

Safi al-Din al-Urmawi's Impact on Music Theory

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Within the context of music literature classes, we, as musical students, focus on the context of Western history. When the question was posed about the musical practices of other cultures, the topic of this paper was decided. With bountiful music traditions in foreign cultures, it is our duty as musicians in academia to familiarize ourselves and acknowledge these traditions. Safi al-Din al-Urmawi was a Medieval Middle Eastern music theorist born in early 13th-century Iran who helped shape Arab music theory today. His largest contributions included treatises that carried on the systematist school of thought, synthesizing past contributions, composing music, and preserving rich Arabic traditions in music. To understand his impact, we will dive into social contexts of the era, the history of his school of thought and predecessors, provide history of his life, and examine his treatises and their impact on middle eastern music theory and practices of the time and thereafter.

To understand al-Urmawi and his compatriots' school of thought, we must begin by looking at the social contexts of the time. Like Europe, the Medieval Middle East was structured in a similar courtly system. Nobles were, for the most part, the most literate in society and literacy was promoted through the Quran. Within the Middle East, the Abbasid Caliphate ruled modern day Saudi Arabia, Iraq, and surrounding lands between 750-1258. The Abbasid Caliphate was a cosmopolitan hub in the Middle East where Christians, Muslims, Zoroastrians, and Jewish people all resided. During this time, with the sponsorship of al-Ma'mun, the seventh Abbasid caliph, the Bayt al-Hikmah (or the House of Wisdom) was constructed in 830 in Baghdad. This library would be home to the Translation Movement in which translated texts from around the world into different languages. Because of this, Medieval philosophers, and theorists such as al-Farabi, Ibn Sina, and al-Urmawi were able to study ancient Greek texts like

Plato's Republic, Aristotle's Metaphysics, and Pythagoras's discoveries.¹ Pythagoras is regarded as the father of music theory, and his work, mainly involving the mathematical ratios between perfect intervals, highly influenced the Middle Eastern thoughts on music theory. The first impactful theorist to develop a more nationalistic direction based on Pythagoras's writings was al-Farabi.

While the debate still continues on whether or not he is the founder of his school of thought, Abu Nasr Muhammad al-Farabi's (870-950) writings were too plentiful and significant to ignore his position as the first member of the Systematist School of Music. Born in Baghdad, al-Farabi was an ud player and used his instrument to develop theory as this was a staple in Middle Eastern music performance. As a theorist, he studied Greek music theory and improved upon it making his own rhythmic modes, ornamental techniques, and combining Greek and Arabic traditions. While Pythagoras did offer more of a mathematical stance on music, he still subscribed to the idea of music's cosmic origin and effect on Ethos. While al-Farabi agreed with him on music regarding Ethos as taught by Aristotle, he believed that music could be found all around them within nature.² Al-Farabi stated that there should be three axioms in which we study theories; 1. Finding the statement of principles. 2. Explain the direction in which the theory goes. 3. To make and defend concrete rules.³ He wrote around eight treatises on music, three of which still survive: the *Kitab al-iqa a (Book of Rhythms)*, the *Kitab ihsa al-iqa at (Book for the Basic Comprehension of Rhythms)*, and, his most famous, the *Kitab al-musiqi al-kabir (The Grand*

¹ CrashCourse. "The Medieval Islamic World: Crash Course World History of Science #7." Published May 14, 2018. Video, 13:03. <https://www.youtube.com/watch?v=bkVsus8Ehxs>

² Koytak, Hakki Talha. The Pythagorean Shift in the Ottoman Musical Writings. *Turkish Academic Research Review*. (2019): 1-26. <https://dergipark.org.tr/en/download/article-file/914031>

³ Farmer, Henry G. *Historical facts for the Arabian musical influence*. London, GB. William Reeves Bookseller Limited, 1930.

Book of Music). The Grand Book of Music was a series of books that developed different ideas within the world of music. The first book outlines the physics of sound and the functions of tetrachords and scales. The second book discusses instruments, their classification described, and the foundations for tuning and the fretting of string instruments. Al-Farabi described the fingerboard of the ud, and in the second section outlines the performance practice of the tunbur (long necked, fretted lute) and rabab (unfretted, bowed chordophone).⁴ In the third section of the book, al-Farabi defined rhythm as “motions through notes within durations well defined as to their length and proportions” and also outlined attacks of notes into three types.⁵ Al-Farabi also describes the mathematical systems for defining melodies and scales in great detail. This treatise and school of thought founded by al-Farabi pioneered the Systematist School of Music. His scholarly studies continued with the second member of this school, Ibn Sina.

Ibn Sina (980-1037) was a Persian philosopher, administrator, and physician. He was well educated and had mastered many areas of study by the time he was 18. He was mostly known for his philosophical and medical theories and background, but his treatise the *Kitab al-shifa* (The Book of Healing) follows and further develops al-Farabi’s writings. His works are more popular than Aristotle’s for the time due to his monotheistic religion. Being a Muslim granted him the opportunity for Christian appeal and allowed them to read his works and be safe knowing he wasn’t pagan. Although Sina presented many similar ideas to Aristotle, he also went on to dismiss the idea of music’s effect on ethos laid out by Plato and Aristotle further distancing the music theory of the Middle East away from the Greeks. Looking at Sina’s connection to

⁴ Wright, Owen. “Farabi, al-.” Grove Music Online. January 20, 2001.

<https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000000548#omo-9781561592630-e-0000000548>

⁵ Danielson, Virginia, Scott Marcus, and Dight Reynolds, eds. *The Middle East*. Vol. 6, *The Garland Encyclopedia of World Music*. New York, NY and London, GB-ENG: Routledge, 2002.

Aristotle, we can see he was a supporter of the treatise *Metaphysics*. Within this treatise, Aristotle discussed the three axioms that al-Farabi followed.⁶ Sina takes previous writings and helps organize them in a more logistical manner and combines ideas from al-Farabi and Aristotle reconciling Muslim religion and *Metaphysics* of the Greek Antiquity.⁷ While still treating music as part of the quadrivium, a mathematical science, Sina discussed the ratios of intervals and ranks them in order of consonance. While rejecting ancient Greek thoughts on music and ethos, he acknowledged the how certain intervals are more pleasant than others.⁸ He also went on to discuss possible structures of al-Farabi's rhythms and the different ways instruments, including reeded, non-reeded, and stringed instruments are constructed. His classification of instruments varies from al-Farabi's and is more refined in nature.⁹ While many of his works are similar in content with al-Farabi, Ibn Sina favors a rhythmic system that is more theoretical in nature and based on Greek and Arabic poetic metrics.

Safi al-Din al-Urmawi (1216-1294) was the last founding member of the Systematist School of Music which included his predecessors al-Farabi and Ibn Sina. Al-Urmawi was born in Azeri which would have been a northern part of the Abbasid Caliphate. He was credited as being a calligrapher, performer, composer, and theorist of his time and was a member of various courts within the Abbasid Caliphate. As was practice with the Systematist School, al-Urmawi continued to take a logical approach to music theory continuing to branch off from the Greeks. He wrote

⁶ Cohen, S. Marc and C. D. C. Reeve. "Aristotle's *Metaphysics*." *Stanford Encyclopedia of Philosophy*. Winter 2021. <https://plato.stanford.edu/entries/aristotle-metaphysics/>

⁷ Lyons, Jonathan. *The House of Wisdom: How the Arabs Transformed Western Civilization*. New York, NY: Bloomsbury Press, 2009.

⁸ Wright, Owen. "Ibn Sina [Abu Ali al-Husayn; Avicenna]." *Grove Music Online*. January 20, 2001. <https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000013683#omo-9781561592630-e-0000013683>

⁹ Wright, Owen, Christian Poche, and Amnon Shiloh. "Arab music." *Grove Music Online*. January 20, 2001. <https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000001139#0000001139.1.3.2>

two treatises on music, both written in Persian: the *Kitab al-adwar* (*Book of Cycles*) and the *Risala ala-sharafiyya* (*The Sharafian Treatise*). Both of these texts synthesized earlier works and were the dominating thoughts on music theory of the era. He made his most contributions while under the patronage in the court of the famous Juwaini family in the central area of Persia. The most significant contribution that came out of these works were a new scale system derived from al-Farabi's works and Pythagoras's scales. By defining a new set of seventeen intervals between an octave based off limmas and commas (different types of intervals) and twenty different modes, al-Urmawi provides the world with the earliest Islamic modal system we can study at length.¹⁰ This scale system came to be known as the Khurasani scale, and the use of the quarter-tone system can still be in practice in Middle Eastern music today. In addition to the scale system that dominated the Middle East for 300 years, al-Urmawi was also credited with the invention of two instruments: the mughni, a lute-like instrument, and the nuzha, a rectangular psaltery. His contributions to music theory even earned him the title of "the Zarlino of the Orient."¹¹ After the execution of the Juwaini family due to false accusations of a member poisoning the father of a political leader, al-Urmawi was left without patronage and died while being imprisoned for being in debt. While his story has a tragic ending, al-Urmawi's students contributed much to different parts of the Middle Eastern music culture.

Qutb al-Din al-Shirazi (1236-1311), a student of al-Urmawi, physician, and scientist, restated many of his teacher's work, but in a more objective sense, in his encyclopedia, the *Durrat al-taj*. His was developed by future Systematist writers such as 'Abd al-Qadir, Fathallah

¹⁰ Wright, Owen. "Safī al-Dīn [al-Urmawī]." Grove Music Online. January 20, 2001.
<https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000024284#omo-9781561592630-e-0000024284>

¹¹ Wellesz, Egon, eds. *Ancient and Oriental Music*. Vol. 1, *The New Oxford History of Music*. New York, NY and Toronto, CA: London Oxford University Press, 1957.

al-Shirwani, and Muhammed al-Ladhiqi, with many of their works dedicated to Ottoman rulers of the time. While some western Arab theorists reject the Systematist approach, they still used the rhythmic patterns described by al-Urmawi.

One of al-Urmawi's most famous student who would go on to find his own continuation of the Systematist School of thought. The Systematist School of music also resonated with other theorists that resided in different regions of the Abbasid Caliphate. In Azerbaijan, north central part of the Abbasid Caliphate of the time, resided 'Abd al-Qadir ibn Ghaybi al-Maraghi (1360-1435). Al-Maraghi was a master theorist of the Systematist School of music and canon as well as a well-known composer and performer serving under the Jalayirid family. Following the conquest of Baghdad in 1401 by Timur, al-Maraghi was taken around to different courts of the land where he would go on to assimilate their musicians into his school of thought.¹² His most famous treatise was the *Jami' al-alhan* (The Compendium of Melodies). While restating much of al-Urmawi's works, al-Maraghi went on to make new *nawmba* (vocal/instrumental musical suite) for each day of the month of Ramadan. He also categorized a new set of modes based on al-Urmawi's writings.¹³ This cemented al-Maraghi as a founding member in Central Asian music theory.

With the introduction of Christianity in Europe, including its adoption in the Roman Empire in 380, the focus on the sciences that the ancient Greeks had begun to fade away. Interest in theoretical studies in music has a resurgence in the Renaissance Era (1450-1600). While we can credit some of this interest to the development of the printing press, which allowed for more

¹² Danielson, Virginia, Scott Marcus, and Dight Reynolds, eds. *The Middle East*. Vol. 6, *The Garland Encyclopedia of World Music*. New York, NY and London, GB-ENG: Routledge, 2002.

¹³ Wright, Owen. "'Abd al-Qadir [ibn Ghaybi al-Maraghi]" Grove Music Online. January 20, 2001. <https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000000025?rskey=TRvVLL&result=1>

people have access to literature or the humanism movement, it is absolutely undeniable that the Arabs and Byzantines who fled from the Ottomans to Italy. The Byzantines had not only translated copies of ancient treatises, but fully fleshed out commentaries on the writings to which Europe now had access to. This is what sparked a new interest in reviving the ancient practices of grammar, rhetoric, poetry, history, and music.¹⁴ It can all be credited to the members of the Systematist School of Music, their pupils, and the House of Wisdom in Baghdad that started the Translation Movement.

The first rediscovery of al-Urmawi's works came from Baron Francois Rodolphe d'Erlanger (1872-1932), a French ethnomusicologist who resided in Tunisia. While living in Tunisia, d'Erlanger was exposed to Middle Eastern music and began study with the famous musician Shaykh Ahmad al-Wafi in 1914. Because many Middle Eastern courts of the time employed European musicians, d'Erlanger believed that they were neglecting the historical, rich Arab musical practice laid out by the Systematist School. He argued that the way the European instruments were tuned was incompatible with playing traditional Middle Eastern music. His life goal then began to be to encourage Europeans to respect the native traditions of musicians around the world rather than teaching them the Western practice. He began hiring Arab musicians into his court who performed around the Middle East including a ma'luf ensemble (Sufi brotherhoods that included unison singing with hand clapping or percussion accompaniment) that performed at the Cairo Congress where they were recorded by Bela Bartok (1881-1945) himself. While working with the Cairo Congress, the Egyptian government dispatched a Syrian musician, Shaykh 'Ali al-Darwish, to be his assistant. It was during this time al-Darwish offered classes to locals where he introduced them to modern Arab music theory and

¹⁴ Farmer, Henry G. *Historical facts for the Arabian musical influence*. London, GB. William Reeves Bookseller Limited, 1930.

Western notation. Less than a decade later, al-Darwish was asked to come back and established the curriculum of the Rashidiyya Institute to preserve traditional Tunisian music. Al-Darwish would lead the aforementioned ma'luf ensemble in rehearsals and performance. In addition to this, d'Erlanger would go on to sponsor research projects that would translate Arab treatises into French including works by al-Farabi, Ibn Sina, al-Urmwai, and al-Ladhiqi in his most famous, six volume work: *La musique arabe*. These translated treatises contained annotations with commentary on the works. Because of his treatment of these treatises and Arabic music overall, d'Erlanger was able to help change the attitude of Tunisian society whereas in the past, musicians would be regarded as having a low social status, they would now be treated with more respect and be more celebrated amongst their communities. By reintroducing medieval music practices and incorporating them into modern Arab music theory, d'Erlanger achieved his goal of bringing back these old traditions and preserving al-Urmawi, his school of thought, and his works succeeded.¹⁵

As you can see, Safi al-Din al-Urmawi had a large part in influencing Middle Eastern music theory, performance practice, and preserving Arab traditions. By combining his works by his predecessors, al-Farabi and Ibn Sina, with works by ancient Greeks, like Aristotle and Plato, and his own thoughts to synthesize his treatises, al-Urmawi was able to create a long-lasting legacy that influenced many music theorists that came after him. His students went on to synthesize and develop his work creating long lasting impacts in other parts of the world such as al-Maraghi in the north central part of the Middle East. His writings, along with both his predecessors and successors, were extremely influential in the European Renaissance by reintroducing music theory as a science. The revival of al-Urmawi's works by d'Erlanger during

¹⁵ Danielson, Virginia, Scott Marcus, and Dight Reynolds, eds. *The Middle East*. Vol. 6, *The Garland Encyclopedia of World Music*. New York, NY and London, GB-ENG: Routledge, 2002.

the late Romantic era helped preserve the rich traditions of the past in Middle Eastern courts and changed the way musicians were treated by the government of Tunisia. While scholars argue the who founded the Systematist School or who contributed the most to the theories pioneered by the subscribers of their ideas, it is undeniable that Safi al-Din al-Urmawi's impact on the genre will forever be felt in Arab music and the world of ethnomusicology.

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- Farmer, Henry G. *Historical facts for the Arabian musical influence*. London, GB. William Reeves Bookseller Limited, 1930.
- Koytak, Hakki Talha. The Pythagorean Shift in the Ottoman Musical Writings. *Turkish Academic Research Review*. (2019): 1-26. <https://dergipark.org.tr/en/download/article-file/914031>
- Lyons, Jonathan. *The House of Wisdom: How the Arabs Transformed Western Civilization*. New York, NY: Bloomsbury Press, 2009.
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