt, Labib as-Said describes how difficult it was already becoming in the 1960s in Cairo—often considered the traditional hub of tajwid—to find reciters who had fluency in all of the Seven Readings to record for his ambitious attempt to document the stylistic breadth of tajwid (1975).
In a very different setting in Xinjiang, a group of Muslim women gathered to recite Qur’an and perform zikr. The leader of the group, described the climax of their evening as follows: “The oil is sizzling in the pot. Their love for Allah is so strong they can’t stop themselves crying, just like the pot on the stove. When the oil is hot you must throw in the meat otherwise the oil will catch fire. […] Allah’s passion (ishqi) is like the hot oil in the pot, their passion for Allah is so strong” (in Harris 2014:354). Male reciters dating back as far as al-Ghazālī have emphasized the possibility of becoming overcome through Qur’anic recitation (for Ghazālī, like these Uyghur women, weeping is the ideal outcome, al-Ghazālī 1982). The Qur’an is supposed to be read with huzn, a word commonly translated as “sadness” or “grief.” But as Nelson points out (1985:89ff.), the term almost certainly does not mean sadness as a simple emotional context, though it may have some sense of soberness as a response to hearing the grim future of God’s judgments. Charles Hirschkind touches on similar ideas throughout his excellent book on ethical listening (2006). More intriguingly, Nelson also suggests a connection between huzn and qualitative, timbre-centric descriptions of the voice, similar to the idea of possessing riqqah in one’s voice, a term she renders variously as “softness,” “plaintiveness,” and “delicacy” (1985:91-92). Nelson’s account implies that, paradoxically, as the technical language describing qualities of voice become part of a more explicit analytical/classification system, its descriptive language begins to come increasingly from the world of musical performance. This

19 The Qur’an is supposed to be read with huzn, a word commonly translated as “sadness” or “grief.” But as Nelson points out (1985:89ff.), the term almost certainly does not mean sadness as a simple emotional context, though it may have some sense of soberness as a response to hearing the grim future of God’s judgments. Charles Hirschkind touches on similar ideas throughout his excellent book on ethical listening (2006). More intriguingly, Nelson also suggests a connection between huzn and qualitative, timbre-centric descriptions of the voice, similar to the idea of possessing riqqah in one’s voice, a term she renders variously as “softness,” “plaintiveness,” and “delicacy” (1985:91-92). Nelson’s account implies that, paradoxically, as the technical language describing qualities of voice become part of a more explicit analytical/classification system, its descriptive language begins to come increasingly from the world of musical performance. This association with music then raises other issues in some contexts about the permissibility of music, or what she calls the “samā’ polemic” (32-51).
association with music then raises other issues in some contexts about the permissibility of music, or what she calls the “samā’ polemic” (32-51).

This intertwining of emotion, recitation techniques and timbre has a long history in Islam—and even a long discursive history (that is, a history of people discussing the importance of this affective intertwining). Indeed, Navid Kermani’s account of the Qur’an as “an aesthetic experience” documents this discursive history as an important part of its narrative. This affective power of timbre is especially important in inducing belief in non-Muslims and non-Arabs. For instance, Kermani cites the 20th-century Egyptian scholar Muhammad Abu Zahra’s description of the Qur’an’s power as follows:

The Quran was of such musical (mūsīqā) and poetic quality that it made any listener shiver, even if they understood no Arabic at all. For the words, with their intonations, nasalizations, rhymes, verses and pauses were arranged in such a way that they exerted an attraction on non-Arabs as well, even though they did not understand the meaning of the words. It was the melody (nagam) that produced a wondrous image in them.” (in Kermani 2015:21)

For Kermani, statements like this are part of thinking about how the Qur’an’s recited sound can have such great impact it leads people to convert to Islam. But strikingly, Abu Zahra ascribes that power not just to the text generally, but especially to its timbre—to the arrangement of “intonations, nasalizations, rhymes, verses and pauses” within the text.

These examples from Indonesia, Uyghur China, Egypt (implicitly) and other places inhabited (somewhat vaguely) by non-Arabs, emphasize how the timbres of recitation become sites of differentiated listening—of contestation in and through sound. Michael Frishkopf’s discussions of timbre and reverberation in Saudi-influenced recitation shows how these sonic geographies become highly politicized as well. He suggests that Saudi recitation styles in recent decades have not only created a new set of aesthetic criteria and practices, that style has become “ideologically activated, powerfully promoting a set of discursive positions collectively
comprising a reformist-revivalist Islamic ideology prevalent in Egyptian society today” (2009:86). Technologies of body and audio matter here too: for him, the “cassette era” is the defining break between a traditional taxonomy of reciting (*mujawwad* vs. *murattal*) and a new tripartite taxonomy with Saudi-style reciting as well. Furthermore, the use of artificial studio reverb on recordings aims to conjure mimetically the reverberant sound of spaces like large, traditional mosques, not unlike the Ottoman mosques discussed above. The politics of timbre thus get caught up (fittingly perhaps) in a kind of feedback loop: mosques, themselves very much a sonic and visual technology, produced certain timbral aesthetics and criteria in reciting; these criteria then get built into cassettes and other audio recordings; and the circulation of these recordings then affects how reciters (and more likely, organizers) at, say, competitions in Istanbul mosques decide to amplify their voices electrically beyond the mosque’s reverberation itself. And each of these decisions or widespread practices has important political implications.

**Conclusion: Imam with a Lisp**

To conclude, I would simply share one last brief story that embraces the tension between the codification of alphabetics in tajwid and the space of individual, material difference that may not readily fit into such a sonic system. In discussing the role of the Qur’an’s Arabicness, Shady Hekmat Nasser tells of Ibn Surayj and one of his students. Both of them had a lisp. At some point, the student asked Ibn Surayj if he (the student) could properly lead prayers. Ibn Surayj affirmed, “Yes, your *imāmah* [i.e., performance of an imam’s duties] is valid. And so is mine” (2016:31). Nasser goes on to show that an imam reciting the Qur’an with a lisp proved problematic for many Islamic jurists by the 9th century—it actually did become a topic of significant debate. Many jurists opposed someone with a lisp leading prayers—as opposed to,
say, people with a stutter—because: “Lisping often changes the meaning of words, whereas stuttering seldom does” (40). In some cases, someone with a lisp may lead prayers but must do so silently (42) or it may depend on how severe the case is. These debates would continue for several centuries. I mention this only to show the complications that form on either side of the mouth: inside the mouth, one must utter “properly.” Languages have rules, and tajwid has its own specifications, as well. In theory, that system should be universalizable—thus it theoretically should be able to accommodate those with lisps, those who stutter, Shi’a and Sunnis alike, across genders and physical spaces, and so on. While the gap between the universalizing alphabetics of the Qur’an and actual practice in Indonesia or Xinjiang or Istanbul continues to raise questions, engineers and computer scientists around the globe are building new software to facilitate tajwid learning as part of an automated process (Aqel and Zaitoun 2015, Ibrahim, et al. 2013). In another few hundred years, instead of diagrams of teeth being repurposed into new tajwid manuals, perhaps these 21st century software projects—by that time, they will be ancient history—will lay the groundwork for a future pedagogy and practice of Qur’an alphabetics.
BIBLIOGRAPHY:


