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Musical Language and Body-Soul Relations in Mediaeval Islamic Philosophical Discourse:

A Review of 9th and 10th century sources

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by

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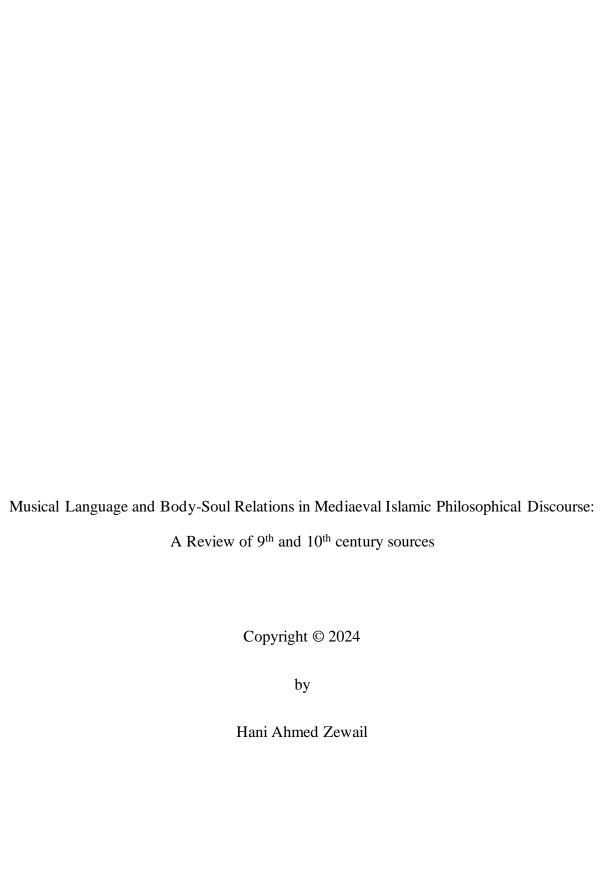
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ABSTRACT

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Islamic Peripatetic traditions offer an understanding of the body-soul relation as one that mediates between the physical bodies of the macrocosmos as well as the subjectivity of the human microcosmos. This human subjectivity is guaranteed through self-knowledge and particularly the knowledge of the human soul (nafs) that serves as the gateway to profound existential truths. Furthermore, the view echoed by Islamic Peripatetics enables a resonance in the dualistic split of body-soul. A resonance achieved through the *praxis* of inward listening to humanly organized music as well as acousmatic listening to celestial sound. Whereas previous scholarship has generally glossed over 9th and 10th century Islamic Peripatetics use of the ontologically salient question that affirms the existence of the body and the soul as *logos* [relation]; I demonstrate that these philosophers negotiated and mediated these discourses through the metaphor of musical language. I will begin my presentation by contextualizing the dialectical arguments produced in Ancient Greece and Mediaeval Baghdad surrounding the question of the harmonicity or tuning [harmonia] of the

body-soul relationship. After laying the foundational layer, I will address the impact of these philosophical theories on al-Kindī's as well as the Ikhwān al-Safā'(s) conceptualizations of the interdisciplinary relationships between philosophical ethics, cognition, and music theory. This thesis offers new approaches towards understanding the body-soul problem through the unique musicological context of the 9th and 10th Islamic life worlds. My work will present a consistent Peripatetic thesis which denies [harmonia] or epiphenomenalist accounts of cognition. In al- Kindī's case, I attempt to demonstrate his authorial consistency in presenting a non-cartesian dualistic understanding of the soul-body relationship, and how his rationalist ethics discovers a self-knowledge manifested in an affective musical ēthos theory.

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Introduction:

In the Islamic intellectual tradition, the conceptualization of the macro-cosmic/micro-cosmic relationship (between man and the cosmos) is contingent upon self-knowledge. The *epist ēmē* or knowledge of the basic underlying substance of the human being, the soul (*nafs*), provides the gateway towards the metaphysical 'ilm (ultimate truth of reality).

Therefore, the verification of the existence of the *nafs* and its relation to the human body and the larger cosmos became a preoccupation of Islamic philosophers. Such investigations or methodological approaches were first and foremost inquiries into the living world that became the site or nexus by which the soul makes its appearance. Author William Chittick lays out the methodology by which Islamic philosophers experientially investigated their surroundings, a phenomenal knowledge of the self as achievable through understanding 'the visible realm [as] a conglomeration of bodily appearances, yet we constantly differentiate among them in terms of their modalities.... 'soul' is the generic name for what shows itself when we recognize life and awareness. When we recognize these qualities in things, we simultaneously recognize them in ourselves. It is the soul that knows soul." ² (Chittick 2007).

How is it that we find the knowledge of the self by looking out unto the world? The epistemology of the Islamic peripatetic perspective runs *contra* to the dominant hegemonic

¹ This is not to say that within Ancient Greek circles, the soul wasn't a speculative issue for natural sciences. Aristotle similarly contended that the science of the soul was a portion of the natural world. In his book Parts of Animals, he wrote "The search of the whole soul or a part among its parts is specific to the natural world". Additionally, in his *De Anima* text, he writes "The search of the soul is specific to the natural world" (Al-Ahwana, n.d.).

² Without attempting to bias the reader, I make a slight intervention here to point out that cogent similarities to the Aristotelian Metaphysical claims for sight as the superior sense epistemology and Chittick's re-telling here of the Islamic thesis. All this may serve as evidence to claim for Chittick's *psychical* rendering of the soul as coterminous with that of the Greek conceptualization—refer to the introduction if unclear.

discourse of Renaissance épistémè³ a discourse that did not require Man to look outside of his own mind to find the very certain answers to his existence. Rene Descartes posited that the most famous of dictums in philosophical history *cogito*, *ergo sum* (I think therefore I am), and his process of radical skepticism provided him a method for achieving epistemic certainty. Descartes' statement and method disembodied the mind from the body, thereby creating a strong sense of the dualism between the two distinct substance entities. For the mind was no longer dependent on sense regimes or knowledge gained through the senses to assure its own existence; it instead could engage in autonomous self-reflection divorced from the 'machine' of the body.

Descartes' philosophy of mind had far-reaching implications and has been underscored by sound studies scholars like Veit Erlmann and Andrew Hicks as a fruitful area for accessing the idea of (1) resonance and (2) *minor mundus* or the human microcosm (Hicks 2017; Novak and Matt 2015). Resonance construed more broadly was for European philosophy a contested and profound site over issues relating to the social order and subjecthood. Such an emphasis on modern subjecthood embedded resonance into the discourse of modernity, taking European music theory away from quadrivial science and the divine cosmos into the realm of aesthetic judgment and scientific inquiry⁴ (Novak and Matt

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³ I intend through my use of the French term *épistémè* as opposed to the Greek term epistēmē to denote the change in the intentions and goals between the former and latter rendering, where the former depicts knowledge through a kind of radical skepticism the former speaks to, knowledge gained through sense apprehension intertwined with a rationalist approach.
⁴ I underscore that this form of resonance enters a modern European discourse through this historical moment. We have evidence of such a mode of scientific inquiry beginning in the 10th century Islamic world, but reaching its apex embodied in the figure of Ibn Sina (*Avicenna*) in the 11th century. In his treatment of music in the *Shifā*, Ibn Sina's innovations to the science of music are the result of a functionalist biologist approach to the production of sound as well as the aesthetics of both sound and music as sources of meaning. (Shehadi 1995).

2015). Yet even Descartes was unable to completely abandon the idea that there was an allencompassing unity to truth pursued vigorously by natural philosophers⁵. One would
presume Descartes' philosophical reflections in the *Mediations of First Philosophy* "cut the
umbilical cord" so to speak and destroyed the ruling unity (*unitas regitiva*) of man. Such a
ruling unity is necessary for the human microcosm to exist, man's own faculties of
intellection and sensation --- man must be integrated into all forms of surrounding life. To
express it differently, for the micro-macrocosmic relation to function effectively, one must
establish a profound connection to be in relation [*logos*] with the world, encompassing a
multitude of both static and dynamic relationships that collectively shape the definition of
man.

In contrast to the Enlightenment's focus on subjecthood through Cartesian substance dualism, Islamic Peripatetics viewed the subject-object relationship as inherently relational. The understanding of one's soul was intricately linked to his/her continued engagement with the world. The subject, the human soul, is intertwined with the object, the cosmos⁶. Nevertheless, a powerful resonance exists between the two, enabling unity to emerge as soul and cosmos enter a state of ontological becoming through $logos^7$, inhering as a single

⁵ Reminiscent of Descartes's project to replace Aristotelian or "Scholastic" methods and doctrines of natural philosophy, as personified in figures like al-Fārābī or St. Thomas Aquinas. Later natural philosophers like Isaac Newton were seeking to replace Descartes (Janiak 2021). See for example, Jamie James's book *Music of the Spheres* which describes Newton's treatise on logic, *Principia Mathematica*, as directed towards the revelation of God's eternal truths of the cosmos, Newton's self-ascription as a Pythagorean, and discovery of the inverse-square law through the music of the spheres (James 1995).

⁶ The most substantial studies connecting Islamic philosophy to phenomenology are the edited volumes by A-T. Tymienieka both *Timing and Temporality in Islamic philosophy* as well as the hyper relevant volume *Islamic Philosophy and Occidental Phenomenology on the Perennial Issue of Microcosm and Macrocosm* (Tymieniecka 2006; 2007).

⁷ The question of [logos] is mediated on multiple levels and its definition is multivalent. As a Greek term the origin returns to the verb [legein]: as in to pick up or lay down or collect or

Organism. This thesis does not attempt to delve into the complex philosophical theories of Cartesian substance dualism or the contemporary discourse in cognitive science regarding the distinctions between consciousness and self-consciousness.⁸ The goal of this thesis is to unpack the ways in which Islamic Peripatetics⁹ in the 9th and 10th centuries thought about the body-soul problem with reference to music and sound. The answer to this problem, I propose, can be understood across two domains or sub-themes.

To begin, I aim to reproduce in this thesis the predominant theses surrounding the philosophical body-soul problem or relationship, whether there exists an affinity between body and soul that can be made intelligible through musical language in both the literal and figurative senses. This section will begin by contextualizing the dialectical¹⁰ arguments produced in Ancient Greece surrounding the question of the harmonicity of the soul-body

recount (as in a tale); therein, lies its multiplicity of meaning as a vehicle of human rationality through speech and/or the bringing together to magnitudes into relation (Brann 2011). At the level of man, it can be construed as the composite relation between the body and the soul. Additionally, as above, it can be considered as a composite between man and higher principles placed in relation to one another. In this chapter, I will address in some detail the view of different philosophers in relation to the nature of the relationship between body-soul as [logos].

⁸ See, for example, Roger Scruton's *The Soul of the World* which dissects the role of these fascinating problems with sophistication and rigor. Additional relevant themes in the work for the chapter at hand is the role between the sacred and music (Scruton 2014).

⁹ The term Islamic Peripatetics or the 'Walkers', named after Aristotle, himself, is used to describe those key philosophers of the 'classical' period of Islamic period that begins in the third/ninth century with al-Kindī and concludes with Ibn Rushd. These philosophers are characterized by their drawings from Aristotle, the Neoplatonists, and to a small degree Plato (Groff 2007).

¹⁰ In Aristotle's scientific-psychological treatise, "De Anima," the forthcoming discourse will adopt a dialectical approach to its subject matter. This approach involves presenting dialectical arguments both in favor of and against various theses. It's important to note that this work doesn't aim to instruct on the construction of dialectical arguments; such guidance can be found in Aristotle's *Topics* and *Sophistical Refutations*" – works that serve as manuals for crafting dialectical arguments. Within "De Anima," Aristotle employs dialectical skills and methods to substantiate a point concerning the ontological status between soul and body (Menn 1995).

relationship. Then, the research will explore the subject by drawing on a wealth of Islamic peripatetic sources including translations and commentaries of Aristotelian conceptualizations by authors like Themistius and Ishaq Ibn Hunayn, Neo-Platonic sources like the Theology of Aristotle, with special focus given to Ishaq al-Kindī and the Ikhwān al-Safā'.

Secondly, I will attempt to gain a deeper understanding of al- Kindī's conceptualizations of the interdisciplinary relationships between soul & body, philosophical ethics, cognition, and the impact on his music theory. The exploration will examine the relevant literature and fusion of Platonic, Pythagorean, and Stoic ethics fits into the body-soul problem. As an accomplished music theorist and musicologist, al-Kindī's unique framework offers valuable insights into the intersection of philosophy and music. Finally, I will address the theories of the Ikhwān al-Safā' as an extension of Kindīan soul and music theories, while dissecting unique aspects of their cognitive philosophy as it relates to music & sound.

The conclusion of the thesis will argue for a consistent Islamic Peripatetic thesis that denies the body-soul [harmonia] or epiphenomenalist¹¹ accounts of cognition on the grounds of Aristotelian and Neo-Platonic multiple souls to body thesis. Additionally, the conclusion will argue for authorial consistency in the ontological dualistic understanding of the soul-

¹¹ Epiphenomenalism is a more contemporary term to explain cognition, especially as it relates to mental states. In short, our thoughts though *prima facie* seem to have effects in the world and affects within us (i.e. emotions), this is only an appearance of the true <u>physical</u> causal mechanism that determines mental life. To provide a musical example, mental life is contiguous to melody the notes of the melody follow one another temporally and melodically but are not causal. Notes are effects of physical change that occur within a specific instrument, but between notes there is no cause-effect mechanism. (Caston 1997)

body relationship. The resulting interpretation simultaneously offsets a Cartesian substance dualism, while reinforcing the inherent dualism between soul and body, with ontological priority given to the soul. Additionally, I will argue, through a presentation of rationalist cognition in al-Kindī that emphasizes a psychical representation of the soul insofar that the peripatetic method mediates between music & philosophy of ethics. The arguments will result in the understanding of music as a virtue ethic through both its affects and its representation in the soul; as well as a *pneumatic* spiritual ethic that is elaborated through hearing best demonstrated through the Ikhwān al-Safā'.

Part 1: Ancients Greek and 9th- 10th century Islam: Literature Review

Body-Soul Relations: Plato & Aristotle

Ancient Greece gives us two schools of thought that considered the body-soul relationship as a harmony [harmonia]¹². The first of these groups can be thought of as Platonic, with references to the concept emerging in Plato's *Phaedo* (85 ff - 88d), and the second group can be considered as the school of Aristotle, Dicaerchus, and Aristoxenos (Gottschalk 1971). The discourse within the Platonic account is between Socrates and his interlocutor Simmias. Within the course of the discussion, Simmias proposes to describe the

¹² The contested nature of this word oscillates between several definitions among these are harmony, tuning, melody, and attunement. Those theorists, who are our concern in this section, considered music as an avenue to higher metaphysical truth and often conceived of music as the form of replication of mimetic universals. Other more direct references found in Aristoxenus, Plutarch, Ptolemy, and Aristedes Quintallnaus generally approximated the term to the usage of terms like *enharmonios*, tonos, eidos, tropos (Mathiesen 1984).

nature of the relationship between the soul and the body as one of harmony [harmonia]. Simmias' epiphenomenalist accounting of mental states is analogized through a dualism of the soul-body; against the backdrop of Socrates' argument of the soul's immortality and substance dualism¹³. Simmias attempts to prove the opposite, that the soul is materially bound to the body, which produces its existence.

Simmias begins the argument by drawing our attention to the apparent paradox between the nature of what the lyre can produce – a mode or form of tuning, and the material nature of the lyre itself – its wooden frame. Concerning the former he discusses the process of tuning the lyre as one 'in which its strings and attunement are invisible, incorporeal, very beautiful and divine' (Henderson, 85ff.). Simmias contextualizes the tuning of the lyre, akin to an act of verisimilitude or affinity, to those incorporeal things that are aesthetically beautiful and find resonant divinity in the form of beauty. What is of crucial importance is to comprehend the metaphor between the invisible, incorporeal, beautiful, and divine nature of tuning and the comparable qualities or natures found within the soul. These are contrasted with the lyre's materiality "but the lyre itself and the strings are material and corporeal objects, composite as well as earthly and related to what is mortal" (ibid, 86a). Simmias establishes the nature of the lyre and strings as those made up of earthly elements combined to create a composite and corporeal thing, exhibiting the same nature as the human body. After he has established the categories of relation for his metaphor, Simmias argues that if one were to destroy the material components of the lyre, as a lyre or any other material thing

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¹³ Socrates offers a relatively straightforward argument for a substance dualism between the body and the soul. This can be found in Plato *Phaedo* (72e-77c), where he argues that the soul existed prior to the body, and (78c-81e) where he argues that the similarity between the soul and the Forms- which are divine, invisible, and incorporeal.

it is subject to generation and corruption, wouldn't the attunement, or in this context, the tuning or mode also necessarily fade away? Recast, tuning should subsist even without the presence of a musical instrument if it is somehow divine, yet it cannot be actualized or brought into existence; the latter then is what is essential, given the former's ontological dependence.

Simmias argues that the soul exists as a harmonious blend of various constituent elements that make up the human body, a representation consistent with Pythagoreanism (Pelosi 2010) and specifically the Pythagorean physiological corpus (Westenholz, Maurey, and Seroussi 2014). This view suggests that the soul is not a distinct entity from the body but rather an integral part of it. Through the use of Pythagorean contraries, of hot and cold and wet and dry, Simmias argues for the necessary balancing and/or tempering of the body and the soul as regulated by physical and non-physical relationships. Both the material nature of the body and the immaterial nature of the soul are simply products of the principles of tension and relaxation between the qualities of hot, cold, wet, and dry. Consider the Pythagorean contraries as the strings of the lyre, by tuning them in a specific formation (corresponding mathematical ratios) a certain tuning or mode comes to be (Dorian, Lydian, etc.). Yet, the Dorian mode does not exist because of the physical tuning of the lyre but supervenes upon it when the corresponding tuning is realized. The phenomenon can be demonstrated empirically as both a lyre and a reed can produce the Dorian mode. The harmonicist counterfactual is expressed in this supervenience thesis, that the physical or material nature of the instrument is not the cause of a particular tuning, but a tuning is always realized when the strings of an instrument express the physical relationships in those very strings, as 'a matter of nature' (Caston 1997).

Socrates, the one engaged in discourse with Simmias, rejects Simmias' conclusions that the soul can be a harmonia based on a faulty argument of (1) ontological dependence between the body and the soul and (2) that the representation of the soul, that Simmias gives, does not exist as a ruling principle; therefore, the soul cannot exercise any control over the body. In short, Socrates demonstrates his first argument on the grounds of Simmias' faulty logic: just because tuning (soul) [A] supervenes on the physical instrument (body) [B], this does not make tuning (soul) [A] ontologically dependent on (body) [B] (McLaughlin and Bennett 2005; Caston 1997). Put differently, the soul can be in two opposite states of being and still exist in the same body, i.e. at one point a person can be happy in their soul and at another point be unhappy and still exist within the same body. Logically, though, tuning is necessarily influenced by physical changes upon the instrument and cannot solely rely upon the given tuning based on the tension of the strings. Therefore, the properties (happiness/sadness) that exist in the soul have nothing to do with, or are not ontologically dependent on, the body. Hence the relationship cannot be a [harmonia], in either sense. The harmony cannot tense a string, a physical state that would be able to determine the pitch of the note when the string is plucked; nor in the sense of the body's prior existence to the soul (Gottschalk 1971). The second point given, of the soul's anteriority, is established by Socrates as true in earlier sections of the *Phaedo* (see footnote 10); therefore, his argument stems from an already presented conclusion of the metaphysical priority of the soul in relation to the body, and how the [harmonia] thesis fails to account for it.

From the outset of his dialectical refutation concerning the *[harmonia]* account of the soul, Aristotle effectively establishes the persuasive quality of the argument. Aristotle argues that due to its plausibility, the traditional theory of harmony *[harmonia]* found support

among Pythagoreans such as Simmias as well as other Presocratic thinks such as Empedocles and Philolaus. (Polansky 2007). The reason for this apparent soundness is predicated upon the similar philosophies of harmonists and Aristotelian *functionalism*. Functionalism insofar as it describes mental states¹⁴ are defined in terms of their causal role and identified by a set of conditions that are brought about by certain musical effects, for example striking the strings (Crane and Patterson 2000). In other words, it is the potentiality or the capacity to produce a specific effect that in some way shapes our definition of that effect. For example, our understanding of happiness is in some way or shape defined by our perspective on 'feeling' or 'believing' that we are in fact happy. The likelihood of such an experience was enough for Aristotle to consider the theory's validity.

The fundamental question that Aristotle was seeking to answer is whether the soul is a harmony/ proportion. Aristotle's contention is relatively simple, harmony as we understand it must either be a fixed relation or a composition of blended ingredients, and a soul cannot be either. In other words, [harmonia] can either refer to the compounded body itself or the harmonic ratio [logos] of its components. These 'sound' interpretations of the nature of the soul are ultimately dismissed by Aristotle because the harmony or the resulting mix cannot be the actor that moves the body. [Harmonia] should more appropriately be assigned the placement of the virtue of health or some other form of bodily excellence, which are considered accidents, as opposed to essential forms for the body (Polansky 2007).

¹⁴ Functionalism as a system of thought in the philosophy of mind that argues that a mental state of a particular type is composed not on the internal constitution but rather based on function; therefore, any emotion such as pain only *functions* to produce the belief that something is wrong with the body and the desire to be out of that state the body will cause wincing and moaning (Levin 2023).

How do the Greek theories of harmony [harmonia] resonate within the early Islamic peripatetic tradition? How did Islamic philosophers integrate discourses and tenants of Greek Platonism, a tradition with a profound impact on Arab-Islamic philosophy, particularly regarding the interplay between body and soul? Both of these traditions share an approach to spiritual and bodily well-being that was both psychotherapeutic and psychosomatic in nature. (Gelder and Hammond 2008). This of course does not offset the main question that Aristotle echoed in Politics, whether the nature of the soul 'is a harmony or has a harmony. Henderson, n.d.-b). Finding answers to Aristotle's question, in the 9th -10th century Peripatetic Islamic tradition, is dependent on acknowledging the wide-scale adoption and dissemination of Aristotelian and Neo-Platonic thought. As will be shown below, the harmony [harmonia] thesis receives refutation from several treatises that find their way into the Islamic tradition.

My methodology will be to conduct close textual readings as well as provide English translations for the relevant passages on the Harmony Thesis and related issues. My

¹⁵ Both Plato and Aristotle were recognized among Islamic peripatetic philosophers as founders of philosophy, yet while all of Aristotle's corpus (minus the *Politics*) have survived in the modern day, there does not exist a whole or substantial portion of a Platonic text, Plato's legacy is mired in obscurity and generally by fragmentary attribution (Walker 1994). ¹⁶ This is cited in the section of Politics in which Aristotle discusses the role of a musical education; he posits that the youth are better adapted to music and vice versa. The reason for such compatibility is the affinity to tunes and rhythms which are inextricably linked to the question of the nature of the soul (J. Henderson, n.d.-b)

¹⁷ These commentators or translations of the Greek theories and Syriac translations all circulated in the 9th and 10th centuries.

treatment will begin with the commentary of *De Anima*¹⁸ (*Sharḥ Kitāb al-nafs*) penned by the philosopher Thāmisṭiyūs (Themistius), which was translated in the ninth century by Isḥāq b. Ḥunayn ¹⁹²⁰(*ibid*). In addition, I will provide a translation and analysis of Aristotle's *De Anima* also known as *Kitāb al-nafs* which received its earliest translation from Greek to Syriac by Ḥunayn ibn Isḥāq (d.873) and from Syriac to Arabic by his son Isḥāq b. Ḥunain²¹ (d. 910) (Farmer 1965). Finally, I will be reviewing sections of the Neo-Platonic *Theology of Aristotle* text.

Ad Themistium Arabum

The Pre-[harmonia] Argument and the Body-Soul Relation

Translated by Isḥāq ibn Hunayn, Themistius' Commentary on Aristotle's *De Anima*, referred to by western sources as *Ad Themistium Arabum*, helps to understand the plurality of works that entered Islamic philosophical discourse and help to contextualize the complexity of Aristotelian arguments by providing commentary. For this reason, in addition to the text's anterior arguments concerning the body-soul utilizing musical language, I have chosen to begin my inquiry with this text. Before resuming with [harmonia] based arguments, I would

¹⁸ De Anima is the commonly referred to Latin Name of the Greek text *On the Soul* in the Greek: Περὶ Ψυχῆς, *Peri Psychēs*.

¹⁹ The Kindīan translation circles also created a paraphrase of Aristotle's work on psychology, *De Anima*. However, this version deviates significantly from Aristotle's original argumentation and instead draws heavily from the Neoplatonic Theology of Aristotle. Therefore, I will address the commentary of *De Anima* by Kindīan scholars as a portion of the discourse on the Theology of Aristotle and their collective critiques of Ancient Greek ideas. (Adamson, 2002)

²⁰ Unfortunately, it cannot be further addressed in this thesis, but Farmer continues that this commentary of *De Anima* provides valuable information based on sound (*sawt*) that was criticized in a subsequent commentary by al-Fārābī (Farmer 1965).

²¹ For controversies surrounding the attribution to *Isḥāq ibn Ḥunayn* see (Ḥasan 1956), and for a more general overview of Aristotle's *De Anima* textual translation of Islamic tradition see (Ivry 2001).

like to briefly introduce this text's treatment of the transmigration thesis²². The text of course is in line with the conclusions espoused by the Aristotelian tradition by refuting the idea of the Pythagorean transmigration thesis. Yet, Themistius' commentary produces a novel refutation that further promotes the correspondence between the correct body to the correct soul utilizing music.

The Aristotelian refutation to the Pythagorean doctrine of transmigration thesis (metempsychosis) argues against the Pythagoreans' postulation of the possibility of existence ('clothing') of any possible soul in any possible body (Cornelli 2016). For example, a man can be a tree or a flea or can dwell in an elephant's body, etc. Music is similarly evoked to demonstrate the absurdity of the claims. The soul is analogized to the art of performance, and the flute (مزمان) is analogized to the medium or the body that is necessitated for the performance of this art. Aristotle's metaphor will serve as the basis for rebutting the transmigration thesis nullified due to a lack of compatibility between the art of music and, Aristotle's example, the art of weaving. Each art and/or craft necessitates the proper instruments and in the case of music, the performance is done by the performers of flutes (flautists), not weavers, etc. cf. Aristotle De Anima 407b. The argument of similitude is as follows, art and soul, flute and body, body-soul relations are manifest as the flute is the matter that accepts the art from the performers (Cornelli 2016).

²² The transmigration thesis also known as metempsychosis (*metempsychōsis*) is one of Pythagoras' most famous doctrines that was best summarized by Porphyry as follows: "Some of his [Pythagoras'] statements gained almost general notoriety 1) that the soul is immortal, **2) that it transmigrates into other species of living beings"** in brief it is the idea that the soul can be blown back into a different body after death also known as reincarnation (Cornelli 2016).

An additional argument not given by Aristotle is found in the text below. By which the author argues (numerals added):

فالأنفس أيضا منها إنما تداخل الجسم الملائم لها بل لا تداخل إن كانت الأجسام آلات لها فقد يجب أن تكون واحدة واحدة لكن تجعل الجسم ملائما موافقا لها وذلك أنها هي التي تصوغ ذلك الجسم وليس إنّما تجده مهيأ الضرب بالعود, العود فيتاغورس أغفل أصلا البحث عن الجسم الموافق لواحدة واحدة من الأنفس أيّ جسم هو وكيف صار ذلك بأيّ حال كانت قبل الجسم فاستخرجته وعملته

Souls are also [from among these], for the soul enters/inhabits the body that is appropriate to it. If bodies were instruments for [the soul], then that would have to be one-to-one [different for each individual]. Instead, [the soul] does not enter/inhabit, but rather makes the body appropriate and suitable to it. That is because [the soul] creates/fashions the body, it does not find the body [already] prepared [like] playing the lute. The lute, Pythagoras neglected to investigate (1) the body compatible to the [each and every one of the] souls, (2) which body that is, (3) how this [process] occurs, and (4) what state [the soul was in before the body, and (3) how does it happen (4) and in what state was it in before it was in the body, [was the relationship one of] instrumentalization and utilization?

To review, the Pythagorean position argues that the body determines the soul or more specifically that any single species of body may receive multiple souls. Aristotle argues the opposite, that the soul determines the functions of the body. Thus, epiphenomenalist commentary supports such a claim by demonstrating the instrumentality of the body in relation to the soul. If then the body must serve the soul instrumentally *insofar* as we are discussing ensouled beings, the body must have a suitable affinity. Recast, the argument is

that Aristotle does not think it is possible for the soul to enter a body with which it does not associate, or that its matter cannot support. To provide my own example, the faculties of a sponge cannot support human rational thought. The soul cannot enter the body *per se*, it must be an *entelécheia* or a suitable form that can shape the body and animate it as its essence and vivifying principle. Adjointly, Aristotle gives a resounding 'no' to the opinion that the soul could exist separately from the body; the soul conceptualized as *entelécheia* assures the mutual interdependence of the two, as the soul would partly corrupt without the presence of the body.

This is what is meant by a one-to-one correspondence term that are individually interconnected, that there must be an individual underlying affinity as well as mutual interdependence between the specific body and the specific soul. Punctuated by a series of rhetorical questions, the Themistius commentary presents absurdity, by metaphor, with the example of the lute [' $\bar{u}d$.] The equivalency of such Pythagorean arguments would assume that the soul [' $\bar{u}d$ player] would arrive and have already found the body [' $\bar{u}d$] prepared for performance. Instead, the Aristotelian argument is that the essence of the [' $\bar{u}d$] lies within one of its primary functions²³. Returning to the brief discussion on the nature of functionalism, this is not a modern or computational functionalist argument, the latter of which would dictate the completely unnecessary nature of matter as long as the form is the

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²³ I have written the term function to clarify the ambiguous nature of the terms of *entelechia* as the actualization of <u>form-giving cause</u> ("Entelechy Definition & Meaning - Merriam-Webster," n.d.). The intuitive assumption would suggest an equivalence between form and shape. That the shape of something is necessarily its form i.e. the body of 'ūd or mizmar its form. This is only sometimes the case, for example, Aristotle posits that the form of the eye is the faculty of vision, not the circle-like encasing which is responsible for maintaining the relative position of the eye.

functionalist equivalent²⁴. Recapitulated, though the matter has sustained importance as it is still contingent upon the form or the shape of the instrumental body i.e. 'the soul shapes the body and gives it its essence.'

The Aristotelian argument regards matter as essentially important, as the receptive substratum upon which form emplaces itself. In the aforementioned argument, known as the *individuation* thesis, matter assumes the role of the governing principle for synchronic *individuation* of two individuals within the same species, *infima species*. Insofar as it relates to epistemology, the Aristotelian thesis gives the tools for understanding what distinguishes two individuals of the same species, and their inherent material differences (Whiting 1986). The 'materiality' of the body, or its material nature, is an essential variable that enables the observer to construct a *differentiae* between particular individuals. This can be the case because the principle of individuation is causally responsible for making two individuals numerically distinct.

Themistius' commentary presents its understanding of body-soul as squarely within the Aristotelian tradition. By doing so, the commentary plays a crucial role in facilitating the synthesis and analysis of the arguments pertaining to the [harmonia] opinions, following Aristotle's narrative structure with the lexical vocabulary of the Arabic language. Rephrased,

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²⁴ For the curious reader, a similar functionalist argument is made in Douglas R. Hofstader's *A Conversation with Einstein's Brain*, where the theoretical discourse is made between the tortoise and Achilles, the initial argument surrounds the idea of music asking whether it is the container of music, i.e. the record, that is music or its performance. The main argument is if we had some way to replicate all of Einstein's thoughts in a book, how would we know that it wasn't Einstein himself and would it matter? ("Douglas Hofstadter - The Minds I Chapter 26 A Conversation with Einstein's Brain - Douglas R. Hofstadter.Doc," n.d.).

it is a detailed rehearsal of the psychological theories of previous philosophers, jointly with a refutation or demonstration of the inadequacies of their arguments.

Parallel to the Aristotelian critique echoed above, the Themistius commentary begins by introducing the Pythagorean position as among other public and private opinions of the day. The Pythagoreans argue that the composition is facilitated by the use of contraries (الأضداد), mixture (مزاجها), and composition (وتركيبها). The body is a harmony (مزاجها) of Pythagorean contraries, those contraries being that which is (hot & cold), (wet & dry), and (hard & soft) all these opposites existing within the body²⁵; therefore, if all these exist in the body, the soul loses its unique 'thingness' as nothing can be located within it (ارسطو, حيرى), and ثامسطيوس, H.24.9-14.). Going beyond what is written in the Aristotelian De Anima text, an additional line is added, one that follows the direct analogization to musical melody. The commentary argues that just as the soul is able to reconcile its more naturally existing oppositions, so too in musical melody there is an agreement between the low (lit. heavy) notes (قتيل) as well as high (lit. sharp) notes (والحدّ); therefore, as in Simmias' example there exists an analogic affinity between musical melody and soul. Yet, in this example it is the two categories of notes, the thick and the sharp, that are analogized to the contraries that come to form the soul (*ibid*, H.24.15).

Themistius is laying out the Pythagorean arguments for a musical *harmonia* as conceptualized by the Pythagoreans and subsequently refuting them, once again reciting both aspects of its surface-soundness as well as its refutation by Plato, Aristotle, and Thales (Ṭalīs). Without rehearsing the arguments of Plato and Aristotle, given above, Themistius

²⁵ Cf. Aristotle 407b 29-34 ("Aristotle's De Anima," n.d.)

similarly invokes the musical and the musician in his refutation. To which he says that harmony is a relationship either of harmonically composed elements or the harmony of a mixture (ratio), as the Aristotelian doctrine. Themistius continues that the soul can be neither since it is an essence, neither a constituency of elements nor a mixture (ratio). Similarly, the soul can move the body, but a composition of elements (*harmonia*) does not possess the potentiality to move an essence. The point that is being driven home is the idea of cause-effects, who contains the potential to do what. To postulate a *harmonia* is to argue that strings have the potentiality to move the musician or a soul and would necessitate another soul, which of course is an invalid sequence of cause-effect because it argues that effects move causes or infinite regress of essences, both logical fallacies.

The case that Themistius is attempting to make is that both possible theories of the soul, as a mixture or a ratio, are conflations of a false aspect of musical experience. He gives the example of the melodic line, to which he says that it sounds more beautiful once a ratio $[logos^{26}]$ has entered. Subsequently, by postulating a rhetorical question at the end of the passage by which the soul occupies two ontological modes of existence, either as mixture or as ratio, he clearly is attempting to argue the case that these theories are incorrect, as Aristotle did. To which he adds that the body is a composed series of parts bones upon bones,

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²⁶ This understanding of the *Logos* is borrowed from Euclidean and Pythagorean understandings of the term, in Euclid's general theory a *logos* is understood as: A ratio (*logos*) is a sort of relation (*schesis*) with respect to the size of two magnitudes of the same kind (Bk, def.3). A prescriptive definition, Euclid's relations must exist between magnitudes of the same kind: straight lines with straight lines, planes with planes, numbers with numbers, *sounds with sounds* if they are measurable as they are in the above example (Brann 2011).

flesh upon flesh etc., but the soul cannot be put together by associating a ratio of things or a mixture, dismissing the Pythagorean arguments as absurd.

An additional argument that Themistius makes utilizing music *insofar* as it concerns body-soul relationships more generally is the role accorded between the soul and human being. Utilizing the same methodology of analogical arguments as the one given in the transmigration thesis, Themistius adds an additional variation. What is somewhat unique concerning his argument is that he posits a nature of man as separate from soul, as a separate acting force. The argument follows a straightforward logic. The one who builds buildings is the builder and not an act of craftmanship, and the one who plays the ' $\bar{u}d$ is the ' $\bar{u}d$ player and not the music itself²⁷. Who remains the proximate cause for the endowment of mercy? That is the heart of what this musical analogy gets to. The analogy is continued: by arguing that it is the human being (' $\bar{u}d$ player) who bestows mercy upon the soul (the music itself), rather than the soul (music) endowing humanity (the ' $\bar{u}d$ player) with mercy.

The most obvious question that remains unclear regarding Themisitus' commentary is what mercy functions as in this analogy. One can consider mercy as a certain affective state of the soul, one of its possible states of being, a commonly held conceptualization of ethical theories of music (*ethos*) theory is that they have the ability to move the soul into certain

²⁷ The close relation between the Practical Arts and the craft of music can be found in the works of the Ikhwān al-Safā', see below in the section Ikhwān al-Safā', who posit music as a practical art that works upon *pneumatic* substances or the immaterial. (Edited and Wright 2011)

ethical states by balancing humoral pathologies.²⁸ This conclusion can be supported by a later passage by which he says that it is the soul that is the cause of the emotions in our senses; therefore, the most likely conclusion is that affective emotion is the binding force, or the common link between musical performance at the various levels and the human being (*alinsān*) and his soul. Rephrased, mercy as an affect is the product of both music as well as soul, the analogic correlates in this example. What one can infer from this example is that there exists a *harmonia*, not in the body-soul relationship, but in the man-soul relationship, a further degree of abstraction.

The Commentary of Ishaq Ibn Hunayn on Aristotle's De Anima

Within the history of Islamic philosophy, *Kitāb al-Nafs al-mansūb li Isḥāq ibn Ḥunayn*, also known as "*The Book of Soul*," marks the initial introduction of Aristotelian psychological ideas into the Islamic World. Yet, as the editor of the text points out, there exist deviations from Aristotle's original *De Anima* text. On the philosophical level, said deviations can be understood as an example of how Ishaq Ibn Hunayn's views can be more closely considered aligned with the Alexandrian school, especially on issues relating to the rational soul as well as the soul's annihilation after the body. On the level of narrative, even more than the Themistius commentary, Ishaq ibn Hunayn's commentaries are provided in a refutational format. He systematically treats the refutations posited by Aristotle against postulated ideas.

²⁸ See the sections below on al-Kindī: Music as the Medicine for Medical Happiness, How We Know that Music Causes Moral Change- Epistemological Matters – Inference From Signs, The Same Argument on a Kindīan Commentary.

Proof of the variant editions and commentaries can be found in Ibn al-Nadim's citation of Ishaq, who comments: 'I translated this work [*De Anima*] from a defective manuscript. Then thirty years later I found an extremely good manuscript with which I collated my first version... and it is the commentary of Themistius²⁹"(Lyons 1955). Ibn al-Qifti remarks on this issue by saying that there are potentially two translations of the *De Anima* text in its original form and an additional two translations of the commentary of Themistius (*ibid*).

Ishaq's original commentary addresses to the [harmonia] thesis is as follows:

ورد أيضا على من قال: إن النفس تحث من إئتلاف البدن, فقال :الإتلاف يكون إما في الكلام أو إما في الجسم. أما الائتلاف الكلام فيكون منه الخبر, وأضرب آخر من ضروب الكلام فائتلاف الصوت يحث منه ضروب اللحون فإذا ائتلافات الأجسام, حث منها شيء شبيه بها إلا أنه يخالفها في الصنعة. مثل الخشب :فإنه إذا ألف بقى بحاله, إلا أنه حث له عوارض حلية ,لم تكن فيه. فإنه قبل :فإن النفس كذلك وهي حلية حدثت من تأليف الأجسام قلنا :يجب أن تكون فينا إذن أنفس كثير ه لأن كل عضو من أعضاء البدن تأليفه غير تأليف صاحبه.

(ed. Ahmed Fu'ad al-Hawānī 1950)

He [Aristotle] responded to those who claim that the soul originates from the harmony of bodies. So, he responded by saying: Harmony can either be found within speech or within [corporeal] bodies. Yet, the harmony in speech occurs in the form of discourse, or some other type of speech. The harmony of sound occurs in the form of melody. Similarly, the harmony of the bodies occurs similarly as a phenomenon, except that which [it has a] different from it in form/ construction. Like wood: if it is known, it remains in its state, except if it encounters accidental changes, which do not exist within [its essence]. And if it is said

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²⁹ Refer back to the previous section.

that the soul is the same, as an [accidental] change, comes to be from the composition of bodies as we stated earlier. Then we would reply that, by necessity there must exist numerous souls in each of us since each organ of the body is composed autonomously of its bearer's composition.

The conclusion given by Ishaq ibn Hunayn comes as an addition to the original Aristotelian refutation to the [harmonia] thesis. The description that Ishaq ibn Hunayn gives isn't one that explicitly draws on the metaphor of the musical instrument yet discusses music as well as sound as a refutation to the existence of a harmony of the body. Harmony may exist either in a material or immaterial nature. This argument, which Ibn Hunayn posits is one in which speech exists as both intangible and ephemeral, emphasizes its immaterial dimension. Juxtaposing what would exist in the body, since what is constituent in the body must necessarily be unlike those things found in speech; therefore, echoing Simmias' positioning of the two categories of material and immaterial. Speech & music seem to be categorized together as examples of immaterial substance. Ishaq affirms the nature of these two categories by declaring that indeed speech and sound are abstractions of their respective categories. Sound-given form becomes melody and speech-given form is discourse.³⁰

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The philosopher who most extensively deals with the relationship between melody and measured human discourse is the 10th-century philosopher Al-Fārābī, who relates the logical models of measured human discourse which to the model of human melodies. For al-Fārābī form is the necessary existent of melody, the means towards the achievement and realization of its content, and subsequently the final goal in the construction of making a human melody is the realization of a better existence of melody. Content cannot exist without form, nor can content have ontological priority to form. (Madian 1992). Though the intricacies of al-Fārābī's theory are outside of the scope of this thesis please see the dissertation of (Madian 1992): Language-Music Relationships in al-Fārābī's "Grand Book of Music"

Beyond simply immateriality, speech [logos] is reserved in Aristotelian thought for those individuals containing the capacities for reason or rationality (Frede and Striker 1996).

31 Animals, for example, are capable of producing meaningful sounds (phone, semantikos), but not rational speech (ibid). Subsequently, Ishaq proposes that where sound and speech have logical forms that retain their content, the harmony of the body itself would be retained in a body that is subject to change. The example of wood is used when wood undergoes a certain change, i.e. burning, its overall form is subject to change; ergo its form was only accidentally true to it and not essentially true. That being the case, if the soul was subject to change due to the intervention of the harmony of the body, the soul would similarly undergo change, altering its designation into an accident as opposed to a substance. Due to its susceptibility to change, Ishaq then argues there will be no underlying unity to man's existence; man will be defined simply as a series of autonomously unrelated souls that subsist in their respective organs without a single soul to control it.

Theology of Aristotle

The unicity of the text of *The Theology of Aristotle* comes about in its misattribution to Aristotle. Insofar as Aristotle represented the pinnacle of thought in Islamic society, his misattributed text became a seminal text adopted and proliferated in Islamic World through its philosophers. In fact, the text is a paraphrase of the Neo Platonic works of Plotinus', the *Enneads*³², as compiled by his student Porphry. The *Theology* a.k.a. the Arabic Plotinus was

³¹ Such a consideration in the philosophy of mind draws its origin from Plato who asserted that thinking (*dianoia*) was itself a form of silent inner speech (*logos*). According to Plato and continued to some extent by Aristotle speech and reason are mutually dependent on one another, if one has speech then one has reason and *vice versa* (Frede and Striker 1996).

³² The *Enneads* in its original form is a six volume text, the focus of the *Theology of Aristotle* is on volumes IV, V, and VI. The Fourth whose primary concern is the essences, problems, sense-perception, immortality, descent, unity of souls. The Fifth whose primary concerns

produced in the translation circles of the first Muslim philosopher al-Kindī, who will be treated explicitly at some length in the later portion of this thesis. At this juncture, the role of al-Kindī and his circle comes by way of the role in which they played in adapting the text. As a committed philosopher as well as follower of Islam, al-Kindī a.k.a the Adaptor and his circle of translators often changed passages of the text for two explicit purposes (1) to present Greek philosophy as a unified whole, i.e. the reconciliation of differences between different philosophers into a coherent system and (2) to answer problems from the intellectual milieu of 9th century intellectual Islamic society addressing issues such as learned ignorance, the use of divine attributes, and the characterization of God as pure Being (Adamson 2002). In so doing, this circle of translators created a syncretic tradition between Greek and Islamic thought.

Though the differences between the two philosophers are profound, Aristotle and Plotinus share the method of dialectical refutation in their critiques of the soul. Whereas the former constructs a disputation to materialist views of the soul (*De Anima 1.2*), soul as in motion (1.3) and the Pythagorean view of the soul as a harmony (1.4) Plotinus refutes soul as material, harmony, and *entelechia*³³. (Adamson 2002). The Adaptor of the *Theology of Aristotle*, as a custodian and inheritor of both traditions, sides the Neo-Platonic view of criticizing the soul as an *entelechia* of the body. As referred to above, the Aristotelian

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consist of the Hypostases, order, and origin of beings after the first, intellectual beauty, intellect, forms, and being. The Sixth whose content primarily concerns kinds of being, the presence of being, numbers, free will, and the good (Adamson 2021; "The Internet Classics Archive | The Six Enneads by Plotinus," n.d.).

Once again, in Aristotle's *De Anima* 2.1, 412a19 the soul is described as the form or the actualization (*entelecheia*) of a natural or organic body that has the potentiality for life. Therefore, the soul is the principle by which living beings are alive and have the capacities for nutrition, reproduction perception, etc. (López-Farjeat 2015)

argument is based on the predication of the soul to the body, their inherent mutual interdependence, and inseparability. This thesis is summarily rejected for a separability argument, in that the soul can survive without the body. The Adaptor's criticism is nuanced, as he does not wholesale reject the notion of *entelechia*, but only *insofar* as *entelechia* is the inseparable form of the body or 'the body possessing life potentiality' (Adamson 2001). To summarize, the Adaptor and Plotinus' argument is that the body is not the life-giving principle (*entelechia*) because (1) if the body is inseparable from the soul and (2) someone were to separate one aspect of the body i.e. cut off a hand (3) some portion of the soul would be cut off as well, which is not the case.

Such a position affords a conceptualization of the soul as dual-natured, as both a principle that is separable from the body (Neo-Platonic) as well as one that 'in-forms' the body on the nutritive level (Aristotelian). Duality, then, is considered along a number of ontically conceptual planes, [logos] as a relation that is asked of man's own soul, man and his body, and man and his higher principles. In the Adaptor's Aristotelian reading of Plotinus, man is conceptualized as a [logos] of the Aristotelian soul and a separable body, distinct from Plotinus' view that man is a [logos] with himself and a higher hypostatic principle (ibid).

The below paragraph presents the Neo-Platonic refutation, modified and given by the Adapter of the Theology of Aristotle on the *harmonia* thesis:

نقول :إن كانت النفس طبيعة غير الطبيعة الأجرام فينبغي لنا أن نفحص هذه الطبيعة ,ونعلم ما هي: أتراها في ائتلاف الجرم؟ فإن أصحاب فيثاغورس وصفوا النفس فقالوإنها ائتلاف الأجرام كالائتلاف الكائن من أوتار العود, وذلك أن أوتار العود إذا امتنت قبلت أثاراً ما وهو الائتلاف. وإنما عنوا بذلك أن الأوتار إذا أمتنت ثم ضرب بها الضارب حدث منها ائتلاف لم يكون فيها و الأوتار غير ممدودة .وكذلك الإنسان إذا امتزجت أخلاطه واتحدث حدث من امتزاجها مزاج خاص, وذلك الأمتزاج الخاص هو يحيي البدن ,والنفس إنما هي أثر لذلك المزاج وهذا القوم شنيع

XII)

We say: If the soul is of a nature that differs from the nature of bodies, it is necessary for us to examine this nature, and to understand what it is. Do you see [the soul] in the harmony [Ar. i'tilāf] of the body. Because the friends of Pythagoras have described the soul saying that it is the harmony [i'tilāf] of the body, which [they argue] is like the harmony [i'tilāf] of the strings of the strings of the 'ūd. When the strings of the ud are stretched, they are affected in such a way that the result is harmony [i'tilāf]. [The Pythagoreans] meant to convey that when the strings are stretched and a player plays on the strings, a harmony [i'tilāf] emerges that did not exist when the strings were not stretched. In the same manner, [they argue] that man, if his [corporeal] elements [Ar. akhlāṭ] are blended together, a special mixture [Ar. mizāj khāṣṣ] emerges from this blending and [they claim] that this special mixture produces life in the body and the soul is [therefore merely] an after-effect of this mixture – the people [who hold this idea] are repugnant.

The Adaptor establishes a lengthy refutation to the Pythagorean thesis, on functionalist grounds, that the body-soul relationship can be construed as a harmony [harmonia]. Instead, music will be accorded a role of direct empirical effects upon the body, as opposed to a metaphorical or analogic conception of the relation between the two. It will be worthwhile to list the arguments of the refutation as this gives us a better idea of how the later Islamic paraphrase of the Aristotelian De Anima complements the Theology of Aristotle, as well as how music is argued to uphold the principles of body-soul relation.

First, the primary argument of the Adaptor is to establish that the soul is causally and ontologically anterior to the body³⁴. The Adaptor argues that the soul is prior to the harmony because it is the soul that creates the harmony between body-soul relationally; therefore, the existence of the harmony could not occur without the existence of the soul. The Adaptor continues that it is the soul that directs the sensible body and watches over it as it is its guardian and the principle that controls its activities. Harmony, the author argues, cannot act on its own or compel the soul to act in a specific sense. The soul remains a substance, but the harmony is not, the latter is an accident that comes about from the mixing of bodies.

After the distinct natures of body, soul, and harmony are established, the contention arises concerning the possibility of numeric consistency. The psychological understanding of this group of philosophers is that souls and bodies exist in a one-to-one relationship. To which the *Theology of Aristotle* responds that if harmony is to be present in bodies, as well as to be equated with soul, and to be found in the union of the body-soul relation, there would be the 'harmonization' of multiple souls simultaneously, a concept that would be understood as repugnant³⁵. How instead does the relationship work in body-soul relationships? Again,

³⁴ By designating the terms ontologically anterior, I am emphasizing the distinction between 'temporality' and 'relationality' with respect to creation. To proffer an example, if I were to say that two comes *earlier than* three, relationally i.e. in the number series or within the chapters within a book; it does not tell me *necessarily* of their temporal relationship. It is not necessary that I read them in a specific order or that they have real existence as they are numbers that could potential exist external to time.

³⁵ In Plotinus' Enneads the following is written in relation to the problems of the *[harmonia] Thesis*: 'And for each part, which is mixed differently, there would be a different soul, so that there would be many [souls];' This is mirrored in the Arabic *De Anima* that comes from the Kindīan circles: "If the soul is like this, that is, a shape which comes about from the formation (ta'līf) of the bodies, we say: it would therefore be necessary that there are in us many souls, because the formation of every one of the members of the body is different from the formation of every other [member]. If this were the case, then it would be necessary that there are many souls in us, and this is absurd (Adamson 2002).

music is invoked, yet instead of the metaphor of the material body as an instrument body in relation to music and the immaterial soul, a discourse is created around the musician as a causal agent.

لأنّا نرى أوتار آلات الموسيقار لا تتألف من ذاتها لأنها ليست كلها مؤلفة وإنما المؤلّف هو الموسيقار الذي يمدّ الأوتار ويؤلّف بعضها إلى بعض ويؤلف أيضا آثرا مطربا فكما أن الأوتار ليست بعلة لا ئتلافها فكذلك الأجسام ليست بعلة لائتلافها ولا تقدري على أن تؤثر الائتلاف بل من شأنها قبول الآثار الحسية فليس ائتلاف الأجسام إذا هو النفس (ed. 'Abd al-Rahman al-Badawī 1955)

Because we see that the strings of the musician's instruments do not create harmony on their own, for they are not "composers" [capable of composition/harmony]; rather, the "composer" [harmonizer] is the musician who tightens the strings and [composes/harmonizes/tunes them in consonance] with each other, and who composes [creates] enchanting effects. Just as the strings are not the [lord/master] of their own harmony, so is it that bodies are not [lords/masters] of their harmony and are not capable of [effecting/bringing about] harmony; rather, the role [of bodies] is to receive [external] sensory effects. Therefore, the harmony of bodies is not the soul [as the Pythagoreans claim].

The above passage first engages our conceptualization of the perception of sense phenomenon contrasting what appears to be true prima *facie* with the nature of musical instruments. These musical instruments, the Adaptor argues, are not autonomous entities isolated from the proximate cause that brought them into being. They cannot in essence self-differentiate or exist independently without cause. The Adaptor asserts, instead, that it is the musician who is the active agent in the performance of the instrument; it is, the Adapter says,

the musician who stretches the strings and tunes the strings into a harmonious fashion, thereby creating a causal effect. Like the body, the strings on their own do not have the power to create any affect that would move the union or harmony of the individual into another state. The body can receive the sense-perceptions of the outside world, but is not responsible for bringing itself into being, therefore it is distinguished from the soul. The importance of such an argument is to demonstrate the Adaptor's position that the soul is not a harmony of the body, echoing the original argument of Simmias. Yet, as we will see below, Islamic peripatetic philosophers did believe that the soul contained a harmonic structure. They conceptualized the soul as a unique substance which both animates and is separate from the body³⁶

Part 2: Al-Kindī and the Ikhwān al-Safā'

Al-Kindī's Portrait of the Soul – From Ontology to Ethics

On Definitions: "philosophy is man's knowledge of himself [nafs]": "This statement is noble in the extreme and profound. For example, I say that things are either bodies or not.

Things that are not bodies are either substances or accidents. Man is body, soul, and accidents. And his soul [nafs] is a non-bodily substance. Therefore, if someone knows all this

³⁶ As an example of a later peripatetic philosopher who distinguished the two Ibn Sīnā wrote: 'Therefore, he who has been instructed, does have a way to affirm the existence of the soul (*nafs*) as something different from the body or, better said, without body.' Ibn Sīnā has epistemic certainty of the soul's distinct and independent substance apart from the body; and that the architecture and movement of the body are wholly determined by the soul (López-Farjeat 2015).

[i.e. all the parts of man], then he knows everything. For this reason, wise men call man a microcosm." (Adamson 2006)

In his independent philosophical writings, Al-Kindī does not give an explicit answer to the question of whether or not the body-soul relationship can be construed as a [harmonia]³⁷, but there are a series of accumulated sources that can give us an idea of al-Kindī's ontological views of the soul as well as his ethical views. The answer to the question of ontology and ethics can be found in two doctrines: first, his most extensive psychological doxography, his *Discourse on the Soul*, another rare example of a Pythagorean-Platonic engagement within a predominately Islamic Aristotelian worldview,³⁸ and second, Stoic sources that reveal a unique feature of the Kindīan philosophical life.

In the *Discourse of the Soul*, al-Kindī begins by describing the soul as both simple and possessing an essence that embodies a noble and perfected nature (إن النفس بسيط إذا كانت). What ontological status does al-Kindī attribute to the simple-incorporeal soul? He states that it is (1) separated (منفردة) from the body (الجسم), and that (2) its substance is a non-material but spiritual essence. The Neo-Platonic view proposed by the Adaptor of the *Theology of Aristotle*, the *De Anima* commentary of the Kindīan circle, as well as the independent al-Kindī all agree that the soul is a simple substance. The consequences of adopting such a perspective is argued in the *Theology of Aristotle*, particularly focusing on

³⁷ See (footnote 17) for the multiple souls in a single body argument that emerges from the Kindīan circle, a *De Anima* paraphrase and commentary.

³⁸ The name of the treatise itself may be somewhat of a misnomer in that it opens with the following subtitle: القول في النفس المختصر من كتاب أروسطو وفلاطن سائر الفلاسفة (The Discourse of the Soul, An Abridgment of the Books of Aristotle and Plato, and Auxiliary Philosophers). Yet along with the Theology of Aristotle these two doxographies on the soul remain formative Platonic/Neo Platonic doctrines on the thought of al-Kindī.

the soul's enduring nature and immaterial essence. Both the Adaptor of the *Theology of Aristotle* as well as al-Kindī determine the nature of the soul to be based on its nobility; both texts analogizing between the body and the rational mind.³⁹

Al-Kindī argues that the body is equated to the two lower faculties of the soul, the appetitive and the irascible, while the rational faculty is equated to the higher faculty of the soul⁴⁰. This can take place because the rational soul controls the other two souls and prevents them from taking indiscriminate moral action. The importance of the Platonizing rational soul cannot be understated because it allows al-Kindī to connect moral and aesthetic values. Al-Kindī describes the three parts of the soul in the metaphor of a swine, a dog, and a king, the first two corresponding with the appetitive and irascible and the last one corresponding to the rational part of the soul. Al-Kindī connects this to moral philosophy by equating the virtue of the rational souls with the virtuous aspects of God. Through an epistemology of reason, al-Kindī describes the Platonic forms of goodness, justice, power, wisdom, beauty, and truth (الحكمة والقدر والعدلو الخير والجيل والحق) as aspects or discernable qualities of God, and if man can accord his being by empowering the rational mind he will gain, within human limitation those same virtues⁴¹.

³⁹ Though this form of dualism is Platonic, in al-Kindī's conceptualization Aristotle is seen to agree with Plato as to the essential separations of body and soul, and the ability for the soul to know without empirical investigation.

⁴⁰ This conceptualization of the tri-partition of the soul ultimately derives from Plato's Republic, but reaches al- Kindī through the *Enneads iv.7*, in which pure souls will retain after death the rational part of their soul [logistikón] while losing the [epihymetikón] and the spirited [thymoeidés] while in the Theology of Aristotle the distinction is made along Aristotelian divisions in *De Anima* [nabatiya wa-hayawaniya wa nutqiya] (Pormann and Adamson 2012).

⁴¹ The idea of inhabitation of virtue and its reflection of a form of Godliness can be found in Plato's Theaetetus (176B) 'and to become like God is to become righteous and holy and wise' (Henderson, 176B) as well as commentaries surrounding Arabic paraphrases of

The Pythagorean elements located in al-Kindī's conceptualization of the soul have to do with the purification of the soul from its baser elements. Al-Kindī attributes this saying to Pythagoras, the soul when it is bound to the body, leaves aside its desires (إن النفس إذا كانت هي then it will subsequently have the ability to acquire the form of real knowledge: the type of philosophical knowledge which knows things by their essence.

Ethical Arguments from al-Kindī:

If man is to emulate the ideal Platonic human virtues, what role does music have in the achievement of this task? Understanding this relationship requires an intervention into al-Kindī's general ethical theory. In al-Kindī's "Epistle on the Device for Dispelling Sorrows" the philosopher attempts to teach the neophyte how to engage in the purification of the incorporeal; the proper procedure for the administration of the spiritual medicine of the soul necessary for quelling one's desires. This Platonic-Stoic epistle serves as a methodological guide to rationality urging its readers to abandon the common, unexamined life in favor of embracing the philosophical one. Briefly, al-Kindī's introductory reflections include a discourse on the nature of human desire, after which he identifies the causes of such behavior. The philosopher concludes that the reason why we love or hate, in our desire for things in the material world, is simply an act of habituation, a convention in our cognition and not a part of immutable human nature (Groff, n.d.). A departure from his generally more determinist ideas, al-Kindī encourages his reader to adopt the concept of *habitus*, ⁴² that one's

Pythagoras' Golden Verses in the hands of Neoplatonist commentators for example like Hierocles 'Pythagorean verses, the so-called holy verses... both practical and contemplative, through which one may acquire truth and virtue, regain one's purity, succeed in obtaining likeness to God'(Izdebska 2016).

⁴² The rendering of the Latin *habitus* given here is what is defined by St. Thomas Aquinas, borrowed from Aristotle as 'a disposition in relation to a thing's nature,' which contemporary commentators have understood that Aquinas' meaning relates to the acquired quality that we

moral and ethical habits are dynamic and change over time with proper action; therefore, training is required to bring one's old habits into a new ethical regime.

What remains a subject of fascination in al-Kindī's argument is the philosophical and religious language that is the lexicographic basis upon which his ethics are built. The idea of 'training' oneself is demonstrated through the term *tarbiya* – a concept linked with gesture towards the Arabic notion of *adab*, the self-cultivation of knowledge/appropriate comportment as an end of refining one's character in a noble way⁴³ (*ibid*). Such rectification of character (*takhalluq khulq*), utilizes a language of metaphorical polishing associated with the concepts and terms such as measured, proportioned, formed, etc., which in the Islamic tradition is a methodology for bringing oneself closer to divine attributes of God i.e. philosophically fulfilling Platonic ethical mimetics⁴⁴ (*ibid*).

alter with difficulty. It is a disposition to act that has become second nature,'; understood as halfway between action and capacity, potentiality and actuality (Peterson et al. 2017) which fits perfectly with al-Kindī's definition. See also *How Greed Corrupts Our Hearts and Minds, Renovatio: The Journal of Zaytuna College* 4:50-6:00 for an explanation of how these concepts work within a larger *psychomachy* (battle for the soul) in the Abrahamic traditions: Judaism, Christianity, Islam (Renovatio: The Journal of Zaytuna College 2022)

43 The understanding of the Arabic notion of *Adab* as literature is a contemporary phenomenon; historically the meaning of *Adab* was in the philosophical sense of 'precept' referring to a guiding principle or rule of conduct. An authoritative instruction on how individuals should behave ethically in various situations. An early example of this is in Isḥaq's gnomology, Ādāb al-Falāsifa (Precepts of the Philosophers) (Gelder and Hammond 2008). Such inculcation of proper philosophical precepts was the role of traditional liberal arts education; Music's participation as such was evident in the 9th century with Ibn Khurradadhbih, a student of Ishaq al-Mausilī, who authored titles such as *On Liberal Education in Music* (Farmer 1928).

⁴⁴ Such theories reached their apex with an acknowledged ethicist of the Kindīan philosophical circle Ahmad ibn Muhammad Miskawayh (320-421/932-1030) whose principal work, *The Refinement of Character (Tahdhīb al-akhlāq)* synthesized both Platonic conceptions of the soul, Aristotelian virtue ethics of the mean, Cynic-Stoic therapies for irrational passions as well as the Arabic *adab* tradition (Groff 2007). For a complete reading of Miskawayh's Psychology including his thoughts on the ontology of the soul, its Kindīan epistemological influences and translations of related passages please see (Adamson 2007).

As a philosopher of Eudaimonia⁴⁵, Al-Kindī's rationalist approach to ethics extends to his characterization of inter-relation between body-soul relations and affect. Like his predecessors, al-Kindī pays particular attention to the emotion of sadness as the source of the pain in the soul, and the subject of psychosomatic intervention. In his letter, *On Dispelling Sorrows*, his titular aim is of course the removal of sadness; therefore, in an attempt to do so, he comprehends sadness through its negation of happiness, placing the two as binary opposites, namely that they cannot exist within the soul *at the same time*. Such a methodology of analysis, a form of propositional logic, is common for al-Kindī's style, as a philosophical mathematician he is quick to employ the law of the excluded middle⁴⁶ for the benefit of his inquires. Though rigorous in his commitment to logical method, al-Kindī is aware that our method for attaining happiness is not only a process dictated by logical

⁴⁵ Eudaimonia, also spelled eudaemonia, is drawn from Aristotle's ethical writings, in which human beings pursue their function in achieving happiness as represented by the highest human good "human good turns out to be [rational] activity of soul in accordance with virtue" (Nichomachean Ethics, Book 1, chapter 7). ("Eudaimonia | Definition & Facts | Britannica" 2023). We know that al-Kindī was familiar with Aristotelian ethics through his Letter on the Quantity of Aristotle's Books and What is Required for the Attainment of Philosophy. In his systemization of the latter's collection of works, he remarks "then the books on ethics and the governance of the soul through laudable ethics" as well as in his On the Definitions and Descriptions of Things by which he defines the human virtues (al-fada'il al-insānīya): specifically virtue insofar as it contains two extremes, and that departure from virtue by exaggeration or insufficiency is vice (Pormann and Adamson 2012). ⁴⁶In its most formal terms, the Law of Excluded Middle argues that 'For any proposition, either that proposition is true or its negation is true' appropriated by al-Kindī from Aristotle who wrote in the Metaphysics "it will be impossible to be and not to be the same thing" in reference to human beings, in terms of ontological accidental states like happiness and sadness there is a temporal element (Murphy 2018).

postulates and precepts but requires experience in understanding what happiness is in the first place.

Al-Kindī's rational behavioral therapy targets sorrow as the source of psychosomatic pain contrasted with that of the body; the latter finds resolution through the application of often "nasty" medicines, amputations, and other violent applications. The conditions for the treatment of the body reinforce its subordination to the soul, the act of healing the soul is conducted in the spiritual realm, which accords it nobility in relation to the object of its intervention. In this treatise, al-Kindī gives us a clear indication of the many reasons for the superiority of the soul over that of the body.

- (1) The soul rules and the body is ruled.
- (2) The soul remains and the body is obliterated; therefore, that which stays must be more properly cared for than that which doesn't.
- (3) Our essence, our being, who we are, is a function of the soul since it is the common bringer of life vs. what bodies have in common which is corporeality.
- (4) The body is the instrument, and the soul is the essence; more incumbent on individuals to improve the essence than the instrument.

(Pormann and Adamson 2012).

What does al-Kindī's music theory then have to say about these rational ethics? In a sub-chapter called *Sayings on Tones*, within his *Great Treatise on Music*, al-Kindī identifies along gendered lines, the roles, and functions of specific notes. From which he derives

certain analogical arguments (47 بقياس) to construct the relation between sadness (عزن) to construct the relation between sadness (ضعف) 49. At first, al-Kindī argues the problem by relation, in which the states that emerge from the soul, sadness & weakness, are related (منشا كلان) to one another: insofar, as happiness and sadness are opposites of another, strength (قوة) and happiness (50 are correlated. The position that al-Kindī takes then is more dramatic, moving from a notion of the correlated nature of such effects to the causative nature by which he communicates that these states within the soul are caused by one another.

"Weakness in the soul is from sadness, and sadness from weakness, and therefore happiness is from strength and strength is from happiness."

For al-Kindī's theory to work, the notes themselves, which he refers to either as masculine, perfected, strong, and happy, or feminine, weak, deficient, and sad, must have the

The term (القياس al-qīyās) is ambiguous in al-Kindī's lexical library in his treatise On Definitions

⁴⁸ The term (حزن – huzn) has a complete complementarity between both treatises, in both treatises he mentions sadness utilizing the same lexical terminology.

⁴⁹ The term (ضعف –d'f) is meant in the completely negative sense the negation of strength, seen below, as well as associated with the actions and adjectives of "tears, humiliation, and brokenness"

⁵⁰ The difficulty of interpreting the passages is predicated upon the analysis of the term الفرح (al-faraḥ), Hans Wehr gives us the term to be glad, happy, delighted, and rejoicing (Wehr, Cowan, and Wehr 1994), while in the Kindīan ethical texts, we are given the term (saʻadah) (Mahmoud 2021) Hans Wehr gives the term to mean also to be happy, fortunate (Wehr, Cowan, and Wehr 1994). Yet, the complexity of the Medieval Arabic like the Ancient Greeks acknowledges many degrees or shades of happiness especially when contrasting a sense of fleeting happiness (*eros*) with that of supreme happiness (*Eudaemonia*- see footnote 25). It seems unlikely that music alone could afford this supreme happiness, but eliminating sadness works towards the same goal as *telos*.

ability to affect the soul into its state of being. The sounds of the notes themselves resonate with a certain affective nature which compels the soul to move to what is reflected by them, and in moving to one of those states (weakness) along with it comes its complement (sadness). Al-Kindī addresses such reflexivity of the states of being with a quotation by Plato "The soul becomes full (تتكفي – tankafī) with music" demonstrating a reflexive qualitative state that one can enter (*ibid*). As much as it is directly responsible for moving the soul into its reflexive state, performance becomes an ethical activity predicated on the cultivation of rational behavior and how it achieves its therapeutic goals⁵¹.

In relation to the body, hermeneutically al-Kindī's music theory can be interpreted as a form of practical virtuous action (*praxis*)⁵², in which virtue is tempered by necessity with respect to a certain *telos*, towards the achievement of supreme happiness (*eudaimonia*) but not identical to it. Recast, music serves a dual function with respect to the body-soul relation, it mediates between what serves the soul, i.e. above, and that which is 'necessitated' by the body. Such a *telos* of necessity is no more obvious than in the medical effects of music. Just as Hippocrates would not wish the man next to him ill, practical virtuous action

⁵¹ Al-Kindī's therapeutic approach is much more akin to that of a philosopher in both method and results. This approach can be more fully conceptualized by a student in his circle Abu Zayd al-Balkhi (235 h, 849 CE) who authored the medical treatise "Sustenance of the Body and Soul "*Masalih al-Abdan wa-l-Anfus*" dedicated to the treatment of both bodies (physical health) & soul (mental health) as different substances. Balkhi's approach echoes much of al-Kindī's in terms of its rational approach but gives a more nuanced analysis of three forms of sadness; Balkhi's three categories include (1) commonplace sadness, (2) specific loss (*depression of known etiology* or 'reactive depression), and (3) continuous feeling of sadness not related to time and place (*depression of unknown etiology*) (Awaad and Ali 2023) ⁵² The term *Praxis* is translated from the Neo-Platonist Plotinus in his *Enneads* VI.8, a philosophy known to the Arabs through the 'Theology of Aristotle' see above. Virtue or more, specifically virtuous action is translated in this context to mean those things that are undertaken by some degree of 'necessity' (*anangke*), they serve to fulfill what is necessary towards achieving happiness but not happiness itself. (Adamson 2011). (See footnote 30 for more context)

is, in a phrase, doing what is necessary for the health of the body to continue toward greater pursuits. Such a story is given by Ibn al-Qifti⁵³ when the son of a virulent wealthy businessman became sick with apoplexy,⁵⁴ it was recommended to the father, by the medical community, to elicit a visit from al- Kindī who was familiar with the treatment of this specific ailment. The irony of this engagement of course being the portrayal of the father and his attitude towards the philosopher, his attitude was described as 'antagonistic to al-Kindī and that he attacked him *persistently*. Yet, when called upon, al-Kindī begins the process of medical treatment placing his fingers upon the body to receive a pulse and calling to his technically elite 'ūd players to begin localized treatment around the afflicted area, the head. As the boy began to regain strength and speak to the father's affairs with the father furiously writing down the information, the 'ūd players became 'remiss' and 'strayed from the melodic mode they were in'. At that point, the boy fell back into an apoplexic state and passed away (Shehadi 1995).

As hermeneutic detailing, the story gives us insightful details as to the medical practice of music therapy within 9th century Baghdad. Discussing both the methodology of treatment in which al-Kindī identifies known relationships of the body in terms of the pulse, the localization of the head as the afflicted region, and music as a stimulant with the potential to heal the body. Yet, the boy's health is never actualized in the story. Interpreted as an ethical parable, al-Kindī's music-medico story reveals the fine attunement between moral character and the healing properties of music. This interpretation of the story places the onus

⁵³ See Harmony of the Spheres, 1993, pg. 32, Also cited in Martin West(ed. Joscelyn Godwin 1993)

⁵⁴ Apoplexy: a stroke inquired as an injury in the brain caused by occlusion of a blood vessel or inadequate blood supply leading to infarction or a hemorrhage of the brain("Apoplexy - an Overview | ScienceDirect Topics," n.d.)

of practical moral action on the failings of the father, whose greed precludes him from assuring his son's health. The calamity that befalls the son, or his inability to recover, is told through the story of the father's vice. The reinforcement of habitually cultivated immoral attitudes has a similar 'de-tunement' effect upon musicians, the negation or binary opposite to upright moral behavior or virtue.

This interpretation can be defended by the portrayal of the father, as the distraught nature of the merchant was based upon the interruption of his business as his son oversaw memorizing financial information. Additionally, the ' $\bar{u}d$ players became remiss, I argue non-accidentally, due to the father writing the information he wanted, i.e. lack of concern with his son. For music to function as a mode of healing, <u>all</u> those engaged in the process must be of upright moral character as the *telos* of music itself is in service to the achievement of higher moral truths.

How We Know that Music Causes Moral Change- Epistemological Matters – Inference From Signs

Al-Kindī's interdisciplinary efforts between medicine, philosophy, and music can be understood through a traditional epistemological framework of rationalism vs. empiricism. Al-Kindī's philosophical views, again, reflect those views of the rationalist whose credo can be summarized as follows: if medicine is to achieve its goals it must aim to heal the sick by locating the underlying fundamental nature of both the human body as well as unhealthy illnesses that potentially can effect the body. (Allen and Allen 2001). Such a position reflected by Galen and adopted by al-Kindī echoed a middling position where rational theories were emphasized over *theories* of experience, yet experience was not completely

discounted and played a smaller role in supplying reason with data. Experience, in other words, gives a narrow representation of the overall. Whereas rationality provides a substantial point of inquiry beyond experience.

An example of empirical data used in the construction of rational theories can be found in al-Kindī's understanding of the moral effects of music on human beings and animals, a conceptualization predicated upon observable visual phenomenon. he al-Kindī's (في كيفية أظهار الأوتار أخلاق النفس) On how the strings show/make visible the Morality of the Soul his emblematic of this modality of thought. Here he presents the reader with the outcomes of certain combinations of strings/ rhythms and the way that they act through the body upon the soul. The conclusions come to be accessed through observable phenomena or the visible motions manifest in the physical vibrations of the string. An example of material affect it is the motions or the (عركات) of the strings that move the soul and the body and its intermediary. The body becomes the source of collisions of matter and these consequential collisions produce motion, and subsequently, these motions are carried through and impart their motion upon the soul of the soul are

⁵⁵ This is not the sole instance by which al-Kindī demonstrates the power of music by its effects. Examples arise when he attempts to construct an affinity argument between musical instruments and animals of the animal kingdom. This principle he proves by extrapolating how animals react to the effects of the music on them. Dolphins and whales are engaged by the flute (*al-zamr*) and the horn (*al-buq*), fish on the other hand come together once they hear the lute (*pandore*) (Shehadi 1995)

⁵⁶ This is a more literal translation others have translated the title as "how the strings can bring out the soul's innate character" (Gelder and Hammond 2008).

⁵⁷ The following description of how the body interacts with affect and movement is drawn from Plato's *Timaeus*. Generally considered to be Plato's natural philosophy it speaks briefly to the science of the soul more specifically on the issue of epistemology as it relates to the questions of sensation vs. rationality. See (42e1). Al-Kindī as demonstrated above draws heavily on Plato for his science of the soul and this may provide a comprehensive way of comprehending the shared terminology.

called 'sensations-emotions' and are equivalent to what al-Kindī describes as the motions or movement of the soul. The strings function as proximate causes by which the impression of these qualities appears in the soul. The emotions are derived from 'what is visible in the sense percepts from what is imprinted on the soul' (ما يكون ظاهر ⁵⁸ الحس من طبعا في النفس) i.e., sense perception.

When describing the string of *Zir* or the highest string on a four-string lute he gives the following prescription:

. فممّا يظهر في حركات الزير من أفعال النفس⁵⁹ :الفرحية والعزية و العلبيّة وقساوة القلب الجرأة الإقدام الزهو والنخوة والمخوري

ويحصل من فعل هذا الوتر وهذا الايقاع أن يكونا مقوّيين للمرّة الصفراء المحرّكين لها مع اجتماع الزمان الشتوي والنومي وسخنه وسخنة وسخنة الموسيقاري وطباعه وإذا قوي هذا الطّبع والمزاج أذاب البلغم وقطّعه ورقّقه وأسخنه

(ed. Zakariyyā Yūsuf 1962)

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has a range of definitions including visibility in terms of sense perception as well as appearance (Wehr, Cowan, and Wehr 1994) Appearance, as phenomenological, finds evidence among Greek authors as both (species) and (fantasia), a form of knowledge that is experiential and prior to rationality (Frede and Striker 1996) Such an interpretation would be valid for al- Kindī as an ethicist of both Stoic and Aristotelian mix. The Stoics, by Seneca, explained emotions by their appearances (species), arguing that animals did have the ability to experience emotion, but not real emotion due to lack of rational assent. Similarly, Aristotle in Rhetoric oscillates between the appearance of the past and belief in such evil (ibid)

59 In the previous sub-chapter, Al-Kindī refers to the phenomenon by the phrase "الظاهرة في الحيوان ومن أفعالها" And from [the soul's] visible actions in animals demonstrating both the idea that emotion is not a restricted phenomenon to humans, but animals can act emotionally. Second, by introducing animals it helps us to ensure that this phenomenon exists within the sensible aspects of the soul instead of the rational aspects as for Al-Kindī animals are not capable of rational thought.

And among the things that are made visible [apparent/manifest] by the movements of the zir string from among the actions of the soul are: joy, happiness, and to be victorious and firmness of the heart, courage, audacious, pride, haughtiness, and arrogance, and it is suitable to the nature of the al-mākhūrī [rhythm].

The action of this string and this rhythm result in strengthening the yellow bile, and they cause it to move [along with] it during winter and sleep and the age of the musician and nature, when this temperament and mood becomes stronger, it dissolves and thins the phlegm as well as heats it 60.

Al-Kindī is describing to his reader the underlying causal mechanism for the emergence of the listed emotions. The causal mechanism in this case refers to the product of the linkage between the motion of the strings and the actions of the soul. Recast, as per the rationalist tradition, al-Kindī utilizes, but seeks to go beyond, observation or what he can glean from his senses to discover the true nature of things⁶¹. The different humoral pathologies, apart from black bile, are truly observable in the sense that they are subject matter for empiricists. The ways that they affect ethical manifestations as well as the

⁶⁰ Al- Kindī is not the only to make the connections between the 'ūd strings and the humors of the body, Ibn Khurradādhibah (d.911), notes specifically therapeutic uses for the 'ūd strings in relation to the body similarly al-Jāhiz (d.869), in his book al-Tarbī' wa l-Tadwīr (*Squaring and Circling*) has a brief section on music, that links 'the strings, the elements, and the temperaments' (Shehadi 1995). Ibn Khurradādhibah contributes the following "if the strings are in just relation to the celestial numbers (*al-aqdār al-sharīfa*) the natures are in agreement. Thus it creates an emotion, and the emotion restores the soul to its natural state at once" (Farmer 1928).

⁶¹ Al-Kindī's view is based on views like those found in Aristotle who argues that grasping things underlying nature, by necessity requires rational understanding that which is fundamentally distinct from, yet contingent upon the use of experience, whether general or specific (cf. *Metaph.* A 1,981a5-12) (cited in Allen and Allen 2001). [Include Galen as well]

application of music cannot be understood solely by experience but by rational argumentation.

Rationalists emphasize more generally that any artistic knowledge must similarly go beyond experience. Any true form of artistic knowledge must not only observe the phenomenon at hand, i.e. the affect at hand, but provide a reason as to why. In his musical writings, al-Kindī uses the word `illah as a causal principle by which he seeks to determine the causes of several musical phenomena (Fadlou, 1995). Such a description allows the practitioner of the art to attend to the specific underlying causes. For example, the activity of the string and the rhythm acts a causal force that reveals non-evident causes (the action of the performer) on observable outcomes i.e. the amplification of one of the humors of the body. Semiotically, the rational position allows philosophers such as al-Kindī to infer larger rationalist theories from observable conditions or signs. Insofar as the body presents observable signs to the philosopher, he can diagnose the underlying mechanism that brought about such observable phenomenon.

The Harmonic Structure of the Soul- Kindīan Psychology: (Investigation of Mind)

Just as the morality of music can move the soul into different states of affect (*ethos* theory), the soul's very make-up is built upon self-similarity, both as a musical structure and psychological structure. To rephrase, not only does music contain the potential to move the soul to a harmonious or ethical state of consonance, but also, it's very make-up is predicated upon a harmonious and ethical structure. Al-Kindī's reflections on the nature of the ethical soul do not only rely solely upon the effects of the sensible but on its abstracted structure as well. Dualist in approach, al-Kindī considers the relatedness between the physical "thing-

ness" of his strings a non *sui generis* approach to mental states. For each string he assigns a psychological as well as a physical effect, here are their correspondences⁶².

ومن قوة النفس المنبعثة في الرأس القوى الفكري ومن قواها في البدن القوى الجاذبة: For the Zir String

ومن القوة النفس المنبعثة من الدماغ ما يسمى التخيل ومن قواها من البدن القوى :For the Mathna String

ومن قوة النفس المنبعثة في الدماغ القوة الذكرية ومن الأعضاء الرئيسي الدماغ ومن قواها في البدن القوة الدافعة

ومن قوة النفس المنبعثة في رأس قوة الحفظية ومن قواها في البدن بقوة الممسكة :For the Bamm ومن قوة النفس المنبعثة في رأس قوة الحفظية ومن قواها في البدن بقوة الممسكة :Ged. Zakariyyā Yūsuf

1962)

Among the faculties of the soul that emerge from the head [on the one hand] is the faculty of thought⁶³, and from the body [on the hand] the faculty of attraction.

Among the faculties of the soul that emerge from the brain is what is called the faculty of imagination and from the body the faculty of digestion.

63 Al- Kindī defines "thought [fikr] in On First Philosophy, as "a function of the soul which falls short of pure intellection, insofar as it "makes a transition from certain forms of things to others" (xXIX.5, AR 154, RJ 85). According to Adamson, this is following the Arabic Plotinus text, which considers fikr as a substitute for discursive thought inferior to intellection, what Plotinus and the Greeks called [dianoia] (Adamson 2006)

 $^{^{62}}$ rational faculty of the mind as well as an irascible and concupiscent faculty 62 in the body [Also include] ... the three partitions of the soul.

Among the faculties of the soul that emerge from the brain is what is called recollection or memory, and it is one of the principal structures of the brain⁶⁴, and from body is the faculty of propulsive force.

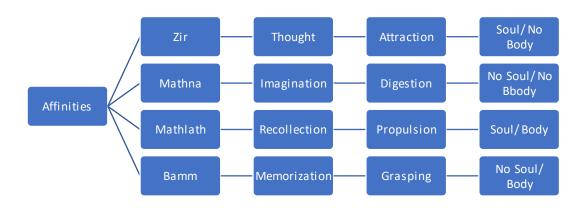
Among the faculties of the soul that emerge from the head is the faculty of memorization [ennoia] and from the body the faculty of grasping.

As described earlier in the section of al-Kindī's ontology of the soul, he discusses the rational aspects as both separate and seated in the mind, while the irascible and concupiscent are considered a unified group seated in the body. Therefore, al-Kindī's description of the correlates between strings, or their similitude, reflects a relation in the structure of the human soul *insofar* as each string is accorded both a rational and a lower paired function, in which he emphasizes the tetradic nature of knowledge in the rational faculties as well as concupiscent and irascible. Yet, there seem to be both tetradic and dualistic presentations of the psychology of mind and the states of being of the soul, where sensation and intellection are presented initially without intermediaries. Furthermore, al-Kindī includes several intermediary internal faculties such as thought [dianoia], imagination [fantasia⁶⁵],

⁶⁴ Perhaps the reason for such emphasis on the faculty of the brain called recollection is because for al- Kindī all learning happens as a function of remembering. A contribution to a larger debate that begins in Plato's *Meno*, in which Socrates rejects the premise of knowledge as learning and instead it is an act of recollection or remembering. Aristotle goes against this opinion and al-Kindī is squarely on the side of Plato. This is abundantly clear in his treatise *On Recollection* which addresses the soul, knowledge, and recollection (Pormann and Adamson 2012).

⁶⁵For example, al-Kindī addresses the superiority of the imaginative faculty over sensation in his epistle *On the Quiddity of Sleep and Dreams*, because the imaginative faculty is not affected by accidents, meaning its actions are constant and the imaginative faculty perceives things that the senses cannot. See Pormann and Adamson chapters IV and V for the full comparison (Pormann and Adamson 2012)

recollection, and memory [ennoia]⁶⁶. Similarly, he presents four ontological conditions for the body-soul relationship including complete non-existence (no body and no soul), partial existence (soul or body), and existence (body and soul) each of which correspond to an individual string. Al-Kindī is unclear in this portion of his musical text whether the strings exist in the same relation in terms of ontological hierarchy. Rephrased, is the Zir string superior to or in control of the Bamn string in the same ways as the soul is to the body? What we can surmise is this extrapolation of the 'ūd qua tetrad is a formal presentation of the cognitive states or (intermediary powers of the soul) as well as ways of being within the world.



(Figure 1.1 The soul is correlated between the faculties of the mind, body, and strings of the ' $\bar{u}d$)

⁶⁶ Some thinkers considered the processes of knowledge to be a direct line from sense perception to intellection, while others such as al-Kindī necessitated multiple intermediary steps.

Unfortunately, beyond its presentation in this musical treatise, al-Kindī's conceptualization of the four-fold structure is not extant. This brings about a series of interesting questions. What does al-Kindī's four-fold cognitive structure say about the engagement with these mental states? Can his approach be considered phenomenological⁶⁷ in that, it assumes, as dualists assume, that there is an inexplicable residue or qualia which emerges from the identification of the inner faculties (Scruton 2014). Does his cognitive approach change within this schema through the inclusion of intermediary powers? Al-Kindī, by positing such a schema, is aware of the complex reality of human thought, but he doesn't make concessions regarding his dualist understanding of epistemology of thought (intellection & sensation) or the ontology of the soul (as separate from the body). In both cases, the intermediary faculties may perform on or in either body or soul, for example, sensation may perform on the soul, but this does not implicate the soul as being somehow a body. Nor does, as in the case of dreams, the faculty of imagination [fantasia] require a body, i.e. fantasia is not simply located in the brain; it is instead a product of the independent soul (Adamson 2006).

For example, logical postulates or precepts (*alfāz mantiqiyya*) interact with both forms of perception sensation and intellection without compromising their unique integrity. Al- Kindī makes such a case in his chapter, On the Anecdotes of the Philosophers, within the treatise *Risā la fi Ajzā' Khubariyya fi al-Musīqa*, where he argues that such precepts enter the soul through the "mechanism of sensory input existing in their ephemeral immediacy

⁶⁷ I say, in some sense, a phenomenological description, in order to complete a description of 'lived experience' but one that combines observations of visual phenomenon mixed with that of a conceptual belief system: the comparisons include the strings to cosmological phenomenon like the zodiac, the moon and sun, seasonal phenomenon, those of months, the day, all temporally lived experiences.

(sensation), and the same logical precepts after scrutiny of thought (al-fikr) are found in the intellect ('aql)". Furthermore, it is of interest to see that al-Kind $\bar{\imath}$ prioritizes thought, as an intermediary, a less pure form of intellection as the correcting mechanism for what reaches the mind from logical postulates. Thought construed as such is considerably distinct from the objective nature of intellection and therefore can mediate between the senses and intellect itself. Fikr or thought is then capable of dealing with the sensible forms as well as universal intelligible things; therefore, acting as a check to but not in substitution of knowledge, which is the privilege of intellection.

Al-Kindī continues the chapter, after recalling his sense epistemologies, by introducing the anecdotes of the philosophers about the art of music⁶⁸. Through his interlocutor Musus, al-Kindī presents a series of opinions that pertain to music and sound. There are definite overlaps and consistency between al-Kindī's views and those of his interlocutors. In the most general sense, music and singing are aligned with the realization of the science of the soul as entangled with the understanding of nature⁶⁹.

The comparison then of al-Kindī's initial interlocutors is as such:

⁶⁸ According to Godwin, this form of presentation belongs to a distinct form or genre that began in the 9th century by Hunayn ibn Ishaq al-'Ibadi. A Nestorian Christian who headed the second major translational circle contemporaneously with al-Kindī, in the former's book "Maxims of the Philosophers" (*Nawadir al-falasifa*) we find a collection of sayings, anecdotes, etc. from classical Greek philosophers. In introducing this genre of literature, Godwin argues that, unlike Western music which concerned itself with music as a self-contained system, the Islamic focus on the moral metaphysics of music manifest in works like this leads to a perspective of musical phenomenology (ed. Joscelyn Godwin 1993). Additionally, it seems that al-Kindī was familiar with Section I, Chapter 18 of the Hunayn's Maxims because his collections of aphorisms stop at this point as well (see pg. 92,93 of Godwin).

⁶⁹ This conceptualization of the entanglement between nature and the soul is emphasized in the introductory portions of this chapter of the thesis and will continue to be a common theme throughout.

"Singing is a noble virtue which logic [rational intellection]⁷⁰ is unable to match in its power, and logic is not powerful enough to create, so the soul produces it [in the form of] a melody, and when [the melody] appears the soul is greatly pleased with it gives itself over to ecstasy. So, listen to the soul and take delight in the call of nature and reflect upon it"⁷¹

(Personal Communication Dwight Reynolds)

Singing and music more generally are understood as an ethical virtue that is contingent upon the soul for its creation. Music in its virtue or singing are phenomenally experienced as both within nature and recognizable or intelligible to and a product of the soul. Recognition of the modality or the quality of music is to be found in the form of melody and *insofar* as that quality is recognized within the soul it finds its ecstasy; therefore, the activity of listening is predicated on the listening to nature and melody, as the soul produces and finds the knowledge of itself both externally and internally.

⁷⁰ In Godwin's translation of (*Nawadir al-falasifa*) a similar phraseology is used, yet she uses the term dialectical faculty, situating the soul as a perceiving subject. Therefore, the soul becomes a perceiving subject through melody, situating soul and nature in a subject-object relation but not a dialectic one(ed. Joscelyn Godwin 1993). Thus, it is related to the argument given above about the Islamic relational knowledge of the soul and nature.

⁷¹ This is quite distinct from the perspective of the Ikhwān al-Safā' where soul and nature are in opposition to one another, and much of the language surrounding music is an injunction against its potential to seduce: "Music has a quality that speech cannot render, and words cannot express. The soul manifests it as a rhythmical melody so that when nature hears it, it takes delight, pleasure, and enjoyment in it. Listen, then, to what the soul relates and intimates, and do not let nature and reflection upon its beauty deceive you" (Edited and Wright 2011). Wright argues the complexity of such a distinction is contingent upon the differences between the *kulli* (whole soul) and *juz'i* (partial soul) See pg. 163 footnote 318, for an in-depth explanation of the differences between the two. See also Godwin, (*Nawadir al-Falsasifa*) pg. 92, Section I, Chapter, 18, 6-12, which is more similar to the Ikhwān in their injunction for paying heed or attention to the transient world; I would argue this is a reference to the world of generation and corruption i.e. nature (ed. Joscelyn Godwin 1993).

After the presentation of a series of postulates, the subsequent interlocutors focus on aspects of music more generally understood by the above framework. One, for example, analogizes virtue to instruments, another the relationship between the soul and the accidental category of number made manifest in strings, a third gives the ways in which music moves the soul to its noble powers such as moderation, righteousness, courage, etc. Kindīan ethical themes arise when one interlocutor posits the soul's affective qualities within theories of knowledge. To rephrase, the interlocutor is agreeing with al-Kindī's epistemological theory, both describing the process of the soul's knowledge as rooted within recollection,

Another said: The soul, when it is in isolation or is alone, hums sad melodies and remembers its [previous] noble existence and [also] whenever it sees in nature something [reminiscent of] that. The soul is exposed to all of its forms, and nature shows [the soul] its previous existences one by one until the soul is brought from the state [solitude, isolation] it was in, and takes from the melodies of nature and creates a noble composition. Alhan almutqin (precise/ scientific music) precedes the melodies in nature, and it continues in this fashion until the soul sees a diver in the sea of intellectual pleasures⁷².

Similarly, nature is responsible for bringing the soul back towards itself or turning the soul by recollection towards knowledge of its own existence. In the soul's recognition of its modalities and forms within nature, due to affect, it moves from a sadness invoked by purity to that of virtue and nobility. Moving from solitude to virtue becomes manifest through

⁷² Cf. Ishaq ibn Hunayn's (*Nawadir al-Falsasifa*) for an alternative explanation in which the soul is placed in opposition to nature, in which the soul in solitude produces melodies and in such a state can remind itself, still recollection theory, of the world of forms or superior world. Nature is the negative agent in this capacity attempting to lure the soul away with its affairs (worldly affairs), and in so doing one will become fully or entirely submerged within it See: (ed. Joscelyn Godwin 1993) pg. 93, 8.

music and specifically a form of music that is precise or scientific, reaching the joys of intellectual pursuit. Therefore, it is the change in state of being, a becoming from sadness, perhaps a chaotic stage anterior to nature's processes, to number and ratio and precise musical form, which endows the soul with its virtue. Al- Kindī's interlocutor is describing the reflection of what is beautiful in the external world that manifests in a well-constructed melodic line (measured, proportioned, well-formed nature) underlying a moral change in character cultivation.

The Same Argument on a Kindīan Commentary

The argument of *similtudinem* or similitude, in which the harmonic representation of the soul is found in musical structures, is not only to be found in the direct works of al-Kindī⁷³. A later commentator on the former's work, Al-Ḥasan bin Aḥmed bin 'Ali al-Kātib⁷⁴ (d. 11C) in his book *Kitāb Kamāl adab al-Ghinā* '(*The Perfection of Musical Knowledge*) discusses the relationship between musical intervals as well as the immaterial human soul. Al-Katīb's ninth chapter⁷⁵ titled "Similitude" constructs relations between the soul (*musica*)

⁷³ Additional commentaries of al-Kindī live on in his other students such as al-Sarakhsī, who are said to have replicated many of their master's theories. As one of al-Kindī's former philosophical disciples, al-Sarahkshī also spoke about the affective capacities of music empirically by the way it moves the soul from cowardice to bravery an idea goes back to the ancient Greeks – for example, Damon, Plato, and Socrates, etc. See pages 153 and 154 of *Takhyil: The Imaginary of Classical Arabic Poetics* for the quotation also see footnote 20 for the relation to al-Kātib as well as al-Sarakhsī's 'elitist' innovations on the Kindī's ethical system which constructed an ethical trinity an Islamization of the Greek theories like that of Heraclides (Gelder and Hammond 2008).

⁷⁴ Al-Ḥasan bin Aḥmed bin 'Ali al-Kātib, an 11th-century municipal secretary, drew his music theory from three sources: al-Kindī (d.874), al-Fārābī, and al-Sarakhsī. From al-Kindī he drew Pythagorean celestial notions and the effects of the soul, the subject of this section. His body-soul relations are drawn metaphorically from al-Fārābī in which practical and theoretical knowledge are grafted onto body and soul respectively(Shehadi 1995). See Shehadi, for a summary of his musicological views.

⁷⁵ The entire chapter can be found in an English translation see Jocelyn Godwin's *The Harmony of the Spheres* (ed. Joscelyn Godwin 1993) for a French translation please see

humana), melodies (instrumentalis), and the cosmological: celestial spheres (musica mundana)⁷⁶. The focus in al-Kātib's chapters is the relationship between the musica mundana and instrumentalis, meaning the relation between the attunement of the soul and the cultivation of music.

Al-Kātib begins by summarizing the writings of his philosophical predecessors about the analogous relationship between the actions of the soul and the categories of consonant intervals. This is an indication that the harmonic representation of the soul was a common trope within the philosophical canon. Al-Kātib specifically attributes this passage to al-Kindī, though the chapter reiterates material found in Ptolemy's *Harmonics*. Al-Kātib draws the reader's attention away from the congruence of the quantity of strings as the epicenter of his analysis to that of the intervallic possibilities that one can generate. He points to the 'noble ratios' of the octave, fifth, and fourth as analogous to the intellective, concupiscible, and appetitive principles of the soul. Despite the shared notion of tripartition of the soul⁷⁷ is ultimately drawn from Plato, al-Kātib 's commentary is more directly derived from Ptolemy's *Harmonics* Book III, V, in which the Ptolemaic formulation of the soul mixes both Aristotelian (*De Anima* Book II. Chapter II) as well as Stoic sources (Barker 1990). Such a syncretic approach may imply a form of logical inconsistency in the writings of al-Kātib,

Amnon Shiloah *La Perfection des Connaissances Musicales* (Paris: Geuthner, 1972), the entire citation is given as it was not consulted in writing this thesis and therefore does not appear in the bibliography.

⁷⁶ The following terms are given by a later author *Boethius* who used such a designation and classification of knowledge, Godwin remarks that al-Katib's work can similarly fall into the same conceptual categories(ed. Joscelyn Godwin 1993).

al-Kindī's Arabic terminology divides the souls' faculties into the "rational" (القوة العقلية) "spirited" (الشهواني) and "appetitive" (الشهواني) this tri-partition originates from Plato's Republic Book. IV in the Greek [logistikos –'calculative'], [spirited -thymikos], and [appetitive – epithemētikos].

which may ultimately derive from al-Kindī. Yet, like Ptolemy, al-Kindī may be using different terminology when addressing different readership⁷⁸. The relationships between musical intervals and the soul are conducive to the Platonic/Stoic worldview, the ethical/ontological approach that we have been referring to so far in al-Kindī's writings. Yet, we find a response to the question of [harmonia], in Ptolemy's definition that locates the resurgence of a rational order predicated on the mathematical lens.

Drawing upon earlier writings, Ptolemy in particular, al-Kātib argues that the octave corresponds to the rational faculties of the soul, the musical fifth to the sensible aspect of the soul, and the musical fourth to the animating faculty. Al-Kātib continues by establishing a hierarchy between the three faculties of the soul predicated upon the mathematical relationships among these musical intervals. Namely, just as the octave has the fifth and fourth embedded within it, so too does the rational soul contain the sensible and animating aspects inside it as well.⁷⁹. Al-Kātib then relates the number of species in the musical octave (i.e the seven notes of the octave) to the seven species or faculties that exist within the rational soul. They are⁸⁰ *al-fahm* (*phantasia*), *al-'aql* (*nous*), *al-hfiz* (*ennoia*), al-riwāya

⁷⁸ In Ptolemy's own *On the Kritêrion*, he adopts a different terminology from that of his *Harmonics*. For example, in the former, he discusses the three faculties of the soul: in the latter three parts, their forms, and species. The reason for such variance is that the former treats the perceptibility of the movements of the soul caused in the body. Psychology is rooted in dually rational and empirical truth dependent on Aristotle's *De Anima* criteria. In *Harmonics*, Ptolemy relies on Platonic and Stoic traditions to describe the soul in terms of harmonic terms such as pitches, parts, species, etc (Feke 2018).

⁷⁹ Al-Hasan al-Katib does not add this sentence which can be found in Ptolemy c.f. pg. 375 by which the latter assert the reason for such is that 'the [fifth and the fourth] is made up of the less perfect melodic intervals and combinations, the latter of the more perfect' (Barker 1990)

⁸⁰Reading from right to left, apprehension, mind, memorization, reflection, syllogism, analogous reasoning, knowledge(الفهم والعقل والحفظ والرواية والظن والقياس والعلم)

(*dianoia*), al-zann (*doxa*), al-qiyās (*logos*), '*ilm* (*episteme*)⁸¹. Subsequently, he presents the notes contained in the musical fifth as corresponding to the human sense regime, consisting of sight, hearing, smell, and taste⁸². Finally, the notes contained within the musical fourth correspond to the Aristotelian conceptions of growth, maturity, and decline, which are found in the animating or generally nutritive part of the soul⁸³.

By analyzing the similitude of the soul through this lens, al-Kātib participates in the project of assigning moral virtue through an attunement to melody and by extension to the soul. The harmonic qualities of musical notes he argues are intertwined with concepts of virtue and vice through the ideas of melodiousness (בוֹעביׁביׁ) and non-melodiousness (עוֹ בּבּיעוֹנייׁ) *4. The direct relationship between music, the soul, and virtue is underscored in the following sentence:

والإئتلاف في النغم هو اشتراك الأصوات المتناسبة و المتوا لفة والاختلاف بضد ذلك وكذلك فضائل النفس هي اعتدالها وإتلاف أجزاءها

⁸¹ Cf. Ptolemy's Harmonics pg. 375 and 376 in Barker

⁸² An additional sentence found in Ptolemy relates the sense of touch to all the other senses; forwarding a Stoic conception he argues that all senses are forms of touch, Aristotle rejects this thesis, and so does al-Kindī who argues that the sense of touch shares aspects of method in what it 'conveys to the soul of joy and pleasure, which it shares with the other senses in most of the conditions'

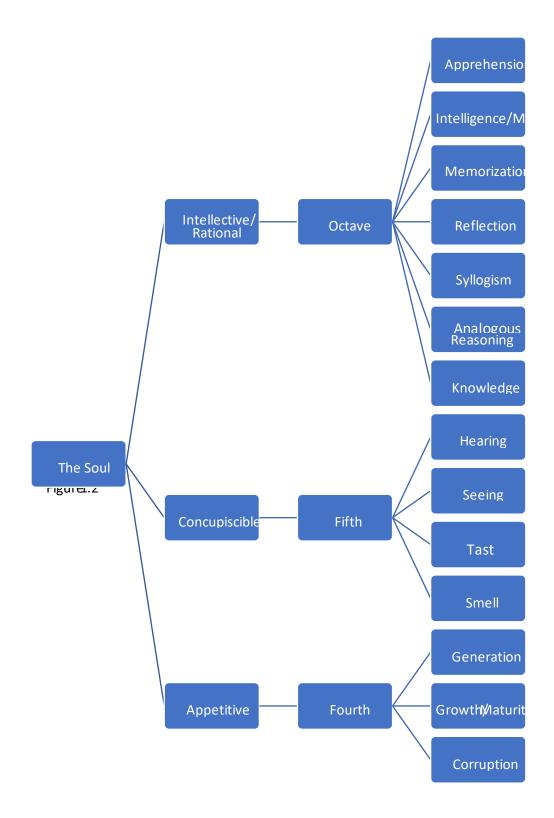
⁸³ See Figure 1.2 below for a graphic emphasizing the relations by similarity.

⁸⁴ Cf. Ptolemy's *Harmonics* pg. 375 and 376 in Barker, In Ptolemy's writing the Greek terms are *emmeles* for melodiousness and *ekmeles* for unmelodiousness. Both in the Arabic and the Greek, there is an understanding that there is the affirmation and negation of both melody and un-melody, similar to moral paradigms that can be either virtues or vices not simultaneously a virtue and a vice.

Consonance in music is the occurrence of sounds that are attuned and harmonious, and dissonance is the antithesis, similarly the virtues of the soul [are realized] in its tempering [and the attunement] of its parts.

(P.C. Reynolds, 2023)

Morality is predicated upon beauty and attunement in relationships that can be found in consonant harmonies as well as those of the soul. The agreement among the melodies' internal constituent parts gives rise to the attunement within the soul as well. This reflection has the power to move the soul into different states of being based on their mutual reflexive properties and it is in the recognition of the proper ordering or well-constructed nature of melody that attunement becomes possible. It is the pattern of organization based on sound harmonic ratios and principles that has the power to affect the soul and bring it to the state to which it belongs, whether that be desire, calm, deadening of the senses, indignation, etc.



(Figure 1.2. The Harmonic Concord and representation of Soul)

Ptolemy argues that [harmonia] is a rational cause that produces the harmonic ratios in both natural bodies identifying the similarity between music, human souls, and celestial bodies as higher rational mathematical constructs. An additional feature of al-Kātib's work on moral theory seems to be a combination of the Ptolemaic elements, but his work is not an exact replication of the material. In al-Katib's formulation of the correspondence between the virtues of the soul and specific notes, he goes on to create an analogy between justice and the note played by the index finger on the third string (mathlath) string of the 'ūd, chastity and that of the middle finger on the third string (mathlath), masculinity and the middle finger on the fourth (highest) string $(z\bar{v})$ i.e. highest tuned string. Neither in the nature of the overall structure of the melody nor in the strings as quantitative entities are the virtues to be accounted for, but instead inherent in the notes themselves. However, the Ptolemaic argument encourages the reader to look at the system, for his understanding is not specifically tied to the third or second note on the x, y, or z string, but instead there exists an overall unity in the [harmonia] that is reflected at the species of the melodics or specific note values. Ethical meaning is conferred with one's engagement with the ' $\bar{u}d$, in fact, one comes to understand an overall ethical system where individual elements exist in relation to one another in a more geometrico 85 .

⁸⁵ The term refers to the writings of Spinoza, the *Ethica ordine*, or *geometrico demonstrate* (1677), 'Ethics demonstrated in <u>the</u> geometric manner,' by which philosophical ethics is as axiomatically true as geometric postulates. In the case of al-Hasan al-Katib, such relationships are predicated more on arithmetic than geometry, and the *topos* of the methodology of mathematical sciences underlying fundamental ethical truths remain consistent (Epple 2015).

Ikhwān al-Safā'

As stated in the introduction, much of the *Ikhwān al-Safā* 's intellectual thinking is closely associated with that of the Peripatetic philosopher al-Kindī. Their doctrines overlap through the use of the same corpus of Greek philosophical thought drawing upon Platonic, Neo-Platonic, Aristotelian, and Stoic sources in the construction of their answers to the problem of the body-soul relationship. Therefore, certain aspects of this section may seem repetitive in relation to the previous section on al-Kindī; however significant distinctions do exist, especially when it comes to the Ikhwān 's reliance on Neo-Platonic thought. The Ikhwān al-Safā, regarded as also a group of intellectual thinkers drawing from Islamic sources, were recognized as adherents of the Mu'tazilah school of rationalist thought as well as drawing inspiration from Shī'ism. ⁸⁶ As Nasr (1993) points out though eclectic with respect to source material the Ikhwan demonstrated a unity in purpose with respect to its teleology namely the edification of man through spiritual education and training. The Rasa'il or epistles of the Ikhwan are organized into three major theoretical categories (1) the primary [propaedeutic] sciences (riyādiyah) (2) the religious sciences (al-sharī 'at al-waḍ'īyah) and (3) philosophical sciences (al-falsafiyat al-ḥaqīqīyah). They are then further sub-divided into four major books that encompass the epistles, the four major books are as follows (1) mathematical and educational treatises numbering 1-14, (2) the sciences of natural bodies numbering 15-31, (3) the psychological and rational sciences number 32-41, (4) and the theological sciences 42-52 (ibid).

⁸⁶ According to Ibn al-Qifṭī, as relayed by al-Tawḥīdī, the actual members of the group were Abu Sulaimā Muḥammad ibn al Ma'shar al-Bastī, Abu'l-Ḥasan 'Alī ibn Hārūn al-Zanjānī, Abū Aḥmad al-Mihrjānī, 'Awfī and Zaid ibn al-Rifā'ī. A different list of authors is given by Shahrazūrī (Nasr, 1993).

I first want to focus for a moment on the emphasis the Ikhwān al-Safā'(s) place on the knowledge of the soul. In Epistle 49b, the Ikhwān write the following "Through man's knowledge of the structure of his body and the modality [of] his soul's action in his body comes his knowledge of what is the entire macrocosm, the existence of his Creator... and the knowledge of His signs written in His Earth and heavens. Thus, the Prophet, God bless and grant him and his family peace, said "Whoever among you is familiar with his soul is most familiar with his Lord" (Uy et. all 2019). With this quotation, the Ikhwān reinforce a knowledge of the self as imperative both to knowledge of the natural world as well as to the understanding of God. Ultimately, for the Ikhwan, the goal of any inquiry into the science of the soul is the comprehension of the Islamic metaphysical truths.

The body-soul distinction is specifically addressed in Epistle 26 On the Claim of the Sages that Man is a *Microcosm*.⁸⁷ Though on one level, one could consider this epistle simply a literature review, as the title is clearly a reference to Greek predecessors (Sages), yet additional evidence makes it seem that these beliefs were integrated and synthesized into the Ikhwan's own thoughts. The epistle itself begins by underscoring the *visual* aspects of gaining knowledge of the soul, and the experiential methodology.

أعلم ان الحكماء الأولين لما نظروا إلى هذا العالم الجسماني بأبصار عيونهم وشاهدوا ظواهر أموره بجواسهم وتفكروا عند ذلك في أحواله بعقولهم وتصفحوا تصرف أشخاص كلياته ببصائرهم واعتبروا فنون جزئياته برويتهم فلم يجدوا جزءاً من جميع أجزائه أتم بنية و لا أكمل صورة و لا بجملته أشد تشبيها من الإنسان

⁸⁷A similar notion is referenced in *Epistle 33: Chapter 2* in which the Ikhwan state that the human being is composed of a coarse corporeal body and a simple immaterial soul, and it is for that reason that the human being is a microcosm, and the universe is a large human.

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Know that when the Ancient Sages looked at this corporeal world with their eyes and witnessed the outward appearances of their affairs through their [faculties] of sensation and then contemplated the states [of the world] using the [faculties] of thought and [they] investigated the behavior of its various components with their eyes... they found none more complete in structure more perfect in form nor in its entirety stronger in similarity than the human being.

(Edited and Baffioni 2014)

The explanation that the Ikhwān give for this is the comprehension of mankind's dualistic nature, as a composite of both the corporeal body and the *pneumatic*⁸⁸ soul (*al-nafs al-rūḥāniyya*). The *prima facie* or, more aptly, the *fantasiya* of appearance, presents to the faculty of sight the beauty of human form and behavior. With that said, what is initially perceived externally is confirmed through an investigation of the internal namely, the existence of the two distinct essences for body-soul. Recast, the human being is only presented through form and behavior, but his parts are then grasped through a more multivalent analysis. The two essences (*jawharayn*) are defined by their epistemology. In the case of the body, it is by way of the senses that one is able to ascertain knowledge of its existence through its dimensionality. To rephrase, the body is defined by its three dimensions (height, width, and depth), while the *pneumatic* soul (rūḥ) is conceptualized through

⁸⁸ As a reminder, the *Pneuma* refers to the spirit as opposed to the *psychical* soul. The Arabic term for the *spirit* is (rūḥ) while the term for *soul* is (nafs). Among different authors the terms take a different valence. *Spirit*, for example, was initially portrayed as something corporeal, a diffused substance within the material bodies of animals and men, a medium through which the *nafs* controlled the body (Tritton 1971).

perception and the faculties of intellection as a sign. According to the Ikhwan, the structure of the corporeal body is what confers external existence to physical bodies such as those associated with astronomy, the composition of the primary elements, those aspects of natural philosophy or cosmology. The soul confers its synonymous role by inferring the existence of immaterial beings such as jinns, angels, animal souls, etc. Though clearly a reference is made to those more-than human beings that are part of a religious lexicography, one should not conflate knowledge of body-soul as an avenue of for religious inquiry. To restate, the acquisition of body-soul knowledge of the body-soul, or the epistemic root is philosophical knowledge 'worship' versus religious worship⁸⁹.

Epistle 50 "On the Quantity and the Quality of the Species of a Proper Attitude" (في الموات و كيفيتها addresses both the ontological dualism accorded to the fundamentally distinct substances of the body and the soul. Within this epistle, the Ikhwān state that knowledge that serves to the 'advantage⁹⁰' of man is attained through proper cultivation and comportment of the body and the soul. Once man is able to cultivate such moral sensibilities then he becomes ready to receive angelic forms and separate from corporeal ones⁹¹. The process of receiving angelic forms is akin to death *insofar* as man becomes lifted out of his body and enters a higher domain. Meaning that once the soul is separated from the body, it

⁸⁹ The traditional question of epistemology in this case between revelation or reason is a fecund question that is embedded within any metaphysics coupled with Divine revelation. In its most basic sense the question seeks to understand whether the root of truth may be discerned by knowledge of reason (logic, deduction, inference etc.) or by knowledge of transmission (the scriptures)

⁹⁰ Man's 'advantage' as stated above is predicated on fulfilling eschatological goals and realizing metaphysical realities; man's ascendency is not material advantage.

⁹¹ This theme similarly emerges in a sub-chapter on the Ikhwān 's analysis in Epistle 14 *On the Meaning of the Posterior Analytics*, the name of the sub-chapter is *Chapter on the Human Being if he Raises his Soul Will Become an Angel* See Vol.1 pg.359.

engages in eternal life in an angelic form, the eternal nature of the soul; therefore, in order to be in a position for the soul to accept the angelic form. The Ikhwān discuss one's need to cultivate the proper attitudes a form of moral ethic of body and soul⁹², which become the basis for a type of worship the Ikhwān term "philosophical worship" (Uy, Baffioni, and Alshaar 2019).

This form of philosophical worship, as well as religious worship prescribed by the Prophet Muhammad (**)⁹³, are inherently dualistic *ergo* dualism is the nature of reality that allows for the reception of angelic forms [opened up and explained]. They see the ancestral lineage of this form of worship as beginning with ancient Greek peripatetic philosophers, to which they attribute a designation only one degree lower than Islamic worship, which occupies the highest position⁹⁴. This theme is reinforced in the Ikhwān's Epistle 5, On Music, in which the body in relation to the soul are considered to be equivalent to the oyster shell and the pearl from which human beings are similarly called to ethical reformation that they may prostrate to the divine mercy and subsequently take on angelic form (Edited and Wright 2011).]

The body-soul distinction as a part of the Ikhwān's philosophical (*falsafa*) discourse is unsurprising due to the definition of philosophy itself, borrowed from Platonic philosophy, as the 'imitation of God insofar as humanity can achieve it⁹⁵'. To achieve such lofty virtue,

⁹²See Chapters 3 & 4 of Epistle 50: *On the Proper Attitude towards the Body and On the Proper Attitude Towards the Soul*

⁹³ Honorific attributed to the Prophet Muhammad (**) by pious Muslims: See Oxford Reference ("sallā Allahū 'aleyhi wa-sallam" n.d.).

⁹⁴ Though the emphasis of this paragraph is to draw attention to ontological distinctions between body and soul, music also has a role to play in the cultivation of moral character.

⁹⁵ This is also cited in the section on Al- Kindī's ethics from Plato's *Theaetetus 176B*

one must ascend and make human flight from the mundane world to the divine world using the cultivation of ethical mimetic practices related to justice, holiness, and wisdom. Yet, the Ikhwān's understanding of the goal of philosophy deviates from the Platonic goal, specifically in the engagement with body-soul relation. The Ikhwān view the *telos* of philosophy as a meditation on death, reminiscent of a discourse given in Plato's *Phaedo* in which Socrates defines the highest virtue of human existence as the purification of the soul from the body; therefore philosophy is inevitably preparation and exercise towards death⁹⁶. (Edited and Baffioni 2014). Insofar as this is the case, comprehending and overcoming the body is central to the fulfillment of the ultimate goals of philosophy among the Ikhwān.

The most explicit reference to the body-soul relationship *qua* musical relation appears in their Epistle 5 *On Music*. In chapter eight, the Ikhwān al-Safā' claim an explicitly musical relation that is predicated upon the fulfillment of multiple requirements. Their concerns for the emergence of the relation are not *apriori* but are necessarily contingent upon the fulfillment of a series of musical requirements. To rephrase, the Ikhwān look first to music in their construction of the argument and then present their views on the immortality and the immateriality of the soul in relation to the body. The relation between body and soul as musical is introduced after the discussion of tuning, in which the very act of proper tuning and proportional combination creates two distinct note categories: quick high ones and slow

⁹⁶ Though the relation between soul-number will be more thoroughly addressed in another chapter on number; it is important to note that the Ikhwān addressed this relationship in their first *Epistle*, *On Arithmetic*, which address the profound relation between the science of numbers as an epistemic method for comprehending the soul as an essence as opposed to an accident. Similarly, that way of realizing profound truths is the understanding of the soul before it attaches to the body, and its returning to its source (Edited and El-Bizri 2013).

low ones. Once these notes are combined in various harmonious ways⁹⁷, they produce a relation between one another to achieve the necessary virtuous ratios for the emergence of the body-soul metaphor. This relation of slow low notes to that of quick high ones will, by similitude, exist like the relation between bodies and souls⁹⁸, a harmony being produced through the unity of these two elements in their interaction subsequently creating words and song.

The Ikhwān 's dualist understanding of the natures of (high quick) notes and (low slow) notes are foundational to their understanding of creation. Borrowing from the Aristotelian conceptualization of Matter and Form or hylomorphism, the Ikhwān use the concept of musical strings and specifically the production of these two types of notes to connect these foundational principles. I argue that the Ikhwān construct the following general analogy:

Soul: Body	Form: Matter	Notes on the Zir (the highest
		string): Notes on the <i>Bam</i> m
		(the lowest string)

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⁹⁷ According to Wright these harmonious ways are predicated of the rhythmic structures. The usage of therm ways relates to blows and strikes alongside the lute in a regular temporal pattern (Edited and Wright 2011).

⁹⁸ The correlation between pitch to the speed of propagation is a relatively frequent problem within the physics of Ancient acoustic sound. Both in the *pseudo*-Aristotelian *Problemata* and *De audibilius* (803a, that distinguishes the speed, responsible for pitch, from strength which determines length) (Pelosi 2010). Farmer identifies the presence of the former in the Islamic 9th and 10th centuries as well as the Ikhwān's familiarity with the latter (Farmer 1965).

(Figure 1.3 The Analogous Musical Relations to Body-Soul constructs found in the Ikhwān 99)

The evidence for this claim can be found in their subsequent epistle, number 6, On the Arithmetical and Geometrical Proportions with respect to the Refinement of the Soul and the Reforming of the Character. Within this epistle, there is a chapter called: On the Virtue of The Science [Episteme] of Ratio [Logos] of Arithmetic and Geometry and Music 100. The Ikhwān begin this sub-section with the invocation of God, emphasizing His metaphysical unity. God's unity is contrasted with the duality of composed and composite existent beings 101. When he was creating the corporeal world (العالم الجسمانية), God endowed it with form and matter 102 the dualistic principles that the Ikhwān refer to as the first of the two origins (الولا الإصلين)).

These two original principles are then responsible for the creation of all living beings, at least those who are subject to generation and corruption: animals, plants, and minerals.

The elements that make up such living beings: earth, air, fire, and water, according to the Ikhwān, are oppositional and differentiated by nature. Therefore, to bring together these

⁹⁹ A similar chart appears in the Stanford Encyclopedia of Philosophy under sub-heading 3. Hylomorphic Soul-Body Relations: Materialism, Dualism, *Sui Generis* to give a further comparative note to the figure given above. (Shields 2020)

Though such an emphasis on the ratios [*logos*] may invite the reader to speculate on Pythagorean and Nicomachean arithmetical and Euclidean geometry, which are essential to the Ikhwān 's thought; I want to focus my initial inquiry on the subject of soul-body as opposed to number, which is the focus of another thesis chapter.

¹⁰¹ The Arabic reads as follows: الموجودات المثنوية مؤلفة ومركبة: The use of the word مؤلفة as opposed to مركبة may be a semantic or lexical priming for the reader who will subsequently read about music to create an association between the act of creating being and the composer. A basic definition of these concepts as summarized from the Ikhwān 's Fifteenth Epistle "Where One Accounts for Matter, Form, Motion, Time, and Place "is as follows "Matter: What we mean by it is every substance which precedes form" and "Form: What we mean by it is every kind and figure which matter a substance accepts unto itself"

elements together there is necessarily a composer who must harmonize these disparate elements (الا بتأليف المؤلف لها)¹⁰³. This agent of action, according to Ikhwān, must bring together these disparate elements into a ratio [logos], otherwise, there will be no mixture or unity among repellant forces.

Along these lines, the Ikhwān explicitly bring in the concept of music. They argue that those sounds found on the *Zir* and the *Bamm* strings due to their qualitatively distinct natures, one as thick the other as thin, etc. are repellant by their very natures. Except, again, when they undergo a form of composition and harmony because without harmony there will be no mixture or synthesis between the elements, which would lead to an unpleasurable listening experience. Like the nature of being itself, which seeks to bring together these paired elements into a single unified being, so too does music attempt to bring these distinct repellant categories into a unified melody. The goal, the Ikhwān posit, of the organization of music is then a mixture or blending of notes into a single melody so that the human faculties of hearing are unable to distinguish between them. It is in that act that nature and the soul delight in, the union of a distinct two-ness into a single unity, the coming together of distinct elements into a single harmony 104.

إلا بمركب ومؤلف يؤلفهما ومتى لا يكون التأليف على النسبة لا يمتزجان ولا يتحدان ولا يستلذهما السمع فمتى ألفا على النسبة ائتلفا وصارا كنغمة واحدة لا يميز السمع بينهما و تستلذهما الطبيعة وتسربهما النفوس

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¹⁰³ See the above footnote but the Ikhwān al-Safā's use the same verb of بتأليف and the actor of المؤلف further priming the reader for the explicitly musical references.

¹⁰⁴ Harmony in this sense does not refer to the Western or modern day conceptualization of multiple differently sounded notes but to a single octave consonance, which means that as the two distinct notes come into a 2:1 ratio with one another and sound simultaneously then they would be imperceivably different from one another *ergo* harmonious what here is termed as a single harmony.

The notes of Bamm and Zir only meet when an organizer or a composer composes the two of them. when the composition is not according to the proper relation they do not mix, nor unify, nor unite. No pleasure is experienced in listening to them. If they are composed or tuned to proper ratios they become as one, and the faculty of hearing [listening] can hardly distinguish between the two and nature delights in them, and souls are made happy with them.

Music's Effects on the Soul – Cognitive Mapping of the Mind

The Ikhwān attribute early on in their epistle, *On Music*, the direct effects of music on the soul. They begin the section, after requesting the aid of God, by arguing the unique position that music has in relation to all other forms of manual craft. The Ikhwān give a definition that every manual craft (acidate) must necessarily take as its matter or material substance something which occurs within nature. Therefore, by taking naturally occurring substances and shaping them the result or product will be physical in form, The Ikhwān classify music as an exception; it is the only practical art whose matter is spiritual substances—the souls of the people who listen to it 105. Such a classification of music places it in a teleology or as a means of achieving a particular end, the psychological states that music brings about in the listener. Insofar as it is still a practical art, it retains definitional aspects of what it means to be one of the practical arts, which share an analogous nature with the artisan whose craft is presupposed by the use of particular materials. The nature of the practical art

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¹⁰⁵ There is an additional exception to the rule which is the art of Logic found in Epistle 10: *On the Meaning of the Isagoge; An Introduction to the Science of Logic,* where the author argues that in fact 'logic is the closest to the spiritual among human arts, since the other arts take natural bodies as their object, and they all deal with physical substances' (Baffioni 2010).

itself as defined in Epistle Eight, On the Practical Arts is "the bringing out [by] the artisan the image in his thought and emplacing it in the material أن الصناعة العملية هي إخراج الصانع).

The Ikhwān, in this statement, point to the cognitive faculty of [fikr] or thought as the faculty of the soul that is responsible for constructing the form of the image, which then gets emplaced in matter, or in music's case, the soul of another individual. The faculty of thought [fikr] is addressed in a chapter in the 35th epistle, On the Intellect and the Intelligible. Here the Ikhwān explain the routes of cognition by introducing the imaginary faculty [fantasia - قوة المتخولة] as an intermediary faculty that is responsible for inscribing sense perceptions into the faculty of thought after receiving them from the faculty of senses. Furthermore, the forms of such perceptions become inscribed within the human psyche as portrayed through a spiritual representation; thereby rendering the quintessence of the soul within such pictorial depictions and emplacing such depictions within matter. Such emplacement of musical or artisanal creation is qualified as the product of the soul. In Epistle 20 on the Quiddity of Nature, the Ikhwān mention the medium for creative activity. "Artisans use natural bodies, which are an instrument and a tool for their souls, the medium by which the souls make their art and action manifest" (Edited and Baffioni 2014).

The Ikhwān present a compelling discourse through a series of short stories in order to demonstrate the ways in which the effects of music on the soul are. A common theme in

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¹⁰⁶ Though we have been considering at length the ontology of the soul as distinct from the body, this rendering of music as a final cause draws us into ontological questions concerning the nature of music as a form of psychological cognition, similar to the Aristotelian and Harmonist theories. Owen Wright addresses this fascinating question on the nature of the ontology of music as a *functionalist* in his translation of *On Music, Epistle 5*,(Edited and Wright 2011).

these stories is that of emotive affect. Whether it is to inflame action to war, to calm down from it, or to move a person from one affective state to the next, music is demonstrably capable of inciting people to take different actions or provoke different states in the soul. For example, the Ikhwān tell a story of two drunkards in an angry disagreement, and the surrounding musicians performed a specific tuning and specific rhythm, the two men returned to a state of peace and demonstrably stood up and embraced. To summarize, it is the teleology of music and its ability to move the listener to different affectual states in a causative way that gives it its purpose. The virtue of music is then implicated on two levels for the Ikhwān. As they argue in their Epistle 8, On the Practical Arts, the nobility of the craft of music is two-fold, the nobility of the craft itself, a reference to its inner organization, as well as the way it affects in souls (وأما شرف صناع الموسيقي فمن وجهين إثنين أحدهما من جهة صناع (نفسها والأخر من جهة تأثيراتها في النفس).

This presentation of the information so far has been that of the craftsman or performer, one who constructs music for the listening audience, yet if we invert this paradigm to conceptualize the experience of music from listener's end, how do listener's perception and cognition work? Whereas I attempted to demonstrate a spatial representation of cognition in al-Kindī's nature of strings as static representative entities. I will ally it with the Ikhwān -(ic) conceptualization which gives their readers a spatial-temporal representation of cognition through the performance of strings as dynamic entities¹⁰⁷¹⁰⁸. The Ikhwān,

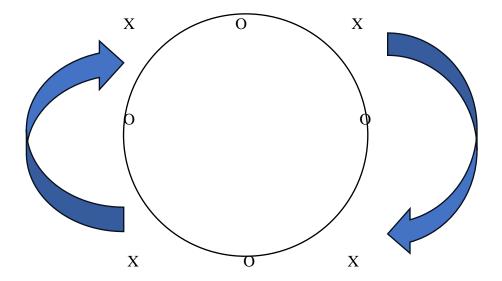
¹⁰⁷ This may be misleading for readers, the Ikhwān maintain the same tetradic conceptualization as al-Kindī between the four strings and the four cognitive faculties. The distinction with al-Kindī seems to be the description of the faculties themselves as natural faculties [quwa hayawaniyya], as opposed to from the head and the body. (Edited and Wright 2011)

 $^{^{108}}$ Additionally, concerning al-Kindī rationalist medico-physico program for the ' $\bar{u}d$ strings. The Ikhwān echo al-Kindī's analysis of the strings with one exception, the addition of

summarily achieve this end of cognitive mapping by utilizing the senses to underscore larger epistemological descriptions. In Epistle 5, $On\ Music$, the reader is informed of the rational principles and dual nature that guide the architecture of music. There exists either sound by striking or silence, (1) this relationship must enter a ratio of minimally 2:1, i.e., for every two strikes of ' $\bar{u}d$ strings there must be a separation of one pause. (2) Pauses must maintain equivalent temporal value or longer [pauses =- attacks or pauses > attacks]. These are but a few of the rules of analogical rules that dictate the basic structures for sound perception.

Sound perception is a function of taking in sensory data through the faculty of hearing. Yet the sensibilia (phenomena that can be sensed) are subject to the rules of the natural world and exist in their ephemerality; therefore, the ears perceive sounds and communicate and send? them to the faculty of imagination[re-worded]. The imaginative faculty, according to the Ikhwān, constructs mental images of these no longer extant sounds, transferring them to *fikr* (faculty of thought that) is responsible for discriminations of hearing on larger time scales [rephrase]. Therefore, the recognition and calculation of spatial magnitudes and temporal distance that occur in the faculty of thought are contingent upon the mental images of sensibilia. The faculty of imagination, according to the Ikhwān, can only maintain a mental image for approximately three reciprocal attacks with one rest between them, the resultant diagram given below.

opposites. For example, when discussing the use of the highest string and its strengthening of yellow bile they simultaneously author the humor of phlegm as opposing it. Finding the ultimate origin in Hippocrates and Galen, such an addition re-affirms the rationalist position of medico-ethics.



(Chart given in Owen Wright, and found within most manuscripts with my own modification the addition of the circle and turned lines of motion -o 's symbolizes pauses, x's symbolize attacks)

Wright makes the point that such a representation is a pre-cursor for later spatiotemporal representations found in diagrammatic approaches in Safi al-Din al Urmawi's thirteenth-century *Kitab al-Adwar*¹⁰⁹ (Book of Circles) (Edited and Wright 2011). The term that he employs is a 'circular orbit,' as an explanation of the phenomenon of motion, the rhythmic spatial and temporal magnitudes that travel about in a circle; it suffices to say at this

¹⁰⁹ In the Kitab al-Adwar circles are representative of the number of beats within a rhythm, irrespective of their size; therefore, demonstrating the total number of motions and rests relative to one another. In the example provided by the Ikhwān, the representation is the upper limit of human retention, a portrait of cognition ("OPenn: LJS 235 Kitāb al-Adwār Fī al-Mūsīqá.," n.d.)

point that this degree of cognition is realized in the individual microcosmos. Reformulated, the spatial-temporal perceptual cognition of the individual, as demonstrated by music, is an invocation of circular i.e. non-linear time.

The inherent cyclicity of audible perception is recognized in the Ikhwan's *Nawadir al-Falasifa* (Maxims of the Philosophers). In the sub-chapter on music, the two senses of vision and hearing, are juxtaposed. The binary positioning and prioritization of one of the senses over, termed the audiovisual litany by contemporary sound scholars¹¹⁰, inherently recognizes regimes of experience that underlie one's interactions with the world. The crux of the argument pertains to the contrast between hearing, as that which leads the soul to spirit, and sight, which leads the soul to the letter [i.e. the written word] (Sterne 2011). Though the terminology is borrowed from Christian spiritualism of spirit-letter¹¹¹, the 'Theology of Sound' is an authoritative phenomenological account that places hearing and sight at the very center of questions surrounding the soul. Spirit is associated with the life-giving spirit and the letter with death, materiality, inertia, and damnation (*ibid*). Therefore, the human sensorium

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The critique of sound studies scholars, like Jonathan Sterne, Sobchack, Gitelman, Khesthi, and Robinson, argues that the Western philosophical tradition has been dominated by 'ocular-centrism.' The primacy of vision over all the other senses is a tradition that is said to have begun with Aristotle whose Metaphysics argues 'all men naturally desire to know. An indication for this is our esteem for the senses... most of all... we prefer sight... the reason of this is that... sight best helps us to know things, and reveals many distinctions'(J. Henderson, n.d.-a). Yet, sound as a life-giving entity has its roots in Plato and is continued by Neoplatonists and theologians as a form of 'ontotheology'. In any case, the trend of 'ocular-centrism' can be seen as continued by recent post-modernist philosophers like Jacques Derrida, whose deconstructionist project critiques the sounded nature of the world arguing for vision, writing, difference, and absence (Sterne 2011)

¹¹¹ In addition, to Plato (see above footnote) sound as a life-giving entity is found in the Gospels of John and the writings of Saint Augustine.

is implicated in ethics, body-soul relations, and even eschatology *insofar* as it directly deals with the purification and uplifting of the soul or *vice versa*.

It is striking that a very similar conceptualization of hearing and vision is also found in the writings of the Ikhwan. The evidence for this in the narrative structure of the aphorisms in Nawadir al-Falasifa. Nearly the same quotation that was given in the section on al-Kindī (see pg. x) and is immediately followed by:

"Verily, souls if they are purified of bodily desires and renounce natural pleasures and are purified from materiality, they intone sad songs,[and they] recall their noble spiritual world."

(P.C. Reynolds, 2023)

Of the six anonymous philosophers quoted in the *Nawadir* one remarks that vision is more virtuous than hearing, while the five others remark that hearing is the more virtuous. In Wright's words (2011), the contention of visual superiority is 'speedily brushed aside', to review the contention as to why hearing is considered superior.

Here are the arguments that the philosophers raise:

- 1.) Whereas hearing apprehends sensible objects from all directions and the horizons of the circle, vision only apprehends sensible objects along straight lines.
- 2.) Whereas the sensible objects perceived by hearing are fully spiritual, sensible objects perceived by vision are generally corporeal.
- 3.) Whereas hearing has sensible objects brought to it and is served like a king, vision goes out in search of its sensible objects and serves them until it perceives them like a slave.

- 4.) Whereas the soul by way of hearing acquires knowledge from what is concealed from it in space and time, by way of vision it only perceives what is present in time.
- 5.) Hearing can distinguish to a finer degree than vision, for it can distinguish... the deviation from the musical rhythm and the melodic contour, and vision makes errors in most of its perceptions because it occasionally perceives what is large as small and what is small as larger, *etc*.

(P.C. Reynolds, 2023, with additional grammatical and syntactic modifications)

Thesis Conclusion:

In the Islamic tradition of thought, the fundamental understanding of the relationship between humanity and the universe, whether on grand or intimate scales relies on self-knowledge. The knowledge of one's soul (nafs) is that which serves as the key to unlocking the most profound truths of existence ('ilm). Hence, the stakes for understanding the soul were enormous and Islamic philosophers were deeply invested in exploring the existence of the soul at multiple levels: its structure, its relationship to the body, its relationship to nature, and its relationship to the divine. Yet in exploring such relationships, philosophers needed recourse to language and specifically metaphor as a way to analogize the intimate connection between soul and body and the soul to the eternal. To that end the semantic lexicon which they chose as the metaphorical basis for aesthetic expression was music. The Islamic Peripatetics followed in the footsteps of their Greek predecessors by turning to musical terminology in order to provide an epistemologically valid way of comprehending the soul's relationship to the body and subsequently as a touchstone to understanding the larger cosmos.

Both at the level of authors and ideas, these interdisciplinary theories of music, ethics, body-soul, and ontology are inevitably entangled with one another, and I have attempted to pay particular attention to the human microcosm and its expression in a cosmos.

This chapter has been an attempt at a comprehensive exploration of the Islamic Peripatetic discourse surrounding the philosophical discourse of the body-soul problem through musical language. We began this thesis with a meticulous examination of the dialectical arguments that emerged from Ancient Greece, which served as a review of the literature on the body-soul dichotomy, with a special focus given to the harmony [harmonia] thesis. Initiated by Pythagorean Simmias, the harmony thesis argues that the soul is necessarily contingent upon the body just as tuning is contingent upon the instrumental body that produces it. Simmias' epiphenomenalist explanation of mental states is exemplified in his accounting of the soul's ontology by which he considers the soul to be a harmony. This thesis receives sustained dialectical refutation from within the same text through Plato's interlocutor Socrates, who rejects Simmias' thesis on the ground of its faulty logic, which conflates correlation with causation. Aristotle extends this critique by identifying faults within the Pythagorean designation of the [harmonia] as a substance, which, he argues, should more appropriately be understood as a virtue or accident.

The critiques of Pythagoreanism are continued by the Islamic Peripatetics in their Arabic commentaries on, and paraphrases of, ancient Greek works. Themistius' commentary, for example, utilized musical terminology when refuting the Pythagorean transmigration thesis, a conceptualization of the soul as that which 'in-forms' the body and gives it its underlying function. These Aristotelian refutations were also applied to the [harmonia] thesis where critiques were provided through the metaphorical language of musical melody. Ishaq

ibn Hunayn's conclusion, introduced the idea that harmony can exist both in material and immaterial forms, his discussion utilizes sound and music as a form of reasoned counterargument to the existence of harmony within the body; he juxtaposes speech and music with the material constituents of the body, and highlights the distinction within their materiality. Whereas speech and sound are abstractions of their respective categories the body is material, echoing Simmias dichotomy between material and immaterial substance.

The Aristotelian critiques of the body-soul relationship became in infused with Plotinian Neoplatonism in the *Theology of Aristotle*. The Adapter of the Theology of Aristotle offers a nuanced critique to the *entelchia* argument by recognizing the concept but limiting it to the body's potential for life. The soul has a dual nature: it can exist separately from the body (Neo-Platonic perspective) while influencing the body at a nutritive level. This duality is explored across conceptual realms and man is seen as embodying the soul as a logos [relation]. Specifically, as it relates to the harmonia doctrine, the Adapter offers a comprehensive rebuttal to the Pythagorean doctrine, through a stronger emphasis on the ordering series between the soul and the body. The emphasis on the substantial nature of the soul and incidental nature of harmony allows the Adaptor to argue that the soul precedes the body both causally and ontologically; therefore, the soul is that which orchestrates the harmony to the body. Furthermore, the Adapator challenges the notion of numeric consistency proposed by the Pythagoreans, arguing that if harmony were equated with the soul, it would imply simultaneous harmonization of multiple souls, an incongruous concept. Instead, the Adaptor presents a discourse where the musician functions as the causal agent, reframing the discussion around the active role of music in the body-soul relationship. The Adaptor contends that, akin to how a musician actively engages with an instrument in order

to produce harmony, the soul is the active agent in relation to the body, distinct from the body's passive reception to external stimuli. Once again, this argument re-reinforces the soul as a unique substance and its separateness, and not simply the idea that the soul is a by-product of the body's harmony.

The second portion of this essay has presented an in-depth investigation of the ideas of the philosopher al-Kindī, one of the major Islamic Peripatetics, relating the ontological dualism of the body-soul relationship to its ethical implications. Al-Kindī's characterization of the soul is as simple, distinct from the body, and possessing a non-material essence—a perspective that resonates with Platonism. The conceptualization underscores the soul's primacy and its role as a driving force behind human actions and perceptions. Al-Kindī's elucidates his Platonic organization of the soul by equating the lower faculties of the soul to the appetite and irascible, while assigning the rational faculties to the higher aspects of the tri-partitioned soul. Such a hierarchy places the rational soul as that which governs and directs the other faculties *ergo* moral and ethical behavior.

Al- Kindī's writings emphasize the importance of music in its role of developing rationality, spiritual purification, and ethical development. This is exemplified in his corpus of writings such as the treatise *On Dispelling Sorrows* that discusses the methodology of achieving happiness as ethical *eudamonia* by way of 'training' and 'self-cultivation,' a form of *praxis* that reflects Islam ethical principles, highlighting the importance of character refinement in the pursuit of emulating divine attributes. Music can be a way to resolve the complex of dynamic emotions and the subject of psychosomatic intervention; the analogization between specific notes and emotional states suggests that music can affect the soul's disposition. Furthermore, in its performance music becomes a form of practical

virtuous action (*praxis*), mediating between the soul's needs and the body's needs in the attainment of *eudamonia* or supreme happiness.

Al- Kindī's interdisciplinary efforts ranging medicine, music, and philosophy reveal his epistemological tension between and engagement with rationalism and empiricism. While he ultimately leans on the use of rational theories, he acknowledges the value of empirical evidence in providing the substance for his rationalist theories. For example, in his analysis of the moral impact of music he relies on observable or apparent phenomena in order to elucidate the causal link between musical elements and emotional responses. *Insofar* as he is able to observe and treat his observations as elucidations of signs, Al–Kindī is able to deduce underlying principles governing these phenomena, showing a synthesis of empirical observation and rational analysis in his philosophical inquires.

Al- Kindī's not only posits the possibility that music has the potential to move the soul to specific affective states, but that the soul exhibits a similar structure to music, specifically musical intervals. To rephrase, musical intervals and the soul have structural similarity, embodying harmony and ethical resonances, the soul *has* a harmony instead of *being* a harmony. His dualist perspective views the soul's faculties as distinct from the physical body, each faculty corresponding to a specific string on the 'ūd. His analysis extends to the ontology of the soul-body relationship, correlating the structure of the soul and body with the arrangement of strings and the tetradic nature of knowledge within the rational faculties. Furthermore, he dialogues with his interlocutors underscoring the ethical dimension of music, portraying the soul's aesthetic expression in nature and nature's capability of elevating the soul towards moral excellence, an excellence predicated upon the beauty and attunement of the relationships found in consonant harmonies.

Al-Kindī's successor Al-Ḥasan bin Aḥmed bin 'Ali al-Kātib provides a commentary that attempts to unify the profound connection between music mundane (celestial spehres), musica humana (human soul), and musica instrumentalis (melodies). Drawing upon the Kindīan philosophical lineage, al-Kātib explore the analogical relationship between actions of the soul and categories of consonant intervals, noble ratios as musical intervals become analogized to aspects or partitions of the soul. The hierarchy between the rational, sensible, and animating principles of the soul mirrors the mathematical relationships inherent in music. Beyond simply quantitative reasoning, al-Kātib suggests that harmonic qualities of musical notes are entangled with concepts of virtue and vice, positing consonance in music as *akin* to attunement and harmonious balance in the soul, revealing the ethical dimensions of music as well as the coterminous relationship between music and the soul.

The final section of this essay explores the intellectual connections between the Ikhwān al-Safā' and al-Kindī as well as elaboration that are unique to the Ikhwān's Neo-Platonic emphasis. The Rasā'il or epistles of the Ikhwan are organized into three major theoretical categories (1) the primary [propaedeutic] sciences (riyāḍiyah) (2) the religious sciences (al-sharī 'at al-waḍ'īyah) and (3) philosophical sciences (al-falsafiyat al-ḥaqīqīyah). They are then further sub-divided into the four major books are as follows (1) mathematical and educational treatises numbering 1-14, (2) the sciences of natural bodies numbering 15-31, (3) the psychological and rational sciences number 32-41, (4) and the theological sciences 42-52. The Ikhwān's emphasis on systematic knowledge is direct towards a unified overall goal, which is the emphasis on self-knowledge and subsequently its connection to the natural world and theology, all of which underscores the importance of the science of soul and the body-soul relationship in Islamic metaphysics. Evidence for such a claim can be

found in Epistle 26, "On the Claim of the Sages that Man is a Microcosm," an epistle that delves into the body-soul distinction, blending visual observation with experiential methodology. The Ikhwān articulate a dualistic understanding of human nature, highlighting the body's material dimensions and the soul's immaterial essence through an analogy between the harmony between quick high notes and slow low notes.

The Ikhwān propose a musical metaphysics, a description of the formative principles that shape reality, from their dualist understanding of notes based on their cosmogony, drawing parallels between musical strings and the principles of Form and Matter. In the psychological domain, the Ikhwān al-Safā' explore music's impact on the soul, distinguishing it from other crafts by detailing it as the only craft that deals with spiritual substances i.e. the soul; music's teleology lies in its ability to evoke various psychological states in listeners, making it both a practical art and a means of achieving specific ends. The cognitive mapping of music's effects on the mind is depicted through a series of short stories. Moreover, the Ikhwān discuss the spatial-temporal representation of cognition in music, demonstrating how sensory data are processed through the faculties of hearing, imagination, and thought. Additionally, in their description, the Ikhwān espouse a complex cognitive theory that centers hearing as a modality that connects with the inherent cyclicity of perception that is elaborated by a world predicated on hearing – a 'theology of sound.' Associating each sense with distinct spiritual and material qualities, the Ikhwān presents the superiority of hearing over vision, emphasizing its ability to apprehend sensible objects from all directions to distinguish finer details.

To conclude, the exploration of Islamic Peripatetic perspectives on the body-soul problem through musical language reveals a deep-seated interconnection between

philosophical inquiry, metaphysical speculation, and aesthetic expression. Philosophers such as al-Kindī and the Ikhwān al-Safā' utilized music and musical metaphor in order to grapple with the ontological status of the soul and elucidate its ethical implication in shaping human experience and understanding. Furthermore, the metaphorical richness of music provides the nuanced framework for understanding the relationship between the corporeal and spiritual, material and immaterial, and the individual and the cosmos in Islamic metaphysics. By engaging with music as a metaphor for the soul-body relationship, Islamic philosophers were able to construct an interdisciplinary perspective integrating diverse strands of knowledge into a unified conceptualization of existence. Ultimately, music and its study in Islamic philosophical thought serves as a testament to the profound ways aesthetic expression can illuminate fundamental question about nature of reality, human consciousness, and the divine.

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