

EPISTLES OF THE BRETHREN OF PURITY

On Music

An Arabic Critical Edition and
English Translation of EPISTLE 5



Edited and Translated by
Owen Wright

Foreword by
Nader El-Bizri

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The *Epistles of the Brethren of Purity* is published by Oxford University Press in association with the Institute of Ismaili Studies, London. This bilingual series consists of a multi-authored Arabic critical edition and annotated English translation of the *Rasā'il Ikhwān al-Ṣafā'* (ca. tenth-century Iraq).

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‘Al-Kindī’s Braid’, *Bulletin of the School of Oriental and African Studies*, 69, 1 (2006);

‘Mais qui était “Le compositeur du *Péchérev* dans le makam *Nihavend*”?’’, *Studii şi Cercetări de Istoria Artei: Teatru, Muzică, Cinematografie*, serie nouă, vol. 1 (45), 2007 (2008);

Touraj Kiaras and Persian Classical Music: An Analytical Perspective (Farnham: Ashgate, 2009).

Contents

Acknowledgements	xv
Foreword	xvii
Introduction	1
Epistle 5: On Music	73
Select Bibliography	177
Subject Index	181
<i>Risāla</i> 5 (Arabic Text & Variants)	[Arabic pagination 3–188]
Arabic Index	[Arabic pagination 189–380]

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Foreword

The Brethren of Purity (Ikhwān al-Ṣafā') were the anonymous members of a fourth-/tenth-century¹ esoteric fraternity of lettered urbanites that was principally based in the southern Iraqi city of Basra, while also having a significant active branch in the capital of the 'Abbāsid caliphate, Baghdad. This secretive coterie occupied a prominent station in the history of scientific and philosophical ideas in Islam owing to the wide intellectual reception and dissemination of diverse manuscripts of their famed philosophically oriented compendium, the *Epistles of the Brethren of Purity* (*Rasā'il Ikhwān al-Ṣafā'*). The exact dating of this corpus, the identity of its authors, and their doctrinal affiliation remain unsettled questions that are hitherto shrouded with mystery. Some situate the historic activities of this brotherhood at the eve of the Fāṭimid conquest of Egypt (ca. 358/969), while others identify the organization with an earlier period that is set chronologically around the founding of the Fāṭimid dynasty in North Africa (ca. 297/909).

The most common account regarding the presumed identity of the Ikhwān is usually related on the authority of the famed *littérateur* Abū Ḥayyān al-Tawḥīdī (ca. 320–414/930–1023), who noted in his *Book of Pleasure and Conviviality* (*Kitāb al-Imtā' wa'l-mu'ānasa*) that these adepts were obscure 'men of letters': Abū Sulaymān Muḥammad b. Ma'shar al-Bustī (nicknamed al-Maqdisī); the *qāḍī* Abū al-Ḥasan 'Alī b. Hārūn al-Zanjānī; Abū Aḥmad al-Mihrajānī (also known as Aḥmad al-Nahrajūrī); and Abū al-Ḥasan al-'Awfī. Abū Ḥayyān also claimed that they were the senior companions of a secretarial officer at the

1 All dates are Common Era, unless otherwise indicated; where two dates appear (separated by a slash), the first date is hijri (AH), followed by CE.

Būyid regional chancellery of Basra, known as Zayd b. Rifā'a, who was reportedly an affiliate of the Brethren's fraternity and a servant of its ministry. Even though this story was reaffirmed by several classical historiographers in Islamic civilization, it is not fully accepted by scholars in terms of its authenticity. Furthermore, some Ismaili missionaries (*du'āt*) historically attributed the compiling of the *Epistles* to the early Ismaili Imams Aḥmad b. 'Abd Allāh (al-Taḳī [al-Mastūr]) or his father, 'Abd Allāh (Wafī Aḥmad), while also suggesting that the *Rasā'il* compendium was secretly disseminated in mosques during the reign of the 'Abbāsid caliph al-Ma'mūn (r. 198–218/813–833).

Encountering 'veracity in every religion', and grasping knowledge as 'pure nourishment for the soul', the Ikhwān associated soteriological hope and the attainment of happiness with the scrupulous development of rational pursuits and intellectual quests. Besides the filial observance of the teachings of the Qur'an and hadith, the Brethren also reverently appealed to the Torah of Judaism and to the Gospels of Christianity. Moreover, they heeded the legacies of the Stoics and of Pythagoras, Hermes Trismegistus, Socrates, Plato, Aristotle, Plotinus, Nicomachus of Gerasa, Euclid, Ptolemy, Galen, Proclus, Porphyry, and Iamblichus.

The Brethren promoted a convivial and earnest 'companionship of virtue'. Their eschatological outlook was articulated by way of an intricate cyclical view of 'sacred' history that is replete with symbolisms and oriented by an uncanny hermeneutic interpretation of the microcosm and macrocosm analogy: believing that the human being is a microcosmos, and that the universe is a 'macroanthropos'. The multiplicity of the voices that were expressed in their *Epistles* reflects a genuine quest for wisdom driven by an impetus that is not reducible to mere eclecticism; indeed, their syncretism grounded their aspiration to establish a spiritual refuge that would transcend the sectarian divisions troubling their era.

In general, fifty-two epistles are enumerated as belonging to the *Rasā'il Ikhwān al-Ṣafā'*, and these are divided into the following four parts: Mathematics, Natural Philosophy, Sciences of the Soul and Intellect, and Theology. The first part consists of fourteen epistles, and it deals with 'the mathematical sciences', treating a variety of topics in arithmetic, geometry, astronomy, geography, and music.

It also includes five epistles on elementary logic, which consist of the following: the *Isagoge*, the *Categories*, the *On Interpretation*, the *Prior Analytics*, and the *Posterior Analytics*. The second part of the corpus groups together seventeen epistles on 'the physical or natural sciences'. It thus treats themes on matter and form, generation and corruption, metallurgy, meteorology, a study of the essence of nature, the classes of plants and animals (the latter being also set as a fable), the composition of the human body and its embryological constitution, a cosmic grasp of the human being as microcosm, and also the investigation of the phonetic and structural properties of languages and their differences. The third part of the compendium comprises ten tracts on 'the psychical and intellective sciences', setting forth the 'opinions of the Pythagoreans and of the Brethren of Purity', and accounting also for the world as a 'macroanthropos'. In this part, the Brethren also examined the distinction between the intellect and the intelligible, and they offered explications of the symbolic significance of temporal dimensions, epochal cycles, and the mystical expression of the essence of love, together with an investigation of resurrection, causes and effects, definitions and descriptions, and the various types of motion. The fourth and last part of the *Rasā'il* deals with 'the *nomos* or legal and theological sciences' in eleven epistles. These address the differences between the varieties of religious opinions and sects, as well as delineating the 'Pathway to God', the virtues of the Ikhwān's fellowship, the characteristics of genuine believers, the nature of the divine *nomos*, the call to God, the actions of spiritualists, of jinn, angels, and recalcitrant demons, the species of politics, the cosmic hierarchy, and, finally, the essence of magic and talismanic incantations. Besides the fifty-two tracts that constitute the *Rasā'il Ikhwān al-Ṣafā'*, this compendium was accompanied by a treatise entitled *al-Risāla al-jāmi'a* (The Comprehensive Epistle), which acted as the *summa summarum* for the whole corpus and was itself supplemented by a further abridged appendage known as the *Risālat jāmi'at al-jāmi'a* (The Condensed Comprehensive Epistle).

In spite of their erudition and resourcefulness, it is doubtful whether the Brethren of Purity can be impartially ranked amongst the authorities of their age in the realms of science and philosophy. Their inquiries

into mathematics, logic, and the natural sciences were recorded in the *Epistles* in a synoptic and diluted fashion, sporadically infused with gnostic, symbolic, and occult directives. Nonetheless, their accounts of religiosity, as well as their syncretic approach, together with their praiseworthy efforts to collate the sciences, and to compose a pioneering 'encyclopaedia', all bear signs of commendable originality.

In terms of the epistemic significance of the *Epistles* and the intellectual calibre of their authors, it must be stated that, despite being supplemented by oral teachings in seminars (*majālis al-‘ilm*), the heuristics embodied in the *Rasā'il* were not representative of the most decisive achievements in their epoch in the domains of mathematics, natural sciences, or philosophical reasoning. Moreover, the sciences were not treated with the same level of expertise across the *Rasā'il*. Consequently, this opus ought to be judged by differential criteria as regards the relative merits of each of its epistles. In fairness, there are signs of conceptual inventiveness, primarily regarding doctrinal positions in theology and reflections on their ethical-political import, along with signs of an intellectual sophistication in the meditations on spirituality and revelation.

The *Rasā'il* corpus is brimming with a wealth of ideas and constitutes a masterpiece of mediaeval literature that presents a populist yet comprehensive adaptation of scientific knowledge. It is perhaps most informative in terms of investigating the transmission of knowledge in Islam, the 'adaptive assimilation' of antique sciences, and the historical evolution of the elements of the *sociology* of learning through the mediaeval forms of the popularization of the sciences and the systemic attempts to canonize them. By influencing a variety of Islamic schools and doctrines, the Brethren's heritage acted as a significant intellectual prompt and catalyst in the development of the history of ideas in Islam. As such, their work rightfully holds the station assigned to it among the distinguished Arabic classics and the high literature of Islamic civilization.

The composition of this text displays impressive lexical versatility, which encompasses the technical idioms of mathematics and logic, the heuristics of natural philosophy, and the diction of religious pronouncements and occult invocations, in addition to poetic verses,

didactic parables, and satirical and inspirational fables. Despite the sometimes disproportionate treatment of topics, the occasional hiatus in proofs, irrelevant digressions, or instances of verbosity, the apparent stylistic weaknesses disappear, becoming inconsequential when a complete impression is formed of the architectonic unity of the text as a whole and of the convergence of its constituent elements as a remarkable *oeuvre des belles lettres*.

Modern academic literature on the *Rasā'il Ikhwān al-Ṣafā'* is reasonably extensive within the field of Islamic studies, and it continues to grow, covering works dating from the nineteenth century up to the present, with numerous scholars attempting to solve the riddles surrounding this compendium. The academic rediscovery of the *Rasā'il* in modern times emerged through the monumental editorial and translation efforts of the German scholar Friedrich Dieterici between the years 1861 and 1872. Several printed editions aiming to reconstruct the original Arabic have also been established, starting with the *editio princeps* in Calcutta in 1812, which was reprinted in 1846, then a complete edition in Bombay between 1887 and 1889, followed by the Cairo edition of 1928, and the Beirut editions of 1957, 1983, 1995, and their reprints.² Although the scholarly contribution of these Arabic editions of the *Rasā'il* is laudable, as they valuably sustained research on the topic, they are uncritical in character, and they do not reveal their manuscript sources. Consequently, the current printed editions do not provide definitive primary-source documentation for this classical text. Given this state of affairs, the Institute of Ismaili Studies (IIS) in London has undertaken the publication (in association with Oxford University Press) of a multi-authored, multi-volume Arabic critical edition and annotated English translation of the fifty-two epistles. In preparation

2 The principal complete editions of this compendium that are available in print consist of the following: *Kitāb Ikhwān al-Ṣafā' wa-Khullān al-Wafā'*, ed. Wilāyat Ḥusayn, 4 vols. (Bombay: Maṭba'at Nukhbat al-Akhbār, 1305–1306/ca. 1888); *Rasā'il Ikhwān al-Ṣafā'*, ed. Khayr al-Dīn al-Ziriklī, with two separate introductions by Ṭaha Ḥusayn and Aḥmad Zakī Pasha, 4 vols. (Cairo: al-Maṭba'a al-'Arabiyya bi-Miṣr, 1928); *Rasā'il Ikhwān al-Ṣafā'*, ed. with introduction by Buṭrus Bustānī, 4 vols. (Beirut: Dār Ṣādir, 1957); and an additional version, *Rasā'il Ikhwān al-Ṣafā'*, ed. 'Arif Tāmir, 5 vols. (Beirut: Manshūrāt 'Uwaydāt, 1995).

for the critical edition, reproductions of nineteen manuscripts were acquired by the IIS, and their particulars can be summarized as follows, with the corresponding Arabic sigla:

Bibliothèque nationale de France, Paris:

MS 2303 (1611 CE): [ر]

MS 2304 (1654 CE): [ز]

MS 6.647–6.648 (AH 695; Yazd): [د]

Bodleian Library, Oxford:

MS Hunt 296 (n.d.): [ج]

MS Laud Or. 255 (n.d.): [ح]

MS Laud Or. 260 (1560 CE): [خ]

MS Marsh 189 (n.d.): [غ]

El Escorial, Madrid:

MS Casiri 895/Derenbourg 900 (1535–1536 CE): [س]

MS Casiri 923/Derenbourg 928 (1458 CE): [ش]

Istanbul collections (mainly the Süleymaniye and associated libraries):

MS Atif Efendi 1681 (1182 CE): [ع]

MS Esad Efendi 3637 (ca. thirteenth century CE): [ن]

MS Esad Efendi 3638 (ca. 1287 CE): [أ]

MS Feyzullah 2130 (AH 704): [ف]

MS Feyzullah 2131 (AH 704): [ق]

MS Köprülü 870 (ca. fifteenth century CE): [ك]

MS Köprülü 871 (1417 CE): [ل]

MS Köprülü 981 (n.d.): [و]

Königliche Bibliothek zu Berlin:

MS 5038 (AH 600/1203 CE): [ب]

The Mahdavi Collection, Tehran:³

MS 7437 (AH 640): [ط]

Reconstruction of the *Rasā'il* by way of a critical edition will be undertaken using manuscript reproductions that are significantly distanced in time from the original, and these have proved to be traceable to a variety of transmission traditions that cannot be articulated with confidence in terms of a definitive *stemma codicum*.⁴ The dexterity of the copyists, their deliberate tampering, or commendable exercise of restraint and relative impartiality, along with their scribal idioms, would have conditioned the drafting of the manuscripts. Such endeavours would also have been influenced by the intellectual impress of the prevalent geopolitical circumstances in which this text was transcribed, in addition to its channels of transmission. By widening the selection of the oldest manuscripts and fragments, based on the period of

3 It is worth noting that these acquisitions by the IIS, which consist of the oldest complete manuscripts, along with significant supplementary fragments of an early dating, were each carefully selected from over one hundred extant manuscripts, which are preserved in thirty-nine libraries and collections, noted in alphabetical order by country, as follows: *Egypt*: Dār al-Kutub, Arab League Library (possibly also in the Arab League offices in Tunis); *France*: Bibliothèque nationale de France; *Germany*: Königliche Bibliothek zu Berlin, Herzogliche Bibliothek zu Gotha, Eberhard-Karls-Universität (Tübingen), Leipzig (Bibliotheca Orientalis), München Staatsbibliothek; *Iran*: Muṭahhari Library, Tehran University Central Library, Mahdavi Collection (private); *Ireland*: Chester Beatty Library; *Italy*: Biblioteca Ambrosiana, Biblioteca Vaticana; *Netherlands*: Bibliotheca Universitatis Leidensis; *Russia*: Institut des Langues Orientales (St Petersburg); *Spain*: Biblioteca del Monasterio San Lorenzo de El Escorial; *Turkey*: Süleymaniye, Aya Sofia, Amia Huseyn, Atif Efendi, Esad Efendi, Millet Library, Garullah, Köprülü, Kütüphane-i 'Umūmī Defterī, Manisa (Maghnisa), Rashid Efendi (Qaysari), Topkapı Saray, Yeni Çami, Revan Kishk; *United Kingdom*: Bodleian Library, British Library, British Museum, Cambridge University (Oriental Studies Faculty Library), Institute of Ismaili Studies (including copies from the Hamdani, Zāhid 'Alī, and Fyzee collections), Mingana Collection (Selly Oak Colleges Library, Birmingham), School of Oriental and African Studies (SOAS); *United States*: New York Public Library, Princeton University Library.

4 Within both the English and the Arabic text, the beginning of each folio of the Atif Efendi [ع] manuscript is indicated, starting at recto folio 39, (fol. 39a)/(أ ٣٩), and verso folio 39, (fol. 39b)/(ب ٣٩). The pagination of the first volume of the Beirut (Dār Šādir) printed edition is also indicated, using square brackets, for example, [p. 183]/[١٨٣].

the copying, the levels of based on the period of the copying, the levels of completeness and clarity, and the recommendations of past and present scholars who have consulted these collections, a suitably grounded critical edition will be produced, and this more reliable textual reconstruction will offer us improved access to the contents of the *Rasā'il* beyond what is presently available through the printed editions (i.e., those from Bombay, Cairo, and Beirut). It is ultimately hoped that the collective authorial effort, in establishing the Arabic critical edition of the *Rasā'il* and the first complete annotated English translation, will eventually render service to the academic community and lay a scholarly foundation for further studies dedicated to the Brethren's corpus and its impact on the history of ideas in Islam and beyond.

This present volume, prepared by Professor Owen Wright, consists of the Arabic critical edition and annotated English translation of Epistle 5: 'On Music', from the first part of the *Rasā'il* that focuses on the propaedeutic and mathematical sciences.⁵

I am most grateful to all the contributing scholars who are participating in this challenging textual endeavour, and I express my deepest appreciation to the distinguished members of the Editorial and Advisory Boards of the series for their continual academic support, especially to Professors Hermann Landolt, Wilferd Madelung, Ismail K. Poonawala, and Roshdi Rashed. Thankfulness must be conveyed as well to my esteemed colleagues at the Institute of Ismaili Studies, London, and to its Directors and Governors, past and present, for their generous sponsorship of this scholarly project. I would like also to record here my indebtedness to Dr Farhad Daftary for his constant support of this institutional initiative. Most special thanks go to Ms Tara Woolnough for her dedicated copy-editing work and thoughtful editorial care, to Mr Saleh al-Achmar for checking the Arabic text, and to Ms Samantha Earl for the diagrams included in this volume. Acknowledgements are also due to all the librarians and colleagues who facilitated the process of acquiring the manuscripts and the various illustrations for this series.

Sincere recognition, in memoriam, ought to be expressed in homage

⁵ Previously published books in the OUP-IIS *Epistles of the Brethren of Purity* series are mentioned in the preliminary title pages of this present volume.

to the late Professor Yves Marquet, for his foundational studies on the Brethren of Purity's oeuvre, and for the honour and privilege he accorded to us in supporting this series as an eminent member of its Advisory Board.

Nader El-Bizri
(General Editor, *Epistles of the Brethren of Purity*)

London, May 2010

Introduction

A general outline of the character and contents of this epistle has been provided in the music chapter in the introductory volume of essays that accompanies the present series of the *Rasā'il*.¹ Although certain matters will need to be revisited here, reduplication has been avoided where possible, so that the main burden of the following remarks is less to attempt a survey of themes and structure and more to discuss specific topics not previously addressed or not examined in sufficient detail. The former concerns the approach adopted in editing the text and in translating the resulting version, the latter matters of content, principally musicological, that present particular interpretative problems or call for further clarification.

1. Text

1.1 Manuscripts

The version of the text presented here is based upon the following manuscripts,² which are considered some of the earliest surviving

1 Owen Wright, 'Music and Musicology in the *Rasā'il Ikhwān al-Ṣafā*', in *The Ikhwān al-Ṣafā' and their 'Rasā'il': An Introduction*, ed. N. El-Bizri (New York and London: OUP-IIS, 2008), pp. 214–247.

2 See also the Foreword above, pp. xx–xxi. For further background, see in the introductory volume the relevant material in the Prologue (by N. El-Bizri), pp. 20–22, and the chapter by I. K. Poonawala, 'Why We Need an Arabic Critical Edition with an Annotated English Translation of the *Rasā'il Ikhwān al-Ṣafā*'.

that contain this specific epistle, and range from the late twelfth to the fifteenth centuries:

1182	Atif Efendi 1681	ع
ca. 1242	Tehran (Mahdavi) 7437	ط
ca. 1287	Esad Efendi 3638	أ
ca. 1296	Bibliothèque nationale 6.647–6.648	د
ca. 1304	Feyzullah 2130	ف
ca. 15th century	Köprülü 870	ك
1417	Köprülü 871	ل

A number of later manuscripts (in the Bibliothèque nationale and the Bodleian, those coded ح, ج, ز, ر, and خ) have been consulted in relation to particular passages, but the further variants they generally introduce have not been taken up in the apparatus, although occasional reference to them is made in the footnotes to the translation. The same applies to the earlier testimony of the *Jumal al-falsafa* by Muḥammad ibn ‘Alī al-Hindī, dated 1135,³ which includes passages extracted from the *risāla*.⁴ The material has been recast in question and answer format, but still provides a useful control.

1.1.1 Relationships

We thus have, at the most conservative estimate, a gāp of some two hundred years between the earliest complete manuscript, ع, and the composition or consolidation of the text: time enough for it to have passed through the hands of several copyists, with consequent mistakes, adjustments, omissions and additions, some inadvertent,

3 Muḥammad ibn ‘Alī ibn ‘Abdallāh al-Hindī, *Jumal al-falsafa*, ed. Fuat Sezgin (Frankfurt: Institut für Geschichte der Arabisch-Islamischen Wissenschaften, 1985), pp. 114–123.

4 Full details can be found in Eckhard Neubauer, ‘Das Musikkapitel der *Ġumal al-falsafa* von Muḥammad b. ‘Alī al-Hindī (1135 n. Chr.)’, *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften*, 4 (1987/1988), pp. 51–59; repr. with text in E. Neubauer, *Arabische Musiktheorie von den Anfängen bis zum 6./12. Jahrhundert: Studien, Übersetzungen und Texte in Faksimile*, ed. F. Sezgin, *The Science of Music in Islam*, vol. 3 (Frankfurt: Institut für Geschichte der Arabisch-Islamischen Wissenschaften, 1998), pp. 311–332.

others deliberate. But the differences these seven manuscripts exhibit are not readily explicable as the result of accumulated deviations from a single original; to judge by the evidence, this *risāla* may have circulated in slightly different versions from a very early stage.

The degree of coincidence between the seven manuscripts is quite variable: there are passages where they are completely or virtually identical, others where there are considerable differences. Setting aside the question of material present in some and absent in others, one may take the following passage⁵ as indicative of how much they can diverge:

ولها [ك: وله] آلة صناعية [ع: متناهية] يقال لها [ع-: لها] الأرغن
[ك، ل: الآرغين. ف+: والهـما؟ كانت تسمى ارقا] كان [ع: كانوا.
ف: كانت] اليونانيون يستعملونها [ع، ل: يستعملونها اليونانيون] عند
الحروب يفزعون [د، ك، ل: ويفزعون. أ، ف: يربعون] بها نفوس [أ-:
نفوس] الأعداء،

followed by:

أ، ع: مشدودة [أ: مسدودة] آذانُ النافخين فيها.
ف: ويسدون النافخون فيها آذانهم عند استعمالها والنفخ فيها مسدودة
آذان النافخين فيها.
د، ط، ك: ويسدون [د: ويشدون. ك+: النافخون فيها] آذانهم عند
استعمالها وتحريكها والنفخ فيها [ك-: والنفخ فيها].
ل: وآذانُ النافخين فيها ~~مسدودة~~ [في الهامش، في خط آخر: ويسدون
آذانهم عند استعمالها وتحريكها].

Comparing these versions, we may make the following preliminary deductions:

Manuscripts أ، ع، and ف (group A) have material in common not shared by the others.

Manuscripts د، ط، ك، and ل (group B) have material in common not shared by group A.

⁵ Unfortunately, this is not included by al-Hindī.

In group A, أ and ف have more in common with each other than either has with ع.

In group B, د and ط have more in common with each other than either has with the other two; and ك and ل have more in common with each other than either has with the other two.

Both ف and ل show evidence of having called upon more than one source text: ف adds material found in B, and other material found in neither A nor B; ل at one point has a layer related to A struck through and discarded in favour of the B equivalent.

This division into two main groups is confirmed elsewhere. To take a very clear example, B contains a Persian poem that A does not. But it would fallacious to conclude that its absence from three of the four or five earliest manuscripts demonstrates that it constitutes a later addition to a hypothetical original, for its prior existence is assumed in two of the three A manuscripts, which include a phrase introducing the poem, and one even leaves space for it. Its absence does, though, serve to confirm that none of the B group could derive directly from any of the A group.

For the A group, there is abundant evidence to confirm that the relationship between أ and ف is close, whereas there are frequent differences to be observed between them and ع, the earliest. But, as is shown by the passage above, it is not simply the case that ف is copied from أ, even if most of the errors it contains, some of which are quite gross (and preclude it as a possible source for any of the later manuscripts),⁶ could be explained readily enough as deviations from the superior text in أ. But أ has occasional quirks of its own:⁷ within Chapter 16, for example, the order of two of the dicta is reversed in أ (and only in أ). With or without intermediaries, we may conclude that ف is not derived from أ, but that both may be traced to a common source. If we turn to ع, we find several occasions on which it gives a different reading to all

6 For example, ف manages to convert تسلط الأشرار into نشاط الأسرار, from which there is no way back.

7 For example, in place of أَدَى لَهُم (found also in ف) it has the evident slip أَوَلَهُم, which would be difficult to correct without having recourse to another manuscript.

the remaining six manuscripts,⁸ and it is impossible to establish a direct line of transmission from ع to any of them.

It is equally clear that the other six do not form a single family; the other group A manuscripts, أ and ف, include features that time and time again separate them from those of B,⁹ which constitutes an equally loose group itself, and further evidence can be adduced to confirm the internal split into the two pairs already proposed. If we take the specific example of the Persian verses mentioned above, we find that the version of the first hemistich in د and ط differs from that in ل and ك, and the latter manuscripts elsewhere share a metrically and semantically unacceptable variant. The division into pairs, however, is not quite as neat as this might suggest. In Chapter 16, again, the order of two of the dicta is reversed in ك but not in ل. Furthermore, د omits material found in the other three, and, in general, has many features in common with ط that distinguish them both from the remainder.¹⁰ However, د also includes material not found in them but present in group A manuscripts,¹¹ which indicates that the divide between the two groups is, again, not always clear-cut.

It is consequently apparent that the relations between the seven manuscripts upon which this edition is principally based are difficult to determine with precision. An initial representation of the main groupings may be given schematically (Fig. 1), with the chronological distribution shown by dispersing the entries vertically.

8 As just one example, we may cite the evidently correct *فاسمعوا من النفس حديثها*, corresponding to which ع has *فسمعوا حديثها*. Further evidence that ع could not have been the source of any of the other six is shown by its omission of, say, *والأحزان والغموم والهموم وفي المآتم يعزي النفوس ويخفف عنها ألم المصائب*, which, with slight variations, is found in all the others, and is hardly likely to be a later accretion.

9 For example, in place of the otherwise universal *زهدت في الملاء*, both have *هدت في الملاء*.

10 For example, د includes in a list of instruments the mysterious *السعائق* and *الوشائق*, and ط adds above the text *الوشائق*. There is nothing equivalent to this in the other manuscripts.

11 The most obvious of these being the verses attributed to al-Basūs, which appear only in د, أ, and ف.

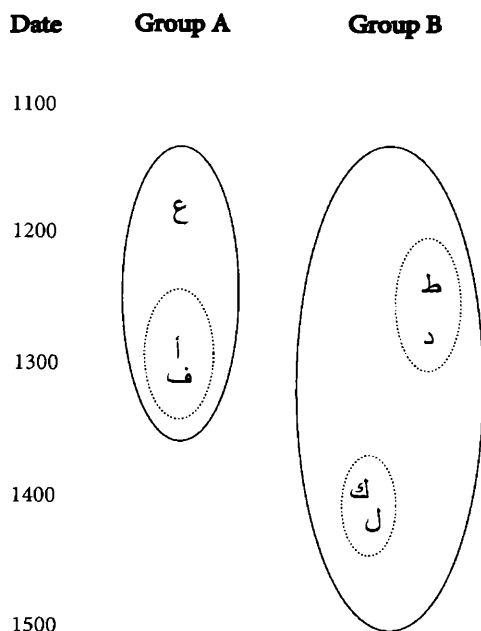


Figure 1

Evidence has already been given of links between various areas of this diagram, so that arriving at a stemma is by no means easy, even if no account is taken of the further problems that would arise from attempting to include any later manuscripts.

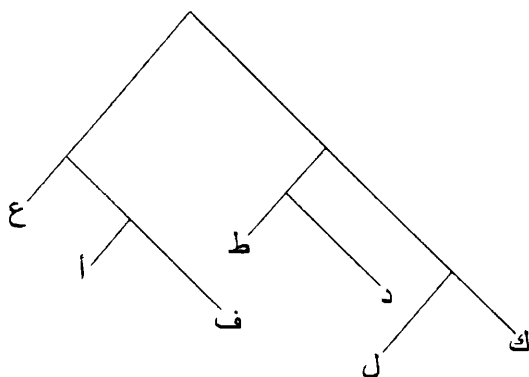


Figure 2

The relationships suggested in Fig. 2, therefore, must be regarded as conjectural and provisional, as well as an over-simplification: in particular, the distance between ع and أ suggests a more complex earlier history than the simple set of divergences from a common source indicated here.

A comparison of the last part of the versions of the passage given above in the later manuscripts suggests resemblances between ج, خ, and ر and group A: all end at (فيها) آذان النافخين, while the following material appears in ز, ح, and غ, linking them with group B. However, ج, خ, and ر, differ from group A (as well as B) at the beginning, substituting يسمى for يقال لها, while the differences between them suggest a derivation sequence of ر → ج → خ as a plausible line of development. But another sample passage might well produce different alignments, and it is clear that much more extensive study would be required before one could hope to provide even the sketch of a comprehensive stemma.

1.2 Edition

Indeed, because of the various lines of cleavage between the manuscripts, and the conclusion that the earliest ones result from different lines of transmission that cannot readily be shown to derive from one single original version, the very concept of an Urtext is questionable; they could, rather, represent points in the evolution of a text that was from the beginning, to a certain degree, malleable. It would certainly be possible to demonstrate the earliest extant stage of the text by basing the edition on ع, which is quite reliable in general, but, as it differs in significant respects from the others, to do so would involve sacrificing adequate representation of the manuscript tradition as a whole.

Instead, the text offered here prefers to attempt a broad representation of the manuscripts. It does not seek to give precedence to any one line of transmission but is, rather, deliberately synthetic, which means that editorial decisions inevitably, and quite frequently, involve having to opt for one reading over another equally good one, and although the tendency has been to prefer the version in ع (frequently supported by ل) over those in أ and ط (which are preserved in the apparatus)

on a case-by-case basis, so that sometimes أ is rejected in favour of ط. Further, it consciously (as well as unwittingly) includes, on occasion, what are probably clarificatory expansions designed to aid comprehension, and thus does not attempt to establish a hypothetical earlier state of the *risāla*, even where evidence is available. For example, in the text offered here,

وأما الحيوانات الخرس كالسمك والسرطان والسلحفاة وغيرها فهي
خرس لأن ليس لها رئة ولا جناحان فلا يكون لها أصوات،

the words ‘وغيرها’ may well be a later interpolation, and given the occurrence in two of the three oldest manuscripts of لا rather than فلا in the final clause, one might hypothesize a balder (and clumsier) earlier version, consisting of something like:

وأما الحيوانات الخرس كالسمك والسرطان والسلحفاة فلأن ليس لها
رئة ولا جناحان لا يكون لها أصوات.

This is then amplified by adding ‘وغيرها’, expanding فلأن to ‘لأن’, and changing لا to فلا to clarify the syntax accordingly. Similarly, technical definitions may exhibit clarificatory accretions. That of movement, for example,

النقلة للشيء من مكان أول الى مكان ثان في زمان ثان،

may at an earlier stage have taken the simpler form:

النقلة من مكان الى مكان في زمان ثان.

But such amplifications do not necessarily appear only in the later manuscripts: in this particular case, they occur in ع, but not in أ or ل, so that the notion of a simple process of gradual accretion through time should be discarded. In such cases, the general approach adopted has been to include material that helps to clarify the argument, even if it is demonstrably a later amplification.

Despite this rather elastic approach, certain passages remain problematic. Catalogues, in particular, are something of a free-for-all, with variations in the order and number of items, as with:

غناء الديلم والترك والأكراد والأرمن والزنج والفرس والروم.

غناء الديلم والأتراك والأعراب والأرمن والزنج والفرس والروم.
غناء الديلم والأتراك والفرس والروم والهند والعرب والأرمن والزنج.

But it is not only vocabulary that can present problems: syntax and morphology also exhibit a considerable degree of diversity, so that editorial decisions are sometimes arbitrary.

1.2.1 Apparatus

The degree of variability also presents problems for the preparation of the critical apparatus. Mechanically reporting all variants, although possible, would be tedious in the extreme and would result in an excessively long volume with very few text lines per page, because of the footnote layout required for technical reasons. In consequence, selective pruning has been done (the drawback being that it is no longer possible, on the basis of the apparatus, to reconstitute the text of each manuscript exactly), with the particular areas concerned outlined as follows.

1.2.1.1 *An evident omission or lapsus calami*

When found in only one manuscript, such peculiarities might be of interest with regard to the stemma but not otherwise; therefore they will frequently remain unrecorded. In this respect, ف and د are the most capricious and are consequently those whose egregiously erroneous variants most often disappear from view. With ا, ع, and ل, on the other hand, the approach, even if not carried out rigorously, has been to preserve individual quirks.

1.2.1.2 *Formulaic expressions, especially honorifics*

These show considerable diversity, but in each instance just one has been selected, with the other(s) being left unrecorded. Those addressed to God naturally provide the greatest diversity:

جل ثناؤه – جل جلاله – جل وعز – سبحانه – سبحانه وتعالى – تعالى
– تعالى جل ثناؤه – عز اسمه – عز وجل – تقدس اسمه.

For prophets, there is also a range of expressions:

صلى الله عليهم — صلى الله عليه وسلم — صلوات الله عليهم — عليهم السلام،

while the Ikhwān address themselves with both a short formula,

يا أخي — أيها الأخ

(here the former alternative has been preferred — the latter occurs in أ and ف , which also use the expanded form, أيها الأخ البار الرحيم), and a longer one:

يا أخي (أيها الأخ) أيدك الله وإيانا بروح منه.

1.2.1.3 Chapter (فصل) divisions

Also to be noted are the unrecorded variations in the presence or absence of chapter divisions. The preference has been inclusion rather than exclusion, simply to provide more reference tools. The chapter numbers are editorial additions.

1.2.1.4 Formulae concluding a chapter

These appear only occasionally, and in ك alone, and have therefore been left unrecorded.

1.2.2 Editorial interference

In addition to the arbitrary choices between the above formulaic possibilities, there are also selections and amendments to note concerning, in particular, orthography and morphology.

1.2.2.1 Orthography

Adjustments have been made to make the text conform to current norms. The most frequent cases involve supplying ة and ء in a wholly predictable way, so individual instances do not require comment. Typical examples are:

ثلاثة	for	ثلاثة
إلهي	for	إلهي

يا أيها	for	يأيها
هكذا	for	هكذي
قائل	for	قایل
غناء	for	غنى
لألا	for	لأن لا

In the Persian verse, similarly, د has been substituted for ذ where appropriate, گ for ك, and به for ب.

Changes that are more properly corrections are few, with examples such as the following:

مثّث	for	مثّث
حمالو	for	حمالوا
مساواة	for	مساوات

1.2.2.2 Concord

A considerable degree of variation may be observed here, and while more orthodox forms have been preferred, no attempt has been made to impose uniformity, with the result that there are cases where standard expectations are not met.

With verbs, one may note considerable fluctuations in gender concord within as well as between manuscripts (and also frequent undecidability when dots are omitted), but more surprising are eccentricities of number in such phrases as,

كانوا يستعملونها اليونانيون.

The gender of suffix pronouns may vary where there is more than one possible antecedent. A noun may, similarly, be plural instead of an expected dual, and one may note a case of attraction by syntactic parallelism and *saj'* euphony interfering with normal concord:

عالمها الروحاني ومحلها النوراني ودارها الحيواني.

With numerals, not unexpectedly, occasional unorthodoxies are encountered, and dual case forms can be confused, with a predictable preference for the oblique: these have generally been tidied up, as have the hesitations over the various forms of ذو, whether singular or plural.

In relative clauses, there are instances of the resumptive suffix pronoun being omitted in one manuscript whilst included in another, as with,

التي ذكرنا - ذكرناها

or

الذی ذکرنا و وصفنا - ذکرنا و صفنا.

These differences are not included in the apparatus.

1.2.2.3 Syntax

Here, too, there are a number of instances where the manuscripts offer alternatives, one of which has been chosen and the other left unrecorded, such as the following:

The inclusion or omission of initial و, as in **واعلم**.

Occasionally, the choice between و and ف where there is no evident difference of meaning.

The choice (essentially capricious) between verb + object and verb + transitive pronoun, principally ب (the verbs concerned are توهم، استلذ، لحن، علم، سَمَّى، تبين، بين) but also الى (after احتاج and انقسم), and (with a verbal noun) ل (after, e.g., استنشاق).

Similarly, the choice between, e.g., بعضها بعضا and بعضها ببعض.

1.2.3 Additions/omissions

It may be observed, finally, that the terms used in the apparatus for '+' (زيادة في) and '-' (سقط من) should not be regarded as necessarily carrying an implication with regard to status. In other words, it cannot be assumed *a priori* that material marked as absent from one or more manuscripts points to an omission from an earlier, fuller, version: it might equally well reflect an earlier state of the text, whereas the edition has included subsequently added material; nor can it be assumed, conversely, that material excluded from the edited text and hence marked as extra in one or more manuscripts has been added to an earlier version.

2. Translation

With a text for which a considered and lavishly annotated translation has already been supplied by Amnon Shiloah,¹² a distinguished scholar who has studied this *risāla* in depth, any newcomer who undertakes the daunting task of rendering it afresh is faced with two temptations. One, despite the wish to demonstrate some degree of stylistic independence, in addition to offering alternatives where the new edition of the source text requires, is to consult his version too frequently and as a result end up with a highly derivative act of homage. The other is deliberately to avoid it, thereby gaining independence at the price of a potential reduction in the standard of scholarship and a consequent loss of accuracy and insight.

The approach adopted here is closer to the second option but, at the same time, the translator is happy to acknowledge his indebtedness to the scholarship displayed by Shiloah in (and around) his translation(s). What this means in practice is that a deliberate attempt not to be influenced in terms of style was made by the simple expedient of not consulting Shiloah's work at all during the course of producing the first draft; this, then, was not only different where the text proposed did not coincide with the Beirut edition on which Shiloah relied, but was wholly independent. The various passages where problems had been encountered were then checked against Shiloah's earlier and smoother French version, and on occasion amended accordingly,¹³

12 A. Shiloah, tr., 'L'Épître sur la musique des Ikhwān al-Ṣafā', *Revue des Études Islamiques*, 32 (1965), pp. 125–162, and 34 (1967), pp. 159–193. This supersedes the pioneering translation by F. Dieterici, *Die Propädeutik der Araber im zehnten Jahrhundert*, *Die Philosophie bei den Arabern im X. Jahrhundert n. Chr.*, III (repr. Hildesheim: Georg Olms Verlag, 1969), pp. 100–153. Shiloah later produced an English translation, *The Epistle on Music of the Ikhwān al-Ṣafā'*, *Documentation and Studies* 3, (Tel Aviv University, Tel Aviv: 1978), repr. in A. Shiloah, *The Dimension of Music in Islamic and Jewish Culture* (Aldershot: Ashgate Variorum, 1993); however, the French is to be preferred, especially because much of the annotation was stripped out for the English version. His Hebrew translation, *Ha-Iggeret 'al ham-musika shel Ikhwān al-Ṣafā'* (Tel Aviv, 1976), has not been consulted here.

13 This is especially the case in those passages of an astrological and numerological nature.

although without diminishing the stylistic divide. Only in a few cases was the English translation also consulted.

As a result, what is offered here provides, when set aside Shiloah's English version, at least an alternative with a rather different stylistic feel and a different approach to handling some of the technical problems the original raises. Which is not to claim that it is better: any student of the *risāla* will need to take account of Shiloah's translations as well as of his researches, and the present version is manifestly indebted to both. Another and more specific form of indebtedness concerns the various Qur'anic citations in the text; the versions offered for these are all taken from Muhammad Abdel-Haleem's translation.¹⁴

The original text spans the gamut from the plainly factual and expository to the highly wrought and hortatory. Some attempt has been made to reflect these differences of tone, and certainly to preserve as much as possible of the syntax, with its preference for sinuous periods made up of bundles of parallel (and often nearly synonymous) clauses. The lengthy English sentences that result are presented quite unapologetically; on the other hand, an attempt has also been made by means of typographical layout to clarify certain of the passages that are essentially catalogues. The fundamental aim has been to provide a version that should at least be approachable, even if not always smoothly readable, and, more especially, to make it accessible for a musicologist unfamiliar with the theoretical tradition within which the *risāla* is set and to which it makes such an individual contribution. Accordingly, while some explanatory comments of a general order have been provided in the footnotes, the emphasis has been on annotating and contextualizing those terms and passages that are more obviously musicological — at least as generally understood today.

In several cases, however, the questions raised are rather too broad, or complicated, to be dealt with effectively within the confines of a footnote, and it is to a survey and discussion of these that the remainder of this introduction is devoted. The major musicological topics concern pitch relationships, rhythm, and instruments, but consideration of these may usefully be prefaced by a rather more detailed account than that

14 *The Qur'an: a New Translation* (Oxford: Oxford University Press, 2004).

given in the companion volume of the various cosmological frameworks within which the Ikhwān integrate music.¹⁵

3. Cosmology

There is no need to expatiate yet again on the fundamentally cosmological orientation of this *risāla*; enough has already been said on its general thematic range and approach. What may usefully be done here is to add a supplementary inventory of the main areas within which its ramifications are presented in some detail. From a musicological perspective, those of greatest interest concern, on the one hand, number, especially in the form of proportions manifest as interval ratios expressed both locally, on the lute, and cosmically, producing the harmony of the spheres, and, on the other hand, sets of relationships, related to the strings of the lute, that trawl through a wide range of fourfold phenomena but give particular prominence to the theory of the humours and thence to the therapeutic potential of music.

3.1 Strings, elements, humours

To begin with the four strings of the lute, it may first be recalled that their number is regarded not as arbitrary, but as resulting from a deliberate decision on the part of the inventor sages to make them match other phenomena grouped in fours.¹⁶ There result various schemes of correspondence, prominent among them being the pairings with the elements and humours. The former also have associated qualities, so that we have:

¹⁵ See Wright, 'Music and Musicology in the *Rasā'il Ikhwān al-Ṣafā'*."

¹⁶ It may be noted that al-Kindī had already developed a more general perspective, discussing instruments with different numbers of strings with a whole catalogue of associations for each. See *Kitāb al-Muṣawwītāt al-watariyya min dhāt al-watar al-wāḥid ilā dhāt al-'asharat al-awtār*, in *Mu'allafāt al-Kindī al-mūsiqiyya*, ed. Zakariyyā Yūsuf (Baghdad: Maṭba'at Shafiq, 1962), pp. 63–92.

highest ¹⁷ string (<i>zīr</i>)	fire	(heat and fierceness)
second (<i>mathnā</i>)	air	(wetness and softness)
third (<i>mathlath</i>)	water	(wetness and cold)
lowest (<i>bamm</i>)	earth	(heaviness and thickness).

The corresponding set with the humours lays out the negative as well as the positive associations and effects, the notes of each string being regarded as capable of strengthening one humour and weakening another:

<i>zīr</i>	+ yellow bile	– phlegm
<i>mathnā</i>	+ blood	– black bile
<i>mathlath</i>	+ phlegm	– yellow bile
<i>bamm</i>	+ black bile	– blood.

The positive relationships are the same as those given by al-Kindi,¹⁸ who does not, however, mention the negative ones, although it could be argued that they are implied by the disposition given: displayed in circular format, the opposite poles will supply the positive and negative pairs. Analogous effects, if less exact and symmetrical, emerge from a threefold distinction within the general range of pitches, each register having intrinsic qualities related to the elements, which in turn affect the humours, again counteracting an imbalance and creating equilibrium. Thus a heavy combination of humours is moderated by high sounds, which are characterized as hot, while low sounds, considered to be cold and wet, counteract a combination of humours deemed too hot and dry. Sounds in the middle register, not surprisingly, help maintain a balance among the humours. It follows from all this that an expert physician is able, depending on the diagnosis of the ailment, to add a suitable allopathic ingredient of music therapy, a further element of which is the selection of the appropriate period of day or night for performing the relevant melodies.¹⁹

17 That is, the highest in pitch. (The text may define this string as the lowest, referring to its position on the vertical plane of the instrument when performed.)

18 *Mu'allafāt al-Kindī al-mūsīqiyya*, pp. 86–88.

19 The general idea persists in later texts, but they switch from strings to modes as the appropriate vehicles for music therapy. See Eckhard Neubauer, 'Arabische Anleitungen zur Musiktherapie', *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften*, 6 (1990) [pub. 1991], pp. 227–272.

3.1.1 Fourfold things

The above are treated as separate topics, but the strings, elements, and humours are also included within a grand scheme of fourfold things (*murabba'āt*).²⁰ This is arranged in four blocks, each one headed by one of the four seasons²¹ (beginning with spring) and containing further time-based sets that likewise progress straightforwardly from beginning to end: the ages of man and the quarters of the month and of the day; and a similar temporal progression around the celestial globe informs the disposition of the astrological entries: the zodiac (beginning with Aries) and the corresponding segments of the ecliptic and quadrants. But not everything follows the same linear (or circular) progression, for we unexpectedly encounter a zigzag arrangement for the cardinal points and the winds, which go from south to east to west to north.

We then reach more familiar territory with the elements, strings, natures (e.g., hot and wet), and humours, but the order is again unexpected, for instead of that given above (i.e., *zīr* = 1, *mathnā* = 2, *mathlath* = 3, *bamm* = 4), we have:

strings	2	1	3	4
elements	2	1	4	3
humours	2	1	4	3.

The reason why *mathlath* and *bamm* are not reversed along with the others is not immediately clear, and is certainly not explained, but the manuscripts are unanimous. To be surmised is an unexpected reflection of practical habits, for instead of the theoretical tuning processes laid out in the *risāla*, according to Ibn al-Ṭaḥḥān musicians were in the

20 For a synthetic tabular presentation see Shiloah's French translation, pp. 179–180, and, for a similar display conflating the relationships covered by al-Kindī, see Johann Christoph Bürgel, *The Feather of Simurgh*, (New York: New York University Press, 1988), p. 94. For a translation of al-Kindī's treatment of this area of enquiry see Henry George Farmer, 'Al-Kindī on the "éthos" of Rhythm, Colour and Perfume', *Transactions of the Glasgow University Oriental Society*, 16 (1955–1956), pp. 29–38.

21 In al-Kindī's text, the various phenomena are ordered under the four strings of the lute. That the Ikhwān should have chosen to present the division of the year into four seasons as a set so self-evident as to serve as exemplary is attributable to intellectual tradition rather than observation of the climate in Iraq.

habit of stringing the lute (and presumably also tuning) in exactly the order given, ending with the *bamm*.²²

Also quite unexpected is the set of entries for rhythm. Given that there are eight of these, one would naturally predict a 4 x 2 arrangement, and in the first block we do, indeed, encounter two entries, but they disconcertingly consist of juxtaposed names of lute strings (to be discussed in 5.3.2) rather than rhythmic cycles. The four entries are:

<i>zīr-bamm</i> ;	<i>mākhūrī</i> and the like;
the heavy and the like;	<i>hazaj</i> and <i>ramal</i> .

The remaining material consists of categorizations of human nature, behaviour, virtues, types of verbal and poetic expression, and, finally, a range of sensory stimuli: tastes, colours, and scents.²³

3.2 Number

The most basic set of associations in which numerical expression comes to the fore is that relating the 4:3 ratio of the difference in the thickness of the strings to the elements, but the presentation is a little confusing. For the strings, beginning with the thickest, the order is *bamm*, *mathlath*, *mathnā*, and *zīr*. The elements are then presented as (concentric) spheres of decreasing size, in the order fire, air, water, and earth, which could suggest a correlation of *bamm* with fire, and so on, whereas in fact the opposite order is intended, for later it is made clear that fire is the thinnest element and earth the thickest; we thus abandon the order listed above in 3.1.1 and revert to the earlier juxtaposition of strings and elements. Further, the text in effect superimposes the concept of the elements as spheres upon the standard cosmological spheres of the earth and the sublunary strata, *nasīm*, *zamharīr*, and *athīr*, so that, in all, we have the following:

22 Ibn al-Ṭaḥḥān al-Mūsīqī (d. after 1057), *Hāwī al-funūn wa-salwat al-maḥzūn*, ed. E. Neubauer, facsimile in Publications of the Institute for the History of Arabic-Islamic science, series C, vol. 52 (Frankfurt: Institut für Geschichte der Arabisch-Islamischen Wissenschaften, 1990), pp. 179–180.

23 Much of this is foreshadowed in al-Kindī. See Farmer, ‘Al-Kindī on the “ēthos” of Rhythm, Colour and Perfume’.

(thickest)	<i>bamm</i>	earth	earth
	<i>mathlath</i>	water	air (<i>nasīm</i>)
	<i>mathnā</i>	air	bitter cold(<i>zamharīr</i>)
(thinnest)	<i>zīr</i>	fire	ether (<i>athīr</i> = fire).

Taking the 9:8 ratio of the whole tone as a springboard, more extensive treatment is then accorded to the number 8 and, assigning this to the diameter of the earth, to the relative diameters of the other celestial spheres and the relationships between them expressed as musical proportions. This particular set of relationships, it may be observed, is quite independent of that implied above, for there, if the diameter of the earth is 8, that of the sphere of air should be $10\frac{2}{3}$, and that of the moon almost 19, whereas here the sphere of air is 9 and that of the moon 12. The complete range of the celestial spheres, together with the intervallic relationships between them, is given in Fig. 3 (see p. 20). It will be seen that these ratios combine to produce a conjunct Greater Perfect System, as follows (with the earth being assigned an arbitrary C):

earth	air	moon	Venus	sun	Jupiter	fixed stars
C	D	G	c	d	g	c'

Those planets standing outside the system, Mercury, Mars, and Saturn, produce dissonant intervals with all the others and are consequently deemed to be of ill omen.

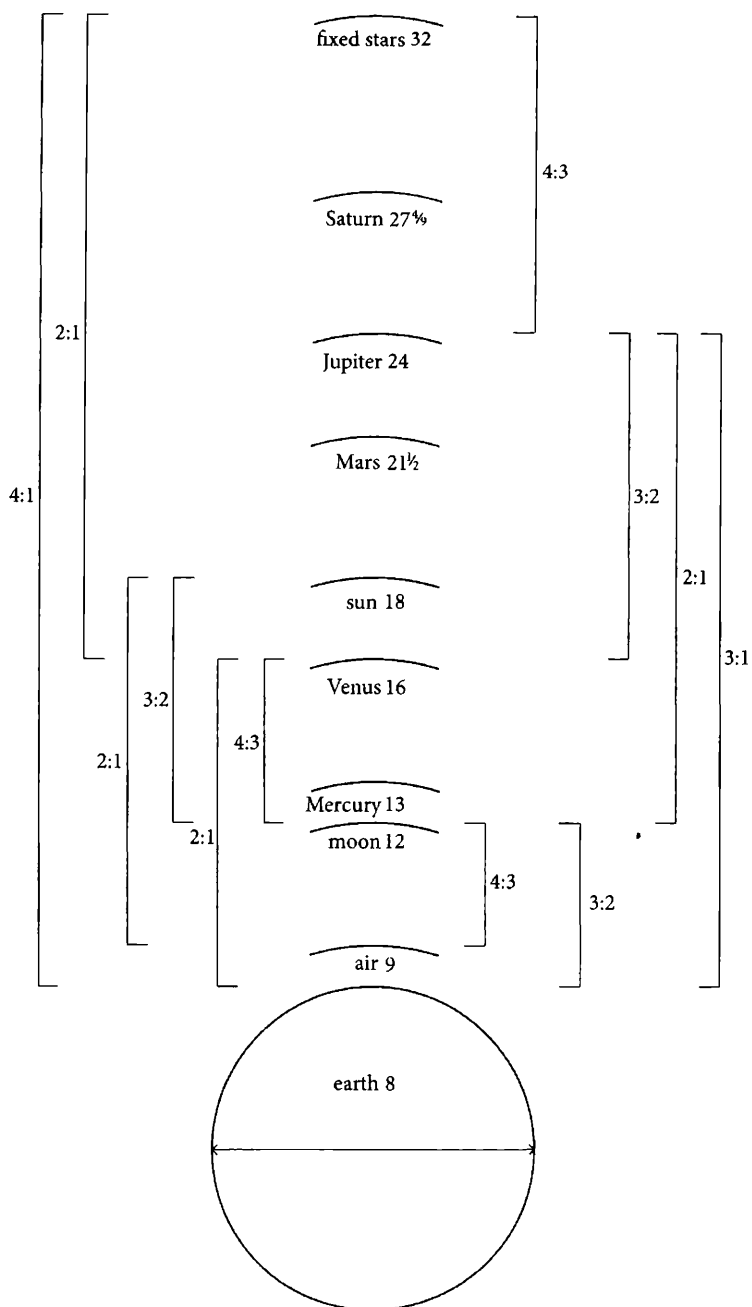


Figure 3

3.2.1 Calligraphy

The ideal proportions embodied by these ratios are held to be manifest not only through their actualization in sound, whether human or celestial, but also in non-musical domains. Two in particular are singled out for extensive treatment: calligraphy and physiology.

The calligraphic essentials are the two geometric fundamentals of line and circle, and all letter shapes, in whatever script, are deemed to be derivable from these. There is confirmatory citation of other scripts (Hebrew, Indian numerals, Syriac, if largely garbled in the extant manuscripts), but detailed exemplification is naturally confined to the Arabic letters, with a description of the nature and proportions of the elements of each. Here the number 8 reappears as a significant element, the width of the first letter of the alphabet, *alif*, being specified as one eighth of its length. The line of *alif* then provides the diameter of a circle, segments of which combine with it to form the remaining letters.

3.2.2 Physiology

When we turn to physiology, we find a general catalogue of body parts, including internal organs, held to be proportionate to one another, and a more specific set of detailed measurements held to be valid for the ideal human form, that of the newborn infant unaffected by any of the ills to come. The unit of measurement is the handspan, and 8 (with internal 4 x 2 segments) is again a key figure:

height	8
finger tip to stretched finger tip	8
soles of feet to knee-caps	2
knees to groin	2
groin to top of the heart	2
top of the heart to the parting	2
finger tip to elbow	2
elbow to clavicle	2.

In addition, using the navel as the central point, a circle described by a

compass extended to the finger tips when stretched above the head will reach the tips of its toes, and have a diameter of 10, as shown below in Fig. 4. The comparison with Leonardo da Vinci's drawing of Vitruvian man is inescapable, and is not just an unavoidable consequence of a common anatomy: there is a direct echo of Vitruvius' circle, centred upon the navel, that touches the outstretched fingers and toes, and of the square within which height equals extended arms. However, there is otherwise little resemblance between the Ikhwān's measurements and those of Vitruvius,²⁴ and the Ikhwān go on to offer a far longer list of items, some subdivisions of those given in Fig. 4, but the majority additional, including numerous facial proportions.

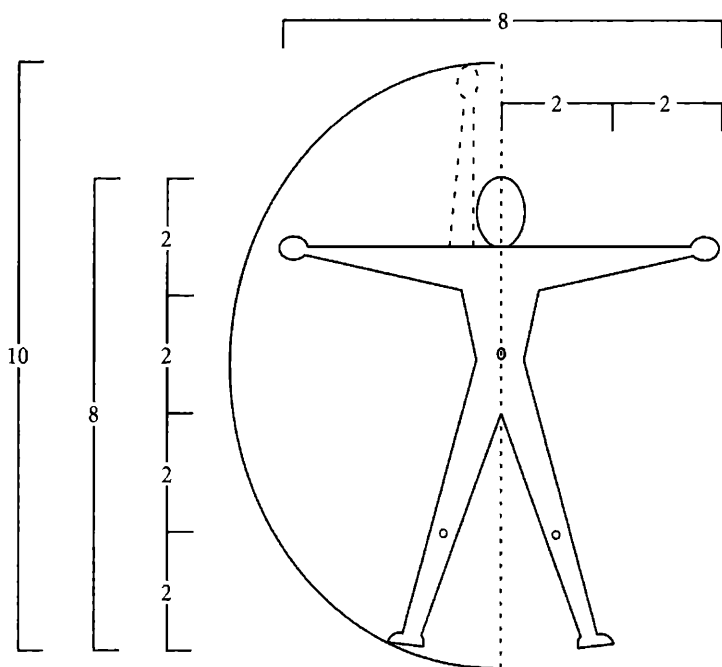


Figure 4

²⁴ They often measure different things, and where there are common items the measurement may not coincide: from elbow to finger tip is one fifth of height for Vitruvius, one quarter for the Ikhwān.

4. Instruments

Given that they are referred to in various contexts and for different reasons, it is not surprising to find that more than one generic term is used for musical instruments. In fact, we encounter four in all: the standard general term *āla* (pl. *ālāt*), ‘instrument’ (of any kind) coupled with which in one passage is the rather more abstract *adawāt* (‘devices’, ‘implements’), the equally standard *malāhī*, and *mūsīqān* (a derivation from *mūsīqī*), peculiar to the Ikhwān and used especially in the chapter on wise sayings on music, the learned flavour of which is well suited to its ancient Greek atmosphere.

Apart from the description of the lute, which is considered separately, there are two main passages dealing with instruments. In addition to the intrinsic interest of the range of instruments represented, they raise two issues, one concerning whether we can infer the presence of a general organological classification, the other whether we can define with any degree of precision the type of instrument to which a given name relates. The two issues are, of course, related: a degree of reliability in the latter is a prerequisite for being able to address the former.

Texts earlier than the *risāla* contain incidental references to a number of instrument names, but some appear to have fallen out of use by the ninth century,²⁵ and few occur in contexts that satisfactorily define them beyond allowing us, at best, to assign them to the general classes of struck, plucked, or blown.²⁶ Theoretical texts are not particularly informative in this respect either, so that it is likely, especially taking regional diversity into account, that a considerably wider range of instruments existed than is revealed by the literature. Mention is made by al-Kindī of a number of chordophones, but few are named, and, apart from his detailed account of the lute, his interest, cosmologically driven, is specifically in the number of strings. (More

25 For example, *muwattar* and *kirān* (presumably types of plucked lute) appear only in early poetry.

26 Although ostensibly concerned with instruments, the *Kitāb al-Malāhī* of Abū Tālib al-Mufaḍḍal ibn Salama (d. 290/902) is not particularly forthcoming, being more concerned with literary citation. See ‘A. al-‘Azzāwī, *Al-Mūsīqā al-‘irāqīyya fi ‘ahd al-mughūl wa’l-turkumān min sanat 656–1258 ilā sanat 941–1534* (Baghdad: Sharikat al-Tijāra wa’l-Ṭibā’a al-Mahdūda, 1370/1951), pp. 73–89; trans. J. Robson, *Journal of the Royal Asiatic Society*, 2 (1938), pp. 231–249.

informative, despite their often laconic brevity, are the definitions given by al-Khwārizmī.)²⁷ In contrast, al-Fārābī provides extensive accounts of the instruments selected for discussion, but his primary concern is not with materials, morphology, or playing technique but with the scales associated with the instrument in question.²⁸

4.1 Types of Instrument

4.1.1 Idiophones and membranophones

Given these concerns, it is not surprising to find that these authorities ignore unpitched instruments; in contrast, it is interesting to see the Ikhwān give percussion its due, even if only a few instruments are specified. Alongside *ṭabl* (pl. *ṭubūl*), probably a generic term for double-headed drums struck with beaters,²⁹ the other common term mentioned is *daff* (pl. *dufūf*), a frame drum. These probably varied in shape (some being square) and size, and possibly also in playing technique, for although striking with the hand or fingers was presumably the norm, there is relatively early iconographical evidence for the use of small beaters also.³⁰ Two other drum types are named, and a third is referred to. One, the *kūs*, is defined in terms of volume, context of use, and geography: presumably a very large kettle drum, it could be heard at a considerable distance, and was used in the border regions of Khurāsān, where it accompanied (and presumably also helped summon) warriors going forth to battle. The other type, named *dabādīb* (sg. *dabdaba*),

27 Al-Khwārizmī, *Mafātīḥ al-‘ulūm*, ed. G. van Vloten (Leiden: Brill, 1895), pp. 236–240.

28 Al-Fārābī, *Kitāb al-Mūsīqī al-kabīr*, ed. Ghaṭṭas ‘Abd al-M. Khashaba, rev. and intro. Maḥmūd Aḥmad al-Ḥifnī (Cairo: Dār al-Kitāb al-‘Arabī li’l-Ṭibā’a wa’l-Nashr, 1967), pp. 494–877; tr. in R. d’Erlanger, *La musique arabe*, vol. 1 (Paris: Geuthner, 1930), pp. 163–306.

29 In a court context, *ṭabl* could also denote a waisted type of drum where pressure on the tensioning laces could alter the pitch. See G. D. Sawa, *Music Performance Practice in the Early ‘Abbāsīd Era* (Toronto: Pontifical Institute of Medieval Studies, 1989), p. 148.

30 On eleventh-century Fāṭimid ivory plaques, see A. Contadini, ‘Fatimid Ivories within a Mediterranean Culture’, *Journal of the David Collection*, 2/2 (2005), pp. 227–247, at p. 231.

may have been a smaller kettle drum, but in any case probably differed from the *ṭabl* in being single-headed rather than double.³¹

There is, further, a reference to the drums played by the *mukhannathūn*, effeminate musicians of unsavoury reputation. Other sources allow us to name this drum, possibly a slim, waisted, single-headed type, as *kūba*.³² We thus have references to membranophones across the social spectrum, from those associated with military campaigns to those used in celebrations to those associated with purely entertainment contexts, and it is also within this last that may be placed the one idiophone cited, the *ṣanj* (pl. *ṣunūj*), or small cymbals.³³ It should be noted, however, as a foretaste of problems to come, that although this seems the more likely identification here, *ṣanj* may also designate a harp.

Finally, in the treatment of rhythm mention is also made of a beater or wand, the *qaḍīb* (pl. *quḍbān*). Although instances are recorded during the ‘Abbāsīd period, the reference is fundamentally a textual relic of an earlier stage of musical practice, before accompaniment of the voice by the lute became the norm, when a light stick or switch had been used to tap out the rhythm.

4.1.2 Aerophones

The problem here is not so much which instrument names belong in this category, but which particular types they designate. The names mentioned are *nāy* (pl. *nāyāt*), *surnāy* (pl. *surnāyāt*, *sarānī*), *mizmār* (pl. *mazāmīr*), *ṣaffāra*, and *shabbāba*. Although there will later emerge a clear divide between *nāy*, designating an obliquely held end-blown bamboo flute, and *surnāy*, designating a double-reed shawm, at this stage there may have been no hard and fast distinction, with *nāy* being

31 This is, however, no more than reasonable conjecture. There is certainly iconographical evidence for kettle drums (of various sizes), but for *dabādīb* the Ikhwān are the only witnesses cited in Lois Ibsen al-Faruqi, *An Annotated Glossary of Arabic Musical Terms* (Westport, CT: Greenwood Press, 1981).

32 Al-Ghāzālī, *Iḥyā’ ‘ulūm al-dīn*, tr. D. B. Macdonald as ‘Emotional Religion in Islām as affected by Music and Singing. Being a Translation of a Book of the *Iḥyā’ ‘Ulūm al-Dīn* of al-Ghazzālī, with Analysis, Annotation, and Appendices’, *Journal of the Royal Asiatic Society* (1901), p. 213.

33 According to al-Khalīl, quoted by al-Khwārizmī, these were the jingles attached to frame drums.

used as a generic term and possibly more frequently in relation to reed instruments; al-Khwārizmī's terse definition of the *nāy* is *mizmār*.³⁴ He also defines *sur-nāy* as *ṣaffāra*, and although we are dealing here with approximate equivalences rather than with organological precision, this suggests, somewhat unexpectedly, that at this stage the name *sur-nāy* may not have been associated specifically with a reed instrument.³⁵ Reeds fail to be mentioned,³⁶ and the only remarks on instrument morphology in the *risāla* occur in a passage commenting on the effect of wider and narrower bores and of wider and narrower finger holes and their relative proximity to the mouthpiece.

Of the other names, one might suppose that, like the *ṣaffāra*, the *shabbāba* was not a reed instrument, and hazard that they may have been, respectively, a whistle (or a duct flute)³⁷ and an end-blown flute (but if so there is insufficient evidence to establish a distinction between it and other end-blown flutes to which the term *nāy* might on occasion have been applied). The one instrument that may be identified with greater confidence as having a reed is the *mizmār* (together with the etymologically related *zamr* and *zummāra*), but among reed instruments it is by no means clear that a consistent differentiation was maintained between single and double reeds.³⁸ In the absence of precise descriptions, early contexts of occurrence are seldom informative enough to assign an instrument to one specific type or another, and early representations in iconography are not always easy to interpret — and in any case have no names attached. What they do, however, is confirm the importance of wind instruments as part of court music making, something that would

34 Al-Khwārizmī, *Maḥāṣin al-ʿulūm*, p. 237. See H. G. Farmer, 'A Note on the *Mizmār* and *Nāy*', *Journal of the Royal Asiatic Society* (1929), pp. 119–121.

35 This conclusion is confirmed by Ibn Sīnā, who contrasts the *mizmār*, which is taken into the mouth (i.e., it has a reed), with instruments where one blows into a hole (i.e., the tube end), such as the *yarāʿa*, an end-blown flute made of cane or reed 'which is known as *sur-nāy*'. See Ibn Sīnā, *Kitāb al-Shifāʾ*, *al-Riyāḍiyyāt*. *Jawāmiʿ ʿilm al-mūsīqī*, ed. Z. Yūsuf (Cairo: al-Maṭbaʿa al-Amīriyya, 1956), p. 143.

36 The exception is al-Khwārizmī, who speaks of *shaʿīrat al-mizmār*, literally, 'the barley stalk of the *mizmār*'.

37 The related verb *ṣafara* means 'to whistle'.

38 Farmer wisely opts for discretion, and prefers to use the non-specific designation 'reed pipe'.

never be suspected from the material collected in the *Kitāb al-Aghānī*,³⁹ the most comprehensive of musical source texts, in which performers on wind instruments, apart from the celebrated *nāy*-player Barṣawmā, are encountered rarely if at all.

It should be noted that the principal list of instrument names contains no trumpets or horns. The key term *būq* (pl. *būqāt*) does, however, appear elsewhere, alongside drums, placing it therefore in the military and ceremonial band. Given the length and the apparently cylindrical bore of the examples in early iconography, it is probably to be defined as a straight trumpet.⁴⁰

There are two further problematic cases, *urghun* and *armūnīqī*. In the first case there is no difficulty in identifying the instrument, the (presumably hydraulic) organ. A number of works of the period mention it, and it appears, with descriptions of its construction, in treatises on ingenious mechanisms. The question concerns, rather, the uses to which it was put: given that it is absent from the *Kitāb al-Aghānī* as well as from al-Fārābī's *Kitāb al-Mūsīqī al-kabīr*, the likelihood is that, although it must have been restricted to the court, on account of cost, it remained essentially a curiosity, an impressive display of engineering skill to go alongside whistling mechanical birds on artificial trees, but one remarkable for volume rather than finesse.⁴¹ With the *armūnīqī*, in contrast, the problem is knowing exactly what instrument it was. It has been confidently identified as panpipes,⁴² but this appears to be a leap of faith unsupported by lexical evidence: *armūnīqī* is unknown to classical Greek (in which the standard term for panpipes is *syrinx*), while in later Arabic sources we encounter, rather, *shu'aybiyya* and *mūsīqāl*.⁴³ Although the literature around 'Abbāsīd court music practice makes no mention of an instrument readily identifiable as panpipes, there is no

39 Abū'l-Faraj al-Iṣbahānī, *Kitāb al-Aghānī*, 25 vols. (Beirut: Dār Ṣādir, 2004).

40 Farmer, however, distinguishes between *būq*, as a generic term but used more for conical bore instruments, and *naḥr*, designating the cylindrical; *Studies in Oriental Musical Instruments*, First Series (London: Reeves, 1931), p. 173.

41 See H. G. Farmer, *The Organ of the Ancients: from Eastern Sources* (London: Reeves, 1931).

42 H. G. Farmer, *A History of Arabian Music to the XIIIth Century* (London: Luzac, 1929, repr. 1973), p. 210; al-Faruqi, *An Annotated Glossary*.

43 Farmer, *Studies in Oriental Musical Instruments*, First Series, p. 173.

reason to think that it could not have occurred in other social milieux, even though its iconographical representation occurs considerably later;⁴⁴ but a no more unlikely alternative would be the mouth organ, for even though its iconographical representation is considerably earlier, it was still known to al-Khwārizmī.⁴⁵ There is, nevertheless, insufficient good evidence to support or refute either identification.

4.1.3 Chordophones

The various terms assigned to this category include a number that are not at all controversial and others that are rather problematic. The readily identifiable types include the short-necked lute (‘ūd, see 4.1.3.1), long-necked lute (*ṭunbūr*), harp (*jank*), and fiddle (*rabāb*). A rather more generic term is *ma‘āzif*, covering one or more types with unstopped strings,⁴⁶ while the problematic ones consist of *shulyāq* and *shawshak* (or more precisely, in each case, multiple variants thereof).

As well as being the vehicle preferred by theorists for demonstrating interval sizes and scalar/modal structures, the ‘ūd was clearly the predominant instrument in court circles, but its popularity was, for a time at least, challenged by that of the *ṭunbūr*.⁴⁷ It is possible, though,

44 Called *shu‘aybiyya*, it appears in an anonymous fourteenth- or fifteenth-century Arabic text, *Kashf al-humūm wa’l-kurab fi sharḥ ālāt al-ṭarab* — reproduced in H. G. Farmer, *The Sources of Arabian Music* (Leiden: Brill, 1965), pl. V — and thereafter frequently in Ottoman miniatures, the Ottoman name being *miskal*.

45 An instrument of the East Asian *sheng* type, known as *mushtak/mushtaq* (*ṣīnī*), and to al-Khwārizmī as *mustaq* or *mushtaq*, it is represented in Sāsānian metalwork and rock carving; see H. G. Farmer, *Islam, Musikgeschichte in Bildern*, Band III: Musik des Mittelalters und der Renaissance, Lieferung 2 (Leipzig: VEB Deutscher Verlag für Musik Leipzig, 1966), p. 19. Its appearance in an early fifteenth-century *Khamṣa* of Nizāmī (British Library MS Add. 27261, fol. 225v) presumably indicates not continuity but a later re-importation from the Far East. There is a contemporary description from Samarkand by al-Marāghī, who again considers it Chinese; *Jāmi‘ al-alḥān*, ed. Taqī Bīnīsh (Tehran: Mu‘assasa-yi Muṭāla‘āt wa-Taḥqīqāt-i Farhangī, 1366/1987), p. 209.

46 For references, see H. G. Farmer, ‘The Mediaeval Psalter in the Orient’, reprinted in *Studies in Oriental Musical Instruments*, Second Series, pp. 15–16.

47 The *ṭunbūr* appears to have overcome the same kind of morally dubious reputation that was attached to the *kūba*, homosexuality being the element common to both. The *kūba* was associated with the effeminate *mukhannathūn*, concerning whom the *Kitāb al-Aghānī* contains anecdotes involving homosexual acts. For the *ṭunbūr*, obloquy surrounded its presumed origins: in one account

that this name was attached to more than one type of long-necked lute: rather than the type with a piriform resonator that can be considered the ancestor of the Persian *setār* and the Turkish *saz*, early representations prefer a type in which the soundbox has square shoulders, an ancestor, presumably, of the barbed lute known later as *rubāb*, and tend to show two pegs as against the four of the lute.⁴⁸

Although associated by the Sāsānians with the royal court,⁴⁹ the harp does not appear to have been prominent during the Umayyad and early ‘Abbāsīd periods. The type current was almost certainly a relative of that depicted on late Sāsānian rock carvings: a vertical harp without forepillar. In addition to *jank*, this type of harp was also called *šanj*, the two terms apparently being used indiscriminately.⁵⁰ Its range, to judge from al-Fārābī’s account, was probably two octaves.⁵¹

Possibly an offshoot of a horizontally held harp, the psaltery is one of the instruments supposedly subsumed under the generic term *mi’zafa* (pl. *ma’āzif*), which may well also have been used to designate members of the lyre family.⁵² It is mentioned by al-Mufaḍḍal ibn Salama, but he is only concerned to emphasize its geographical marginality, associating it especially with the Yemeni rulers in Sanaa, and he offers no clue as to its identity.

There remain the *shulyāq* and *shawshak*, or, more precisely, two groups of names the manuscripts (and other sources) collectively

— see al-Mas’ūdī, *Murūj al-dhahab*, ed. and tr. Charles Barbier de Meynard and Abel Pavet de Courteille as *Les Prairies d’Or*, 9 vols. (Paris: Imprimerie Nationale, 1861–1877), vol. 8, p. 89 — it was invented by the people of Lot, in another it was imported from the Persians; in either case it was used as an instrument of pederastic seduction. Despite this, it was the preferred instrument of a number of prominent performers at court, and there were even books written on famous players; see Farmer, *The Sources of Arabian Music*, nos. 61 and 155.

48 See Farmer, *Islam*, pp. 39, 47.

49 The harp is prominent in the Taq-i Bustan reliefs; see Farmer, *Islam*, pp. 15, 17; and B. Lawergren, ‘Harp’, *Encyclopaedia Iranica*, vol. 12, pp. 7–13.

50 For al-Khwārizmī, *chang* (= *jank*) is the Persian equivalent of the Arabic word *šanj*.

51 Later representations in Safavid and Ottoman miniature paintings normally show upward of twenty strings, suggesting an increase in range to three octaves.

52 Farmer speaks of a ‘more primitive lyre or kithara’; *Studies in Oriental Musical Instruments*, First Series, p. 174.

provide, one consisting of *s.lbāq*, *sh.lbāq*, *sh.lhāq*, *sh.lbā*, and *silbā*, the other of *shawshak*, *shawshal* (and its plural *shawāshil*), *sawsal*, and *sawsak*. The confusion this welter of variants reveals may be attributed to ignorance on the part of most of the copyists with regard to the identity of the instrument in question, which would be hardly surprising in the first case as the name may have dropped out of use, and in any case referred to an exotic instrument. It has been suggested that the most promising candidate among them is *salbāq*, because of the not unreasonable idea that it may be derived from the Greek *sambyke*.⁵³ This would provide an etymological basis for detecting here a reference to an arched harp,⁵⁴ contrasting therefore with the angled *jank*, but this runs up against the unfortunate fact that such harps had disappeared from Persian representations at least 1,000 years earlier, and were not to be attested again; all Islamic harp depictions are of the angled type, with an upper soundchest. In any case, the derivation itself can hardly stand close scrutiny: most manuscripts have an initial *sh*, not *s*; the vowel change is suspect; and there seems to be no good reason for the dissimilation *mb* → *lb*. A perhaps more fruitful lexical connection is one that leads us towards the lyre, for in astronomy the Arabic term for the constellation Lyra is either *lūrā* or *sulyāq* or *shulyāq*, and the latter (or *shalyāq*) is precisely the form given by al-Khwārizmī in his list of instruments (and is the form preferred here).⁵⁵ However, the constellation pictures in Ibn al-Ṣūfī manuscripts show a stylized lyre shape devoid of strings that could not be identified as an instrument without prior knowledge, and there is no evidence for the lyre being known in the environment of Arab art music. Together with Ibn

53 Farmer, *History of Arabian Music*, p. 155. *Studies in Oriental Musical Instruments*, First Series, p. 154 mentions the derivation *sambyke* → Aramaic *šabbekā*.

54 See M. L. West, *Ancient Greek Music* (Oxford: Clarendon Press, 1992, repr. 1994), pp. 75–77.

55 More precisely, *shalyāq* is the reading preferred by the editor, Van Vloten. The manuscripts have *sh.lyāq* or *s.lyāq*. A similar lack of familiarity is exhibited by copyists of Ibn Sīnā's *Kitāb al-Shifā'*, the manuscripts of which have *s.lyāq*, *s.lāq*, *s.ltāq*, and *sh.ltāq*; see Jawāmi' *'ilm al-mūsīqī*, p. 143. Ibn Sīnā places it, together with the *šanj*, in a category that is defined in terms appropriate to both harps and lyres. (Unfortunately, he makes no reference to anything resembling the other problematical term, *shawshak*, discussed below.)

Khurradādhbih,⁵⁶ al-Khwārizmī refers to the *shulyāq*, or *shalyāq*, as a Greek/Byzantine instrument: the former credits it with twenty-four strings, while the latter states that it resembles the *jank*. We are thus left, rather uncomfortably, with the notion of an otherwise unattested twenty-four-stringed Byzantine harp-like instrument,⁵⁷ presumably one perceived to be at the same time both contemporary and ancient (and thus fitting with the introductory claim concerning invention by the sages).

Equally problematic is the *shawshak* group. Farmer,⁵⁸ followed by al-Faruqi, selects *shawshak* itself from the various forms available and tentatively relates it to the *ghizhak*,⁵⁹ suggesting therefore that it may have been a type of spike-fiddle. But the Ikhwān al-Ṣafā' cannot be adduced as authorities for 'the use of the bow' with respect to this instrument,⁶⁰ and although not decisive as evidence, it may be observed that, unlike the *rabāb*, the *shawshak* is not included among the instruments capable of producing continuous sounds. In short, the identification does not inspire confidence: a definition of *ghizhak* as a spike-fiddle only occurs much later,⁶¹ and the sound-shifts required appear suspect; however, given the number of lexical variants that are attested,⁶² a path could probably be found with a modicum of

56 See H. G. Farmer, *Byzantine Musical Instruments in the Ninth Century* (London: Reeves, 1925).

57 Al-Faruqi, *An Annotated Glossary*, suggests that *salbāq* might be an 'ancient triangular harp' — without, presumably, implying the presence of a forepillar. But as al-Khwārizmī attributes it to the contemporary *rūm* as well as the ancient *yūnāniyyūn*, the contrast with the *jank* can hardly be one of ancient and modern.

58 Farmer, *History of Arabian Music*, p. 210.

59 Al-Faruqi, *An Annotated Glossary*.

60 Farmer *History*, p. 210. The Ikhwān made no specific mention of it: the earliest explicit reference is in al-Fārābī's account of the *rabāb*.

61 However, the term may have existed considerably earlier; see Nicholas Sims-Williams, 'A Greek-Sogdian Bilingual from Bulayīq', in *La Persia e Bisanzio*, Atti dei Convegni Lincei, 201 (Rome: Accademia Nazionale dei Lincei, 2004), pp. 623–631.

62 Steingass includes also *qachak*, *qījak*, and, further, *shīshak*, somewhat vaguely glossed as 'musical instrument', 'violin', and 'a four-stringed instrument' respectively. The last is attested in a Pahlavī source, but there is no means of

philological ingenuity.⁶³ Nevertheless, the sheer multiplicity of forms is puzzling, and there remains the point that if the *shawshak* were a bowed instrument, one might expect it to be listed alongside the *rabāb*; and we would also need to assume the parallel existence of two distinct types, presumably the boat-shaped fiddle and the spike-fiddle. In any event, in both of these difficult cases we are dealing with instruments that were unknown to tenth-century Arab court music as reflected in the *Kitāb al-Aghānī* (and which were therefore less likely to receive iconographical attestation later).

4.1.3.1 *The lute*

Given that over the centuries, from al-Kindī on, the lute was the standard tool of theorists for the demonstration of tunings and frettings and the definition of scalar and modal structures, it is no surprise to find the Ikhwān singling it out for particular attention. Nor is it unexpected to find them adopt, broadly, the approach of al-Kindī, who deals not only with intervals and scales but also with the materials and dimensions of the instrument, an aspect also touched upon in a number of later texts.⁶⁴ For example, they strike a realistic note in the practical injunction to choose for the strips of the body a hard, light wood that rings when struck. The dimensions are articulated not as measurements but as proportions: the relationship of breadth to depth is stated to be 2:1, that of length to breadth 3:2, and that of total length to total length less neck 4:3. The ratio 4:3, that of the perfect fourth, is then said to govern the relative thickness of the strings, specified as being made successively of sixty-four, forty-eight, thirty-six, and twenty-seven threads of silk. It might be thought that the relative dimensions given

knowing what, precisely, it designates; J. Unvala, *The Pahlavi Text 'King Husraw and His Boy'* (Paris, n.d. [1921]), pp. 27–29.

63 The change *gh* → *sh* is abrupt and unlikely, and *sh* → *gh* even more implausible. At best, one might hypothesize **g* → *gh* and **g* → *j* → *ch* → *sh*, following recognized routes of affrication and palatization respectively.

64 The available materials, including the accounts of al-Kindī and the Ikhwān, are presented and discussed in detail in E. Neubauer, 'Der Bau der Laute und ihre Besaitung nach arabischen, persischen und türkischen Quellen des 9. bis 15. Jahrhunderts', *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften*, 8 (1993), pp. 279–378.

are less the result of exact measurements than the ideal proportions they are in fact stated to be, yet there is at the same time an emphasis on referring to practitioners, and it is probable that they corresponded fairly closely to the proportions of actual instruments of the day.

4.2 Ratios and tunings

The steps by which the strings are tuned and the fret positions fixed are clearly spelt out, and require no further explanation. First, on any given string the frets are attached to produce the following intervals (measured in cents) from 1, the open string:

1	2	3 ^b	3	4
← 204	→ ← 90	→ ← 114	→ ← 90	→
	204	294	408	498

The strings are then tuned in fourths, so that, with A being given, arbitrarily, as the equivalent of the open *bamm* string, we have in all:

<i>bamm</i>	<i>mathlath</i>	<i>mathnā</i>	<i>zīr</i>
A	d	g	c'
B	e	a	d'
c	f	b ^b	e ^{b'}
c [#]	f [#]	b	e'
d	g	c'	f'

For Farmer, the fretting defined by both al-Kindī and the Ikhwān demonstrates the abandonment of neutral intervals,⁶⁵ thus suggesting a regression from the more complicated scale system described by al-Fārābī to the diatonic structure described by Ibn al-Munajjim (d. 913) and associated with Ishāq al-Mawṣilī,⁶⁶ before complexity re-establishes itself at the beginning of the eleventh century in the accounts of al-Ḥasan al-Kātib and Ibn Sīnā. But such would be a rather perverse view of the evolution of the scale system, and there is no reason to assume that any attempt is being made here to account

⁶⁵ Farmer, *Studies in Oriental Musical Instruments*, First Series, p. 191.

⁶⁶ See Neubauer, 'Al-Khalīl ibn Aḥmad und die Frühgeschichte der arabischen Lehre von den "Tönen" und den musikalischen Metren', *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften*, 10 (1995/1996), pp. 255–323.

for the complexities of practice; the stress is on a Pythagorean fretting which is based on, and restricted to, simple ratios (2:1, 3:2, 4:3, and 9:8) which accord with Neoplatonic numerology (and the attraction of these ratios is such that mention is also made in this context of the just intonation major third, 5:4, even though it is not yielded by the fretting). To take into consideration the irrational ratios associated with neutral intervals, even though they were clearly well established in practice, would have meant completely undermining the cosmological inferences of this scheme.

A further cosmological element emerges in a metaphoric play upon the distinction between high and low notes. Both from the modal descriptions of Ibn al-Munajjim and the comments by al-Kindī on the variable tunings applied to the lowest string, it appears likely that the two highest strings were primarily the bearers of the melody, and that the lower two tended to be used more for registral contrast and to strengthen, by supplying appropriate consonant intervals, modally significant notes in the melody. This contrast is first stated in terms of body (low) and spirit (high), and there is then a quite baroque elaboration in which the performer becomes a scribe, his quill a plectrum conjuring from the higher strings melodic letters that form song-utterances written on the parchment of the air, the ideas they convey again being likened to spirits lodged in bodies. Finally, the temporal dimension of the melody is an imitation of the cosmological rhythms inscribed by the movements of the heavenly bodies, and it thereby serves as a reminder of the felicity the soul may attain in the celestial realm.

4.3 Classification

Reference has been made above to a distinction between continuous and discontinuous sounds. Although not designed as a criterion of organological classification (the discontinuous sounds are exemplified by methods of attack rather than by reference to particular instruments), it certainly allows a listing of instruments (together with water wheels) that produce continuous sounds. These include, predictably, various aerophones but also the *rabāb*, clearly implying that it was a bowed

instrument.⁶⁷ The wind instruments cited are, first, *mizmār* and *nāy*, and then, after the *rabāb*, *surṇāy*. These may well be no more than a random selection, but, if not, one might venture the suggestion that the omission of the *ṣaffāra* and *shabbāba* points us in the direction of reed instruments and thence to the possibility of the further prolongation of sound through the technique of circular breathing.⁶⁸

There are two other passages where a number of instruments are mentioned together. The first moves broadly from percussion to wind to strings, but is perhaps to be more precisely interpreted in terms of a set of functional categories. The first would be military and ceremonial, thereby explaining the inclusion of trumpets (*būqāt*) among the drums, *ṭubūl* and *dabādib*. This group is followed by frame drums (*dufūf*), typically used to accompany social events and celebrations, whether urban or rural, and selected aerophones (*nāyāt*, *sarānī*, and *mazāmīr*), which were probably all reed instruments used in similar contexts. Finally, there is a laconic mention of lutes (*īdān*) ‘and the like’, interpretable as referring in the first instance to the instruments favoured by the social élite and therefore least in need of specification.

Although this is not made explicit, the other and more extensive list approaches more closely an organological classification, and it is of interest to note that it again begins with percussion instruments, which as a category tend to be ignored by other theorists.⁶⁹ It contains the problematic terms already referred to, and it should be noted, although this is not a serious difficulty, that the order of the items listed is not the same in every manuscript. Marking the problematic cases as ‘x’, and the others as ‘p’ (percussion), ‘s’ (string), and ‘w’ (wind), we have in the reading proposed:

p p p w w w w w s x s s s s s w x

67 For those who argue for an early tenth-century date for the *Rasā'il*, this indication would then predate al-Fārābī and thus be the earliest evidence for bowing.

68 The *Kitāb al-Aghānī* contains an anecdote demonstrating that this technique (*zamr*) was already known in the Umayyad period; vol. 17, p. 101.

69 Presumably, because they do not produce functional pitches. The only early major theorist to refer to them in a classificatory context is al-Marāghī; see *Jāmi' al-alḥān*, ed. Binish, pp. 198, 209–210.

Ignoring, for the moment, the last two, it seems fairly clear that this embodies the same tripartite taxonomy as before, and one might further venture the conclusion that the order within each group is not random. Thus, dividing percussion into ‘m’ (membranophone) and ‘i’ (idiophone) and, rather less confidently, wind into ‘r+’ (with reed) and ‘r-’ (without reed), we have:

m m i / r± r+ r+ r- r-

However, the distinctions proposed are by no means certain, and when we turn to the string group, no clear organological sequence can be established on the basis of the usual identifications. The expected juxtapositions of *salbāq*, *ma‘āzif*, and *jank*, and *shawshak* and *rabāb* do not occur, and if we discriminate ‘p’ (plucked) from ‘b’ (bowed) and ‘s+’ (stopped strings) from ‘s-’ (unstopped), we have:

p	b	p	p	b	p
s-	s+	s+	s-	s+	s-

But even if nothing emerges beyond the pointless observation that the first line is palindromic, it is still clear that there is a broad classificatory principle at work (indeed, it is because of this that it is possible, without running a serious risk of circularity, to assign to *ṣunūj* the sense of cymbals rather than harps), and it may be that among the chordophones a different factor was at work. It is certainly striking that the most important ones, the ubiquitous short- and long-necked lutes, come after two rare instruments with classical associations that can, accordingly, be thought to bear a particular form of cultural prestige. The same approach, it may be noted, appears very clearly in al-Khwārizmī’s account, which begins with four Greek instruments (and continues thereafter to stress geographical and hence cultural associations).⁷⁰

After the subsequent list of mainstream contemporary chordophones the group ends with *ma‘āzif*, a plural noun, possibly comprising marginal or local instruments of lesser prestige. But it is also conceivable that they initiate a final group, containing also *urghun* and *armūniqī*,

⁷⁰ A particular form of *ṭunbūr* is associated with Baghdad, the *rabāb* with Fārs and Khurāsān, the *mī‘zafa* with Iraq, and the *mustaq/mushtaq* with China.

that is both organologically consistent, to the extent that each pitch has a separate sound producer,⁷¹ and at the same time a kind of antiquarian appendix: the *mi'zafa* appears to have been a rather generic term that was obsolescent, representative of an earlier stage of Arab musical culture; the organ, as noted above, was of interest for its mechanical complexity, and embodied not so much a significant musical resource as a prolongation of the classical heritage, being usually considered to have originated as a Greek battlefield device designed to inspire awe and terror; and the elusive *armūnīqī* (the identification of which as panpipes may owe something to its coming immediately after the organ) is lexically of quite explicitly Greek derivation.

5. Rhythm

As has been suggested in the introductory volume, the treatment of rhythm is quite complex and in some respects problematic. The particular difficulties concern in the main the definitions of a number of individual cycles (the longer ones in particular), but before addressing these it may be helpful to review the terms in which they are couched and the conceptual framework within which they occur, especially as various relevant themes are touched upon in different chapters of the *risāla*.

5.1 Perception

In presenting the cycles as specific arrangements of attacks and intervening durations the Ikhwān give definitions largely derived from al-Kindī, yet they also set these in a wider context, taking independent account of general issues of duration and memory as these relate to the perception of events in time. Relevant here is the contrast (see above, 4.3) drawn between continuous sounds produced by bowed or wind instruments and discontinuous sounds produced by successive attacks on, e.g., plucked instruments. Although the melodies played using the former were doubtless equally subject to the temporal discipline

71 This is a distinction that would presage the classificatory division between stopped and unstopped made in relation to string instruments by Ibn Sīnā; *Jawāmi' 'ilm al-mūsīqī*, p. 143.

of a rhythmic cycle, it is essentially in terms of the latter that the pattern of the cycle is articulated, and since the attacks that mark it are, inevitably, separated by intervening durations, the question then arises of how these can be measured, whether by ear or by mechanical means, so that the relationships between them are perceived to fall into meaningful recurrent sequences. From this derives the concept of a minimum indivisible time unit, expressed negatively as 'that into which another attack cannot be put',⁷² with longer durations being analysed as multiples thereof. Given the dependence of the description of rhythmic phenomena upon prosodic models, it is not surprising to find the equation of the minimum unit with a short syllable. Nor is it surprising, given the lack of adequate devices for measuring short durations with greater precision, to find that tempo is defined in straightforwardly relative terms: a given speed, *y*, is defined as faster than *z* but slower than *x*. The appeal here is to culturally familiar phenomena, the particular example cited being the pounding of the pestles of gypsum grinders (*y*) as compared with the strokes of oars (*z*) and the blows of blacksmiths' hammers (*x*). The notion of comparatively slower and faster tempi, already implicit in the binary distinctions found in the nomenclature of the cycles, is expanded in abstract terms to four, differentiated by the number of time units per attack in each, one, two, four, and eight respectively.⁷³ Why the possible tempo range could not be subdivided further is not discussed, but why it could not be extended by the addition of yet slower bands is explained as resulting from cognitive constraints: the gap between attacks cannot be so great as to destroy the perception of a meaningful relationship between them, and the limit proposed is eight time units. In most manuscripts the symbols for these are laid out as a square, the notion being that from a given point (the top right corner being suggested by the direction of the Arabic script) one proceeds round the square to arrive, eight symbols later, back at the starting point. This form of representation can be seen to

72 It may be noted, though, that indivisibility is a relative rather than absolute concept, at least for al-Fārābī, who allows tremolo subdivisions.

73 This is one of the few parallels to be detected between the Ikhwān al-Ṣafā' and al-Fārābī in this area; see Neubauer, *Arabische Musiktheorie*, pp. 133–134, 304. However, al-Fārābī also expands from one to two, three, and four; *Kitāb al-Mūsīqī al-kabīr*, pp. 449–452.

prefigure the later use of circular diagrams for the rhythmic cycles, and is almost certainly derived from the concept of the prosodic circle (*dā'ira*) around which related metres could be displayed.⁷⁴

Beyond this limit, it is argued, the mental image of the first attack would fade before the impact of the second is registered. It follows that external aids would be needed to establish the nature of the relationships involving longer durations, and what these might be emerges in the course of a comparison between audial and visual perception. In exactly the same way as with hearing, it is argued that coherent spatial relationships can be perceived over short distances, but otherwise need to be established by using external units of measurement such as feet and yards. The search for temporal equivalents leads not to comparable units such as seconds and minutes, but to the appropriate contemporary technology, despite its inability to operate accurately on such a small scale, to crucial regulatory parts of the water-clock, and beyond these to various forms of astrolabe.

5.2 Prosodic parallels

The basic approach to the description of patterns of attacks and intervening durations is to co-opt prosodic terms and methods of analysis, themselves reflecting features of the Arabic script which determine an approach governed by the concept of the letter rather than the syllable. Thus, an attack (*naqra*) is equated with a letter (*ḥarf*) representing a consonant. The consonant may be followed by a short vowel which is represented not by another letter but by a diacritic and is termed a 'movement' (*ḥaraka*). The resulting 'letter + movement' (*ḥarf mutaharrik*) may be symbolized as 'CV' which, according to the syllable structure of Arabic, forms a short syllable. By analogy with the short syllable, we have a short rhythmic cell. This consists of 'attack + movement' (*naqra mutaharrika*), and is viewed as indivisible. The attack itself is considered to be instantaneous, and the cell as a whole, which only acquires duration through the addition of the following

⁷⁴ It is also used extensively by Šafi al-Dīn al-Urmawī (d. 1294) and his successors to show consonant intervals in modes and to display in concentric layers the pitch relationships they have in common.

movement, is regarded as the shortest entity that can be differentiated from continuous sound. It may be readily equated with the concept of a (minimum) time unit.

5.2.1 Cell combinations

To the short syllable implied by prosodic analysis corresponds, inevitably, a long. To the first ‘letter + movement’ is added a second letter, this time not followed by a short vowel. Lacking movement, it is consequently termed ‘motionless’ (*sākin*). Such a letter can only be final in a syllable, that is, added to a short CV syllable, thereby forming the long, which may be symbolized as CVC.⁷⁵ But, importantly, the ‘absence of movement’ (*sukūn*) associated with the *sākin* letter is theoretically equal in duration to the movement found in a short syllable. Consequently, a long syllable has twice the duration of a short — in other words, CVC is to be analysed as CV + CØ, where Ø has the same notional duration as V.

In exactly the same way, the Ikhwān posit a long rhythmic cell, the duration of which is twice that of the short. They symbolize the short cell in two ways, both equivalent to CV: one uses the short syllables (*mu*, *ta*, ‘*i*’) occurring in the various prosodic feet, the other the short syllables *ta* or *na* which occur in syllable strings representing rhythmic structures. The representation of the long cell similarly uses either long prosodic syllables (*fā*, ‘*i*’, ‘*ū*, *lā*, *mus*, *taf*, *lun*, *tun*) or extends *ta* and *na* by adding a final *n*, all, then, equivalent to CVC.

The long and short syllables combine to form three basic prosodic elements; from various arrangements of these the prosodic feet are formed; and the feet in turn combine to form the poetic metres. The Ikhwān al-Ṣafā’ duly list the three basic elements and the prosodic feet, but do not go on to catalogue the metres. They then use the same three-tiered model as an analytical framework for rhythm, providing first the exact equivalents of the three prosodic elements, defined as *tan*,⁷⁶ *tanān*, and *tanānan*. But the second stage does not correspond exactly to an elaboration of the prosodic feet: rather, we are given various schematic

75 The fact that the long syllable might be phonologically CVV is not relevant here, since the sole determinant is the (identical) distribution of the script symbols.

76 Prosodists allow *tana* (equivalent in duration) as a variant, but the Ikhwān make no mention of this.

(and thus essentially theoretical) combinations of the three elements. Representing the three as *a*, *b*, and *c* respectively, we are presented, first, with all nine possible duple combinations (i.e., *ab*, *ac*, *bb*, *bc*, *cc*, *cb*, *ca*, *ba*, *aa*) and then with a selection of ten (out of a possible twenty-seven) triple combinations. Given the lack of unanimity in the manuscripts, it is not absolutely certain which ten they are, although the most likely seem to be all six possible permutations of all three (i.e., *abc*, *bac*, *acb*, *cab*, *bca*, *cba*) followed by four in which the first and third terms are the same (i.e., *aca*, *bcb*, *cac*, *cbc*). However, one might have expected to encounter in addition *aba* and *bab*. Quite why these have been set aside is not clear, nor, indeed, why the total should have been set at ten: an overall sum of (10 + 9 + the original 3 =) twenty-two is noted, but this is not a number of particular cosmological significance. What is clear is that the combinations do not correspond to the prosodic feet, of which there are only eight,⁷⁷ and given that the prosodic feet are empirically derived from the range of sequences exhibited by the metres, it might reasonably be conjectured that correspondence should be sought not in the result but in the corpus from which it is derived. However, the various duple and triple combinations are far in excess of what is needed to account for the rhythmic cycles, and it is in any case clear that, just as with the prosodic feet, the various duple and triple combinations are logically unnecessary: whatever patterns might be detected in the cycles (or poetic metres) and expressed in these terms, all can be analysed in binary terms, as concatenations of simple elements.

5.3 *The rhythmic cycles as a set*

So far we have been given, in this account of basic prosodic and rhythmic concepts, a review of two parallel sets of constituent elements, but just as this first survey does not go on to itemize the individual metres, so too it avoids describing the structure of each cycle at this stage, a task that is deferred to a later chapter. Rather, it confines itself to characterizing them in general terms and naming them. Significant here is that they are qualified as characteristic of Arab music, a point further

⁷⁷ Formulated in the same way, these would be *ab*, *ba*; *aab*, *baa*, *aba*; *bc*, *cb*, and *aaa*.

emphasized later when they are described in detail. The qualification needs to be put in the context of a general awareness of differences between the musical traditions of various ethnic groups: at one point Daylamīs, Turks, Kurds, Armenians, Africans, Persians, and Byzantines (among others) are mentioned as distinct, so that it should not be presumed that the same rhythmic structures were current far beyond the orbit of the court idiom. Even much later, in the thirteenth century, when a common modal system appears to have prevailed, the point is still being made that Arabs and Persians had divergent rhythmic preferences.⁷⁸ However, as neither the Ikhwān nor the other theorists writing during the ninth and tenth centuries comment on the nature of these differences or provide information about any of these other traditions, the matter cannot be taken further.

The total number of rhythmic cycles (*alḥān*) is stated to be eight, and an equivalence is then suggested between them and the eight prosodic feet. Viewed against the previous stress on taxonomic parallelism, it would be tempting to set this aside as a simple but misleading numerical coincidence between different levels, unhelpfully disguising the proper equivalence, that between a rhythmic cycle and a poetic metre. However, since some of the combinations that correspond to the prosodic feet can in fact account for or be equated with some of the shorter cycles (whereas all metres consist of multiples of prosodic feet), the relationship begins to appear less fanciful, and will be considered again below in 5.5.

Rather more significant is the related statement, echoing al-Kindī,⁷⁹ that the eight are fundamental structures definable as species (*ajnās*), that is, they are in some sense logically prior to other structures that may be viewed as dependent upon them or, to cite the particular metaphor used, as branching off (*tafarraʿ*) from them. On this topic, however, the text of the *risāla* remains as lapidary as al-Kindī, offering no insight into the criteria according to which a particular structure was selected as archetypal, nor any statement leading to an understanding of the nature of the relationships that subsisted between fundamental

78 Ṣafī al-Dīn al-Urmawī (d. 1294), *Kitāb al-Adwār*, ed. H. M. al-Rajab (Baghdad: Manshūrāt Wazārat al-Thaqāfa wa'l-I'lām, 1980), pp. 143, 149, 153.

79 *Mu'allafāt al-kindī al-mūsīqiyya*, p. 97.

and derived forms, and hence no way of telling how distant the latter might be from the former while still being classified as offshoots of it. For a theoretical analysis of this area it is to al-Fārābī that we would need to turn, but, rather than attempt an overall characterization of the transformational processes he explores, here reference will be made only to those variants relevant to the discussion of individual cycles.⁸⁰

On their first appearance, the eight cycles are arranged into four complementary pairs: the first two pairs each consist of a ‘heavy’ cycle and its ‘light’ counterpart, while the last two each juxtapose a cycle with a proper name (*ramal*, *hazaj*) and its light counterpart. In each case, therefore, the nomenclature suggests that the heavier member of the pair constitutes the prior, unmarked term. However, on their second appearance, immediately preceding their individual descriptions, the symmetry of the first presentation is lost, for the first term of the final pair is given as ‘the light [counterpart] of the light’ (*khafif al-khafif*) and the second as *hazaj*. But there is no light to which the former could be a counterpart (and in any case a light/extra light contrast would be a displacement of the heavy/light contrast), and the light counterpart to *hazaj* has been lost.

The subsequent individual accounts follow this asymmetrical second list, inherited from al-Kindī. It thus seems likely that we have here a tacit admission that practice was not quite as neat as theory would wish, and that the first presentation was an over-tidy abstraction which, it may be conjectured, distorted matters in the case of *hazaj* by proposing a light counterpart for what was already a light rhythm. The 4 + 4 arrangement, accordingly, would have been a systematization that was imposed on what in practice appears to have been, rather, a combination of three slower cycles and five faster ones — and there is, further, the suggestion that there may have also been conventional

80 For a general overview of this area, see G. D. Sawa, *Music Performance Practice in the Early ‘Abbāsīd Era*. See also G. D. Sawa, *Rhythmic theories and practices in Arabic Writings to 339 AH/950 CE. Annotated translations and commentaries*, Musicological Studies, vol. 93 (Ottawa: The Institute of Mediaeval Music, 2009); E. Neubauer, ‘Die Theorie vom Īqā’. Part 1: Übersetzung des *Kitāb al-īqā’āt* von Abū Naṣr al-Fārābī, *Oriens*, 21–22 (1968–1969), pp. 196–232; Part 2: ‘Übersetzung des *Kitāb Iḥṣā’ al-īqā’āt* von Abū Naṣr al-Fārābī’, *Oriens*, 34 (1994), pp. 103–173, repr. in *Arabische Musiktheorie* (references will be to the latter volume).

tempo discriminations within the faster band. Moreover, it is significant to note that for al-Fārābī there are seven rather than eight cycles, and that only seven are listed by al-Khwārizmī.⁸¹ We seem, in short, to be faced with an artificial 4 + 4 arrangement cobbled together to provide a counterpart to the 4 + 4 categorization of modal phenomena that had recently been established,⁸² presumably inspired by the similarly patterned Byzantine *octoechos*.⁸³

If it is difficult to trace in any detail the developments leading to the situation the Ikhwān profess to describe, it is easy enough to observe that different kinds of names are juxtaposed. On the one hand, there is the evident parallelism of the two pairs made up of ‘the first heavy’, ‘the light [counterpart] of the first heavy’, ‘the second heavy’, and ‘the light [counterpart] of the second heavy’, even if, on the basis of the definitions given, it is a trifle disconcerting to find that the straightforward relationships that existed between the heavy-light pairs according to al-Kindī (and later authorities) have been switched in the *risāla*, so that they are now connected chiastically:

al-Kindī	heavy:	first	second
	light:	first	second
Ikhwān	heavy:	first	second
	light:	first	second.

In any event, we are dealing with a set of exclusively musical technical terms to which can be added, in the second formulation, the asymmetrical

81 *Mafātīḥ al-‘ulūm*, pp. 245–246.

82 This is attributed to Ishāq al-Mawṣilī (767–850); see J. W. Fück, ‘Ishāq b. Ibrāhīm al-Mawṣilī’, *EI2*, vol. 4, p. 110.

83 Speaking of the differing categories or approaches (*madhāhib*) used by various nations on the lute, al-Kindī refers to the eight Byzantine *alḥān* — using the term that, in the *risāla*, constantly slips between the melodic and the rhythmic, and it is indeed to the rhythmic cycles that he has recourse when giving the Arab counterpart; *Mu‘allafāt al-Kindī al-mūsīqiyya*, pp. 136–137. However, this does not imply a compressed process of derivation but rather, as Neubauer cogently observes, reflects the fact that in the earlier stages of recording the musical details of songs, the rhythmic cycle had conceptual primacy, with mention of the melodic mode coming in only later; see Neubauer, *Arabische Musiktheorie*, pp. 16–17.

'light [counterpart] of the light'. The others, though, point in a different direction, for both *hazaj* and *ramal* are also names of poetic metres. Unfortunately, the relationship is obscure, as although it would be reasonable to hypothesize that the patterns of these metres, both of which are made up of repetitions of a single foot, *fā'ilātun* (– ∪ – –) in the case of *ramal* and *mafā'ilun* (∪ – – –) in the case of *hazaj*,⁸⁴ could have generated rhythmically regular patterns of text setting that then established themselves as autonomous rhythmic cycles, the particular manifestations described by the Ikhwān cannot readily be derived from the corresponding prosodic structures; to this it may be added that there is no evidence to indicate that there had previously been a tendency to set poems in one of these metres in the homonymous cycle.⁸⁵

With regard to *hazaj*, a yet further asymmetry should be noted, one which distances it both from the other cycles and from the *hazaj* metre, for it is elsewhere conceived not as a cycle but as a pulse. It is reasonable to accept that *hazaj* as pulse and *hazaj* as cycle are related, but there is nothing to indicate how one mutated into the other. Given all these possible differences of identity, origin, and association, it might well be that, rather than forming a coherent and balanced set, the eight cycles described by the Ikhwān represent a collection of structures that in certain cases sat uncomfortably together and possibly overlapped.

5.3.1 Associations

The terms 'heavy' and 'light' suggest obvious differences of character, and even if the individual cycles are not assigned specific qualities, they are spread across sets of associations and contexts of use that clearly indicate a perception of their potential to create (or, at least, be appropriate to) various emotions and states of mind. This emerges quite clearly in the recommendations for what is suitable for the various stages of a festive social gathering as it moves from its initially

84 Thus one can be seen as a transformation of the other by the displacement of a single segment, and this relationship was recognized by al-Khalil ibn Aḥmad by inscribing both, along with *rajaz*, in the same prosodic circle.

85 For a review of the evidence see O. Wright, 'Music and Verse', in *The Cambridge History of Arabic Literature: Arabic Literature to the End of the Umayyad Period*, ed. A. F. L. Beeston et al. (Cambridge: Cambridge University Press, 1983), pp. 433–459.

serious state towards final merriment and drunkenness. Associated with this trajectory, not surprisingly, is a shift from heavy rhythms at the beginning to lighter ones later,⁸⁶ with the added injunction to revert to more sedate rhythms at the end if the inebriated become rowdy. There are two further such groupings: one, cited above, within the sets of fourfold phenomena (see above, 3.1.2), the other mentioning which cycles are appropriate for setting poetry on different themes, and taking all these together we can form a fairly clear, if not wholly consistent, picture of the qualities and potentialities deemed to inhere in the various cycles. Thus the first group, suitable for projecting seriousness and setting verse on the connected themes of glory, generosity, and nobility, consists of the two heavy cycles, while the second, characterized as joyful and suitable for setting poems that arouse pleasure, consists of *hazaj* and *ramal*. Beyond that, we have an association between dancing and *mākhūrī* (an alternative name for the light counterpart of the first heavy), while both that same cycle and the slightly imprecise ‘light and the like’ are deemed suitable for setting poems eulogizing impetuous bravery.⁸⁷

The groupings within the fourfold sets are similar: one contains *mākhūrī* ‘and the like’, another ‘the heavy and the like’, and a third *hazaj* and *ramal*. But, although the tripartite division is maintained, leaving the fourth set to be filled by something else, the order is a little unexpected: the joyful *hazaj* and *ramal*, for example, are now associated with winter and old age and with poetry praising nobility and justice.

5.3.2 *Zīr-bamm*

More surprising still is the entry provided for the fourth set (in fact, the first in order of presentation, that of spring), for here we find *zīr-bamm*,

86 A similar arrangement seems to characterize the *nawba* as it evolved in al-Andalus, but, for ‘Abbāsīd court practice, the evidence reviewed by Sawa suggests an absence of pattern, with the cycles occurring more or less randomly; *Music Performance Practice*, pp. 166–170.

87 The name *mākhūrī* has an obvious connection with *mākhūr*, the ‘wine-tavern’, which one could well imagine as a suitable setting for both dancing and Falstaffian braggadocio — except that the bravery mentioned is real, not fake. It is interesting to note, however, that because of its disreputable implications, the derivation *mākhūr* → *mākhūrī* is avoided by al-Fārābī in favour of a metaphorical connection with *makhkhara* ‘to cleave the waves’ (said of the prow of a ship).

that is, a compound of two strings. There is sufficient agreement among the manuscripts to ward off any suspicion that the text might be corrupt,⁸⁸ and, in any case, to decant one or more of the rhythmic cycles into this set would undermine the previous tripartite division.

Although any interpretation must perforce be hypothetical, there are one or two scraps of information that may have a bearing on this curious entry. One is the actual identity of the strings. These are the highest and lowest on the lute, and one could think of a particular technique of alternating strokes whereby the lowest provided a particular rhythmic drone to support the melody in the higher register. But given that both names are Persian words, it might be more realistic to think of the long-necked *ṭunbūr*, on which, given its Persian associations, the two strings probably had these same names. In addition to the possibility of using exactly the same kind of alternation (but with greater facility), or of a single stroke combining melody and drone string in a particular rhythmic pattern, it allows a further relevant technique, stopping the lower string with the thumb, and it is this that is foregrounded in the other piece of evidence, a passage from an eleventh-century text where a complicated Persian rhythmic structure is said to be playable only on Persian lutes with thin (and, presumably, long) necks because it involves an unusual thumb technique on the *bamm* string.⁸⁹ Although there is no evidence to confirm it, there would be nothing unreasonable in the suggestion that there might be a connection between the melodic-rhythmic nexus implied by this technique and the rhythmic entities, sadly not described, that al-Iṣbahānī terms *hazaj ṭunbūrī* and *ramal ṭunbūrī*.⁹⁰

88 All manuscripts have *zīr*, while *bamm* is omitted from two and corrupted in a third to *thumma*.

89 The text is the *Hāwī al-funūn* of Ibn al-Taḥḥān, ed. Neubauer, p. 204. For a discussion on this, see O. Wright, 'Die melodischen Modi bei Ibn Sīnā und die Entwicklung der Modalpraxis von Ibn al-Munaḡḡim bis zu Ṣafī al-Dīn al-Urmawī', *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften*, 16 (2004/2005), pp. 224–308, at pp. 258–259.

90 See Neubauer, *Arabische Musiktheorie*, p. 188.

5.4 The individual cycles

As the above discussion suggests that an examination of the individual cycles would not necessarily benefit from adhering to the pseudo-systematic order of the text, the following discussion will work from the easier, non-controversial definitions towards the more problematic. In the most baffling cases there is an almost irresistible temptation to force the text of the *risāla* to yield a version identical with that derivable from other sources, but, although this needs to be held in check since differences in space and time make it by no means certain that the same name should always relate to the same structure, the fact remains that the other theoretical accounts of the ninth to eleventh centuries provide a set of essential interpretative tools. They consist, in more or less chronological order, of the accounts given by al-Kindī, al-Fārābī, al-Khwārizmī, Ibn Khurradādhbih, al-Ḥasan al-Kātib, Sa'adya Gaon, al-Ma'arri, Ibn Sīnā, and Ibn Zaylā.⁹¹ Of these, the last quotes al-Kindī (even if from a text not identical with those in the surviving corpus), while Sa'adya Gaon and al-Ma'arri are both derivative to the extent that they may be discounted. This leaves, then, six potential points of reference, of which the first two are by far the most important: al-Fārābī because he provides incomparably the fullest and most precise analytical account, but above all al-Kindī, because it is evidently from him that much of the material in the *risāla* is derived.

These sources provide an initial general framework, allowing us to discern the existence of two basic sets: the two heavy cycles and *ramal*, and their light counterparts, that is, then, three corresponding pairs. The lighter ones are cycles of three, four, and five time units, while the heavier are equivalent structures at a slower tempo, i.e., with (at least) twice as many time units. How the remaining cycles relate to these remains to be seen.

In representing the various structures, the short cell (i.e., 'attack + indivisible duration'), will be symbolized as 'x', and its silent counterpart (i.e., 'non-attack + indivisible duration'), as 'o'. (The long cell becomes, accordingly, x o.) Thus 'x' indicates a time unit marked by an attack,

91 For general survey of this corpus, see Neubauer, *Arabische Musiktheorie*, pp. 197–200.

‘o’ a time unit not so marked. The term used throughout for attack/s is *naqra* (pl. *naqarāt*), which appears in the initial verbal definition given for each cycle, after which comes a second definition, or rather representation, in the form of prosodic and rhythmic mnemonics. Evidently, these ought to coincide and also illuminate one another, with the latter, especially, giving the supplementary information needed to fill the gaps in the verbal definitions — literally so, since what is lacking from some of them is a full and precise account of the pauses. Unfortunately, the state of the manuscripts is such that the mnemonic representations cannot always be established with certainty; and worse, what seem to be the best readings cannot always plausibly be aligned with the verbal definitions, so that other accounts must be resorted to in order to gain a clearer reading of the whole.

5.4.1 The light of the light

This could be considered the eighth or additional cycle in the sense that it is the one that does not appear, at least not under that name, in the accounts given by al-Khwārizmī, Ibn Khurradādhbih, and al-Fārābī. However, it is listed by al-Kindī, to whose definition the verbal description in the *risāla* is almost identical. It clearly indicates that the cycle consists of two consecutive time units each marked by an attack, followed by a third time unit not so marked:

(1) /x x o /.

The mnemonic definitions,

mafā ‘i lun mafā ‘i lun
ta nan tanan ta nan tanan,

present this structure four times over, although why they should do so is neither explained nor immediately clear.

5.4.2 The light counterpart of the second heavy

Again, we have a verbal definition almost identical to that given by al-Kindī (but, given the terminological switch noted above, for the light counterpart of the first heavy). This cycle differs from (1) in having

three rather than two consecutive time units each marked by an attack, followed by a fourth time unit not so marked:

(2) /x x x o /.

The mnemonic definitions,

fa'i lun fa'i lun
tananan tananan,

present this structure twice over. As with the fourfold presentation of (1), there seems to be no particular reason for this; certainly, none is given, but it may be noted that, following al-Fārābī, al-Khwārizmī similarly repeats the mnemonic outlines, and, considered in the light of both the versions given for some of the other cycles and the analytical approach of al-Fārābī, it may well be that repetition was considered to give a fuller and more satisfactory identification. More specifically, it may have been that the first cycle was not considered complete until the first attack of the second was reached, in which case it made sense to give it again in full, and that the double format was supported by another prosodic analogy, for although the hemistich, like the single cycle, contained a complete encapsulation of the metre, it still needed to be repeated.⁹²

Definitions of (2) (again called the 'light [counterpart] of the first heavy') as /x x x o / are also given by al-Fārābī⁹³ and al-Khwārizmī.

5.4.3 The light counterpart of *ramal*

Unusual is the fact that the verbal definition of this cycle specifies that the attacks are 'moving' (*mutaḥarrik*), a qualification made for no other cycle. Since every attack is automatically followed by a duration (*ḥaraka*), the inclusion of this specification is either otiose or carries some further implication. If the latter, it might possibly point to a tempo habitually faster than that of the other light cycles, but there is no

92 See Sawa, *Music Performance Practice*, p. 39; Neubauer, *Arabische Musiktheorie*, pp. 133, 183; Sawa, *Rhythmic Theories*, p. 251.

93 See Sawa, *Music Performance Practice*, p. 43; Neubauer, *Arabische Musiktheorie*, pp. 142, 154–155, 202–203, 218.

strong evidence for this, even if al-Khwārizmī qualifies the attacks as ‘light’.⁹⁴

The terms of the definition are clear, if terse: nothing is said about pauses and mention is made only of three consecutive (*mutawālī*) ‘moving’ attacks, which would suggest a cycle of three time units each marked by an attack:

$$(3) \ /x \ x \ x \ /.$$

The cyclic character would presumably be established by differences of timbre and/or dynamics, although no reference is made to this. From al-Kindī’s definition, which has the same three consecutive attacks, followed only by a formulaic phrase indicating the resumption of the cycle, we may find confirmation that the omission of any reference to a pause is because there is none. However, Ibn Zaylā reports a different definition on the authority of al-Kindī, $/x \ x \ o \ /$,⁹⁵ and that the cyclic identity could be — or indeed normally was — ensured by omitting the third attack is confirmed by al-Fārābī and al-Khwārizmī, who give the same basic pattern.⁹⁶ Unfortunately, this coincides with (1) and therefore complicates matters somewhat. But it may well be that for al-Fārābī $/x \ x \ x \ /$ was a variant of a three-time-unit archetype, being subsumed by the generic form $/x \ x \ o \ /$; whereas al-Kindī, followed by the Ikhwān, separated them (presumably in order to round up the set of basic structures to eight) and in so doing assigned the designation of ‘light [counterpart] of *ramal*’ to what for al-Fārābī is a variant.

The congruence between verbal definition and mnemonic representation observed in (1) and (2) is not, unfortunately, the norm, and with regard to the remaining cycles it should also be noted that the mnemonic representation sometimes varies quite significantly between manuscripts. That most commonly given for (3) is:

94 If there was a cycle characterized by a particularly fast tempo, it was probably *hazaj*.

95 H. G. Farmer, *Sa’adya Gaon on the Influence of Music* (London: Probsthain, 1943), pp. 84–85.

96 See Sawa, *Music Performance Practice*, pp. 43, 61; Neubauer, *Arabische Musiktheorie*, pp. 142, 153–154, 201, 211, 225–226; al-Khwārizmī, *Mafātīḥ al-‘ulūm*, p. 244. To be noted, however, is that al-Fārābī allows the addition of an attack in the last time unit, and mentions for it the possibility of qualitative differentiation.

mutafā 'i lun
ta nanan tanan,

which instead of /x x x + x x x / or /x x o + x x o / seems to suggest /x x x o + x x o /, while one manuscript has a repeat of the first of those two elements:

$$\begin{aligned} \textit{mutafā} / \textit{tananan} &= /x x x o / \\ + \textit{'ilatun} / \textit{tananan} &= /x x x o /. \end{aligned}$$

This may appear more convincing but creates a different problem, for it coincides, unhelpfully, with (2).

A possible solution to this difficulty is sketched below in 5.5, where it is suggested that both *mutafā* and *'ilatun* might be interpreted as representing /x x x /. This would mean that there would be no need to conclude that the definition is defective or incoherent or, worse, that the cycle as described by the Ikhwān was significantly different from the version known to other authorities.

5.4.4 The light counterpart of the first heavy

In this case, al-Kindi offers a definition (for what he terms *mākhūrī*, ‘the light [counterpart] of the second heavy’) with three attacks, the first two consecutive, while the third is qualified as ‘isolated’ (*munfarid*). The duration of the preceding pause is not specified, but the text concludes by stating that there is one time unit ‘between its lowering and raising and raising and lowering’ (*bayn waḍ‘ih wa-raf‘ih wa-raf‘ih wa-waḍ‘ih*), that is, at the end of the cycle. This phrase presumably refers to the up and down hand movements of the performer, and is a welcome reminder that the articulation of rhythmic cycles was conceived not, as later, as a set of differentiated strokes on a percussion instrument, but primarily in relation to performance on the lute or *ṭunbūr*. A likely interpretation is that the first ‘lowering’ is the downstroke of the final attack and the second that of the first attack of the next cycle.

The Ikhwān begin their account in a way that suggests that they are dealing with what is essentially the same cycle: three attacks are mentioned, the first two again consecutive (*mutawālī*), while the third is characterized as both isolated (*mufrad*) and — the only difference

so far — heavy (*thaqīl*). Unfortunately, the placing of the third in relation to the first two is again not defined, and neither are we told how many time units separate the third from the beginning of the next cycle, so that the structure could be stated formally as $/x \ x \ p \ x \ q \ /$, where both p and q are unknown. A likely value for p is 1, while to q , if we recall al-Kindī's phraseology, we may rather more confidently assign the same value, thus yielding $/x \ x \ o \ x \ o \ /$. This assumes that the qualification of the third attack as heavy refers only to the presence of an additional following time unit, whereas if it is understood to refer also (or primarily) to a dynamic or timbral contrast, it might be written as $/x \ x \ o \ x \ o \ /$. The interpretation of the light counterpart of the first heavy as a cycle of five time units is confirmed by al-Fārābī, who gives as the basic pattern $/x \ x \ x \ x \ o \ /$, but adds that the variant recognized by Iṣḥāq al-Mawṣilī was, precisely, $/x \ x \ o \ x \ o \ /$.⁹⁷

Would this were all, but, unfortunately, the definition the Ikhwān give complicates matters by going on to mention a further four attacks. As a structure containing far in excess of the probable five time units proposed for al-Kindī's version would run counter to the prediction of identity, or at least close similarity, derivable from the previous cases, the most likely explanation for the discrepancy between al-Kindī's three attacks and the Ikhwān's seven, especially given the initial congruence between the two definitions, is that the latter are describing an enlarged unit consisting of two differentiated cycles,⁹⁸ the second, then, a variant containing one more attack than the first.⁹⁹

The first of the extra four attacks is characterized as *maṭwī*, that is, it is affected by *ṭayy* ('folding'), a form of reduction. This term is taken from prosody, where it designates the substitution of a short syllable for a long, and hence a reduction of the length of the foot (and

97 See Neubauer, *Arabische Musiktheorie*, p. 204; Sawa, *Music Performance Practice*, p. 64; Farmer, *Sa'adya Gaon*, p. 82. The brief definition given by al-Khwārizmī, which could also fit this shape, although it is not specific about pauses, distinguishes between two light attacks and a third heavy one; see *Mafātiḥ al-'ulūm*, p. 246.

98 Neubauer comes to the same conclusion; *Arabische Musiktheorie*, p. 198.

99 The Ikhwān nowhere discuss such a phenomenon, but it is explored extensively by al-Fārābī, who terms it *mukhālafa* ('contrast, differentiation').

hence of the whole line) by the value of a short syllable;¹⁰⁰ the question raised by its application to a rhythmic cycle is whether it relates to the deletion of an attack or, as strict analogy would indicate, a time unit. The answer is provided by the one authority to define this term, al-Fārābī, for whom it is a feature of variant forms, which consists of the omission of an attack from the generic form but without the loss of the related time unit, e.g., /x x x o / → /x o x o /. As the variants that al-Fārābī lists demonstrate, such omission could occur fairly freely in the course of the cycle, but no example is given in which it applies to the first attack. However, in relation to the text of the *risāla*, it makes no sense to specify, for what is purportedly a generic form, a group of attacks from which one is omitted, so the most likely conclusion is either that the duration between the first and second of the four was reduced by comparison with the durations between the other three or that a time unit somehow associated with the onset of this group of attacks was not normally marked. The difficulty attendant upon the first conclusion is that it requires more time units than are available in a second cycle of five. It is preferable, therefore, to understand the suppression indicated by *ṭayy* as relating not to the first of the four attacks mentioned but to the one preceding it, that is, to indicate the elision of the attack that would have been expected on the first time unit of the varied repeat. The resulting structure is

$$(4) \text{ /x x o x o + o x x x x/}$$

(and it may be noted that the resulting two silent time units across the divide are also congruent with notion that ‘heavy’ might be correlated with longer duration).

As a solution, this might be thought less than wholly convincing, and matters are not helped by the corresponding mnemonic syllables, even though they include a third, bird-song version. The manuscripts unfortunately fail to agree: the best overall fit for the prosodic, rhythmic, and bird-song patterns yields a total of thirteen time units, but the majority version for the bird-song coincides with the rhythmic mnemonics in three manuscripts in yielding a total of eleven time

100 Specifically, this is the elision of the fourth letter of a foot, so that, e.g.,
 - - - - → - - - - .

units. In either case, as above in 5.4.3, we have excess when compared with the version derived from the verbal definition, and the reasons why this might be so are discussed below in 5.5, which also reviews the similar discrepancies that occur in the following cycles.

5.4.5 The first heavy

If the light cycles lie, in all probability, within the three to five time unit range, one might expect the heavy equivalents, perceived to be significantly slower, to be statable as cycles of six to ten time units. However, the definitions, as in the previous case, initially seem to point us towards significantly higher totals, in other words, either towards an even slower theoretical tempo band, that in which there are four time units for every one in the fastest, so that the corresponding range for these three cycles becomes twelve to twenty, or else towards a repeat of the phenomenon diagnosed in (4), the combination of a basic form with a following second cycle containing a variant.

The first heavy needs to be seen in relation to the /x x x o / cycle of (2), which the Ikhwān term the ‘light [counterpart] of the second heavy’; to this al-Kindī’s account corresponds exactly, lacking only the specification in the earlier definition that there is insufficient duration between the attacks to insert another. It is therefore implied that there is indeed sufficient duration between the attacks for the insertion of one or more others, and the conclusion that we have moved the same basic number and distribution of attacks to a slower tempo band is confirmed by al-Fārābī’s description.

As before, the Ikhwan begin as if about to reproduce al-Kindī’s definition exactly, mentioning a group of three consecutive attacks. But they then add a further six: one qualified as ‘heavy, isolated, and motionless’ (*thaqīl, mufrad, sākin*), and then, echoing the definition of (4), five attacks, the first of which is affected by *ṭayy*. Given the total number of attacks, it makes sense to think either of an assemblage of two cycles of eight time units each, as with (4), or directly of one of sixteen. In the latter case, though, the logical distribution of the first three attacks, following al-Kindī’s model, would be

/x o o o x o o o x o o o o o o /

and it would not be possible to accommodate the remaining six attacks satisfactorily. In the former case we would have, by the same analogy,

/x o x o x o o o /

with, more plausibly, a further cycle of eight time units to follow. The supposition that we are dealing with two cycles suggests that the distribution of the final set of five attacks should resemble that proposed for (4), in which case it would be reasonable to think of the ‘heavy, isolated, and motionless’ attack as initial in the cycle, thus yielding

(5) /x o x o x o o o / + /x o o x x x x x /.

It would follow that the reference to *ṭayy* relates to the omission of the attack in the third time unit, which would have been present if the model of the first, normative cycle had been followed. It should, however, be noted that no such omission occurs among the variants listed by al-Fārābī, the closest to the above being /x o x x x x x x /.¹⁰¹

The continuing problem of a disagreement between the time-unit totals suggested by the mnemonic as against the verbal definitions is common to all the heavy cycles. In the present case the majority of manuscripts agree on a seventeen-time-unit total, so that we again have an excess.

5.4.6 The second heavy

Here the verbal definition is problematic in exactly the same way, but it also adds a further complication. Appeal to al-Kindī and al-Fārābī suggests, as expected, a fundamental relationship with (4), which the Ikhwān term the ‘light [counterpart] of the first heavy’, viewed as a cycle of five time units but with a change in the internal morphology from /x x o x o / to /x x x o x / (al-Kindī) or /x x x x o / (al-Fārābī).¹⁰² This could then, in slower tempo bands, be stated in terms of either ten or twenty time units. But as with the first heavy, there would be insufficient

101 Sawa, *Music Performance Practice*, p. 58.

102 The parallelism between this form and the layout of the basic (slower tempo) four-time-unit pattern of the first heavy suggests that al-Fārābī may be imposing regularity, especially as he singles out the variant /x x o x o / as the one form recognized by Ishāq al-Mawṣilī; see Sawa, *Music Performance Practice*, p. 60.

space in the latter to accommodate the extra attacks, of which there are now seven, making eleven in all, so that it is again preferable to think in terms of two cycles, consisting now of ten time units each: the basic form, /x o x o x o o x o /, followed by a variant.

The verbal definition begins predictably by echoing al-Kindī but then deviates in a way that suggests the text is defective. Juxtaposing the two, we have:

al-Kindī 3 consecutive + 1 motionless + 1 moving

Ikhwān 3 consecutive + 1 motionless + 1 heavy + 6 with *ṭayy*.

The former definition gives us /x x x o x /, to be understood as /x o x o x o o x o /, with the ‘motionless attack’ (*naqra sākina*) indicating a pause. However, it is clear that when the Ikhwān give the total number of attacks as eleven, they are not including pauses, so that either their ‘motionless attack’ actually corresponds to al-Kindī’s ‘moving’ (*mutaḥarrika*) attack, in which case they have simply failed to refer to the pause preceding it, or — and this is more likely — the ‘moving’ attack has been omitted, leaving ten attacks and a pause.

Restoring the missing attack, we have an exact replica of al-Kindī’s version of the first cycle, with the heavy fifth attack and the remaining six making up the second. Assuming that the heavy attack occupies the first time unit, that qualifying it as heavy may again relate to a following pause longer than one time unit, and that reference to *ṭayy* again relates to the omission of the attack in the third time unit, present in the first, normative cycle, we may interpret the whole definition as

(6) /x o x o x o o x o + x o o x x x x x x /.

The mnemonic definitions, as with the first heavy, appear to point to a number of time units in excess of that in (6).

5.4.7 *Ramal*

Whether defined as /x x x / or /x x o /, it is clear that the light counterpart

of *ramal* is a cycle of three time units, and the consequent expectation that *ramal* should be a slower equivalent stateable as six time units is confirmed by al-Fārābī.¹⁰³ He gives as the basic structure /x o x o o o /, and adds in one passage that Ishāq al-Mawṣilī defined ‘heavy *ramal*’ as a variant thereof, /x o x x o o /.¹⁰⁴ This should help us interpret the rather opaque description offered by al-Kindī,¹⁰⁵ which speaks of a separate attack (*naqra munfarida*) followed by two consecutive attacks and then, in the same vein as for the light counterpart of the first heavy, concludes by stating that there is one time unit ‘between its raising and lowering and lowering and raising’ (*bayn raf’ih wa-waḍ’ih wa-waḍ’ih wa-raf’ih*). But, although the text here differs to the extent that the order of the hand movements is reversed, it is essentially only the testimony of al-Fārābī that urges us to find two time units after the last attack rather than the one mentioned, either by simply assuming that the text mistakenly has one instead of two, or by a rather casuistic reading of the order of events, such as understanding the first ‘raising’ as the hand movement after the third attack and the ‘lowering’ as a movement marking a pause. There would then follow a second pause, the one mentioned, with the subsequent ‘raising’ being the one preparatory to the initial attack of the next cycle.

As expected, the verbal definition given by the Ikhwān begins by replicating part of al-Kindī’s version: an isolated heavy attack is followed by two consecutive ones. But instead of referring to a following pause to complete the cycle, mention is made of a further two pairs of consecutive attacks. The duration of pauses is not specified, though we are told that there is no pause between consecutive attacks, so that

103 Sawa, *Music Performance Practice*, pp. 41–42; Neubauer, *Arabische Musiktheorie*, pp. 221–222. Al-Fārābī sometimes terms this cycle ‘heavy *ramal*’, a designation also used by al-Kindī.

104 Sawa, *Music Performance Practice*, p. 55; Neubauer, *Arabische Musiktheorie*, p. 223.

105 *Mu’allafāt al-Kindī al-mūsīqiyya*, pp. 97–98. Farmer’s interpretation of al-Kindī’s definition, which can be reformulated as /x o o o x o x o /, appears to ignore the final phrase about raising and lowering; see *Sa’adya Gaon*, p. 84. It does, however, fit well with al-Khwārizmī’s curt definition of *ramal* (which, he says, is also called ‘heavy *ramal*’) as one heavy attack and two light ones, symbolized as *tanna tan tan*, and echoed later by Ibn Sinā’s *tān tan tan*; see respectively, *Mafātīḥ al-‘ulūm*, p. 245; *Jawāmi’ ‘ilm al-mūsīqī*, p. 119.

the information given yields $/x p x x q x x r x x s /$. On the assumption that the last four attacks again occupy a second, variant cycle, we might reasonably propose, to conform to al-Fārābī's account, that p , r , and s are each equal to 1, and $q = 2$, thereby arriving at the following distribution for the whole:

$$/x o x x o o + x x o x x o /.^{106}$$

The distribution of attacks in the variant cycle is, though, unusual, for it is to be expected in a fundamentally triple structure that, apart from time unit 1, time unit 3 is the one most likely to be marked by an attack, and it should be noted that this particular variant is not included among the several listed by al-Fārābī: those that contain four attacks are $/x x x x o o /$, $/x o x x x o /$,¹⁰⁷ and $/x o x x o x /$;¹⁰⁸ an attack on time unit 3 is omitted in just one among those with five attacks: $/x x o x x x /$. That the above proposal may not be correct is also suggested by consideration of the rhythmic mnemonics. They include yet again a bird-call version, but despite this extra material the manuscript variants remain few and insignificant, with general agreement on a shape that yields a total of eleven time units. Since the general trend is for the mnemonic representations to produce a total not less but more than that suggested by the verbal definition, one would expect to be able to interpret *ramal* as two cycles of five rather than six time units each, and al-Kindī's account certainly allows us to do so; if we do not interfere with his explicit mention of one time unit for the final pause, his definition corresponds to $/x o x x o /$, and that this is a feasible interpretation is at least countenanced by al-Fārābī, for in the course of his discussion of the second heavy he says that variants, such as $/x o o o x o x o o o /$ (structurally equivalent, therefore, to $/x o x x o /$), were considered by Ishāq al-Mawṣilī to be *ramal*.¹⁰⁹ As elsewhere, then, here we may see the Ikhwān perpetuating al-Kindī's indebtedness to Ishāq. The consequent form of *ramal*,

106 It may be added that the version given by Ibn Hindī can be read as defining the pause between the two pairs as consisting of one time unit.

107 Neubauer, *Arabische Musiktheorie*, p. 223; Sawa, *Music Performance Practice*, p. 55.

108 Neubauer, *Arabische Musiktheorie*, p. 217; Sawa, *Music Performance Practice*, p. 56.

109 Neubauer, *Arabische Musiktheorie*, p. 236.

(7) /x o x x o + x x o x x /,

is one that matches perfectly the remark with which they introduce it, namely that it is the reverse of *mākhūrī*, another cycle of five time units.

5.4.8 Hazaj

This cycle is, for those recognizing a total of seven cycles, the odd one out, having no light counterpart.¹¹⁰ It is also unusual in that there is some dispute as to its basic nature, for Ishāq al-Mawṣilī is accused by al-Fārābī of erroneously considering it less a pattern than a pulse,¹¹¹ and it could also be understood as a pulse from the curt definition provided by al-Khwārizmī, who places it, significantly, first in his exposition, as if, according to this interpretation, it presented the raw rhythmic material out of which all the following cycles would be fashioned. For al-Fārābī, however, it is a cycle of six time units,¹¹² and al-Khwārizmī's definition could also be interpreted thus.

According to the text of al-Kindī, however, it has four.¹¹³ His definition is quite explicit, yielding / x x o o /, and on the basis of the evidence so far one would expect the Ikhwān to echo this version. But, despite a similar reference to two attacks with a pause of two time units after the second one, their version, as it stands, appears impossible to construe as implying the absence of a pause between the two: the problem it presents, rather, is how the length of that pause is to be understood.

An initial oddity is the apparent definition of the first attack as 'motionless'. This renders *sākin*, and it is so qualified in three manuscripts, but in the majority, we find instead *musakkan*,¹¹⁴ a term that appears nowhere else. This might be taken as synonymous, but could also suggest an attack 'rendered motionless', which in other contexts might

110 For al-Fārābī, who makes further tempo distinctions, *hazaj* is in the fastest band, which would explain the lack of a light counterpart; see Neubauer, *Arabische Musiktheorie*, p. 140. However, it acquires one among some of those recognizing eight cycles; see, for example, Ibn al-Ṭahhān, *Hāwī al-funūn*, pp. 180–181.

111 Neubauer, *Arabische Musiktheorie*, pp. 244 (where al-Kindī is regarded as equally culpable in this respect), 251.

112 Sawa, *Music Performance Practice*, pp. 45, 67–68; Neubauer, *Arabische Musiktheorie*, p. 32.

113 *Mu'allafāt al-Kindī al-mūsīqīyya*, p. 98; Farmer, *Sa'adya Gaon*, p. 86.

114 Ibn Hindī, too, has this reading.

be taken, very unusually but not implausibly, as a paradoxical indication that the first time unit of the cycle was distinguished by the absence of an attack. As described by the Ikhwān, however, *hazaj* is the one cycle where there is an explicit reference to a qualitative differentiation between the attacks, the second being lighter (*akhaff*) than the first. Accordingly, the value ‘o’ for the first time unit must be excluded, and the ‘motionless’ qualification must be understood to relate to the duration following the initial attack, presumably designating one longer than that inherent in ‘x’, in all likelihood, then, ‘o’. But the text then adds that there is a one-time-unit duration between the first two attacks, and the question arises whether this is pleonastic, being no more than a restatement and confirmation of the time unit value inherent in the qualification of the first attack, or whether it could conceivably be extra, adding a further ‘o’ to the ‘o’ already implied. In the former case, we would have a cycle of five time units (marking in italics the lighter second attack):

/x o x o o / ,

and in the latter, one of six:

/x o o x o o / .

In either case, though, the apparent clumsiness of expression is both baffling and suspicious: it would have been straightforward to formulate the definition, assuming one of these interpretations to be valid, as ‘an attack followed by a lighter one, with the time of one/two attacks between them’.¹¹⁵

Given that the majority verdict favours six, whereas al-Kindī has four, a version with five seems hard to credit — one might almost think it a desperate attempt at compromise; yet it is this that is reflected exactly by the mnemonic representations.¹¹⁶ But, whilst it seems perverse to suspect these when they do reinforce what the verbal definitions

¹¹⁵ To make the definition accord with al-Kindī’s, the phrase ‘between the two is the time of one attack’ (*baynahumā zamān naqra*) would have to be considered an erroneous scribal addition. But it is present in all manuscripts, including the early Ibn Hindī abridgement, and the following prosodic and rhythmic representations support it.

¹¹⁶ Farmer quotes the mnemonic as ‘fā’il fā’il’ rather than the full form ‘fā’ilun fā’ilun’; see *Sa’adya Gaon*, p. 86.

apparently yield, they have differed from them sufficiently frequently to make untrustworthy witnesses, and they therefore fail to provide cogent reasons for not reconsidering the adequacy of the verbal definition in the light of what other authorities tell us.

Between the six- and the four-time-unit versions, the definition can easily be read as conforming to the former. Yet it is markedly different in character, for al-Fārābī's basic shape is /x x x x x o /, with the subsequent omission of one or two attacks, normally those marking the second and fourth time units.¹¹⁷ Further, without variants it would be difficult to establish that /x o x o x o / actually consisted of six time units, and it could not be distinguished from, e.g., a slightly slower /x o x o /. In short, it lacks the asymmetrical shape needed in addition to the qualitative contrast between the attacks in order to define the cycle.

Given that the mnemonic representations provide a poorer fit with a cycle of six time units, and given, especially, the general indebtedness to al-Kindī, it is more tempting to see whether it cannot be brought in line with his cycle of four time units. This is the route taken by Shiloah, who assumes a straightforward omission of the phrase which in al-Kindī's version denies the presence of a pause between the two attacks.¹¹⁸ But, though convincing, and perfectly effective in that it arrives at the four-time-unit target, this is only a partial solution, as it fails to take account of the fact that there is also no trace in the Ikhwān's version of the 'two consecutive attacks' with which al-Kindī's description begins. We may, therefore, tentatively suggest that the problem arises from the redrafting of al-Kindī's text to indicate the qualitative difference between the two attacks. The latter part of his definition, which the Ikhwān abbreviate but without changing the meaning, may be disregarded,¹¹⁹ leaving only the transformation of the beginning to be considered. Accepting *musakkan* as a *lectio difficilior*, there remains the question of its meaning: rather than 'made vowelless' (that is, taking it as an exceptional, indeed

117 Sawa, *Music Performance Practice*, pp. 67–68; Neubauer, *Arabische Musiktheorie*, pp. 146–147.

118 We would thus have 'naqaratān mutawāliyatān [lā yumkin baynahumā zamān naqra wa-] bayn kull naqaratayn wa-naqaratayn zamān naqaratayn', with the omitted section bracketed.

119 Kindī's 'wa-bayn kull naqaratayn wa-naqaratayn zamān naqaratayn' becomes 'wa-bayn kull ithnatayn zamān naqaratayn'.

inexplicable, substitution for *sākin*), we may appeal to its broader (if rare) sense of ‘calm’, ‘relaxed/soft’, qualifying the intensity of the attack. In contrast to al-Kindī’s text,

naqratān mutawāliyatān lā yumkin baynahumā zamān naqra
 ‘two consecutive attacks, between which there cannot be the time
 of an attack’,

we thus have:

naqra musakkana wa-ukhrā akhaff minhā baynahumā zamān naqrā
 ‘a soft attack and another [even] lighter one, between which there
 is the time of an attack’.

This suggests that the original text of the *risāla* may well have been:

*naqra musakkana wa-ukhrā akhaff minhā lā yumkin baynahumā
 zamān naqra*
 ‘a soft attack and another [even] lighter one, between which there
 cannot be the time of an attack’,

and that the rare *musakkan* was later misinterpreted as indicating a pause, thereby explaining both the substitution in some manuscripts of the more obvious *sākin* and the omission of the following negative, now considered contradictory since it denies the existence of the pause which the first term is deemed to imply. If we emend accordingly, we arrive at

(8) / x x o o / ,

and the expression is no longer atypical and clumsy — the second ‘lighter’ attack fits perfectly. One might even add that a cycle consisting of a soft and then an even lighter attack followed by a pause of two time units would both be markedly different from the light counterpart of the second heavy with its four time units — and not so far removed after all from a pulse.

5.5 Prosodic definitions

As is apparent from the preceding examination of the individual cycles, the prosodic and rhythmic representations replicate the result of the verbal definitions exactly in only two cases. For one of these, the cycle is given twice, and for the other, it is given four times, but this is hardly problematic, and there appears to be no good reason to dwell further upon it at this stage. What is problematic, paradoxically, is the fact that here the two methods of representation do produce identical results, as the norm is for the verbal definition to yield x time units and the mnemonic definitions $x + 1$. Since the regularity of this excess can hardly result from chance, it may be concluded that we are dealing neither with error on the part of the Ikhwān nor irresponsibility on the part of the copyists, but with a systematic difference for which there should be a discernible cause, and the obvious area to consider is the adequacy of the method of representation for the purpose in question.

Considered in isolation, the rhythmic mnemonics (and, following them, the bird-song representations) could easily be articulated in a way that would fit the time-unit totals to which the verbal definitions correspond. Given the convention that *ta* is always initial in a group (corresponding, broadly, to a prosodic foot) and is always followed by *n*, *na*, or *nan*, the only thing they cannot do is represent accurately in all contexts the presence or absence of an attack. Thus, both $/x\ x\ o\ /$ and $/x\ o\ o\ /$ appear as *tanan*, $/x\ x\ x\ o\ /$ and $/x\ x\ o\ o\ /$ as *tananan*. But, as they could certainly provide the correct totals for each cycle, it may be suggested that the reason they do not is that they are parasitic upon the prosodic representation not only with regard to the divisions into feet, but also with regard to the total time-unit count — in other words, the reason for the discrepancy is to be sought in constraints upon the prosodic representation that render it incapable of such accuracy.

The assumption, then, is that the prosodic mnemonics are not just neutral transmitters of the rhythmic structures. Rather, it may be suggested that the forms of representation they take are influenced (that is, in context, distorted) by the norms of prosodic representation as embodied in the various metrical feet and the three elements of which they are constituted.

There is one immediately obvious limitation on their effectiveness. Since the Ikhwān refer only to the form – (CVC) for the first prosodic element in the system (by inference discarding the alternative, ◡ ◡), while for the second and third we have ◡ – (CVCVC) and ◡ ◡ – (CVCVCVC) respectively, it follows that neither the elements nor the prosodic feet compounded from them (nor, *a fortiori*, the metres compounded from the prosodic feet) can end in one or more short syllables. This constraint helps explain the representation of the first heavy, the second heavy, and *ramal*. To begin with the last: the first cycle, /x o x x o /, is rendered exactly by *fā'ilun*, while for the second, /x x o x x /, we have *mafā'ilun*, equally accurate until we reach the final letter, which gives one time unit too many. But to delete it would mean going against the grain of the prosodic system by admitting a final short vowel (it would need to be analysed as ◡ – plus ◡ ◡). It may therefore be hypothesized that here the final consonant is a dummy letter added to produce conformity with prosodic rules, yielding a surface reading /x x o x x o / that should be taken to represent an underlying /x x o x x /.

We have, therefore:

fā 'i lun mafā 'i lu(n)
tan tanan tanan tana(n),
kay kakay kakay kaka(y)
 /x o x x o + x x o x x /.

Interpreting the final consonant as a dummy letter also provides a satisfactory solution for both the first heavy and the second heavy. In the former, we have a problem of initial segmentation, in that there is no prosodic foot consisting of two, three, or four long syllables, with the result that the division adopted for the second cycle is imported into the first, thereby creating an artificial foot of three long syllables followed by a single long:

maf'ū lun maf mafā 'i lun ma(f)
tan tan tan tan ta nan tan tan ta(n)
 /x o x o x o o o + x o o x x x x x /.

It may be noted that this gives a good correspondence in the second

cycle between the syllabic organization and the pause plus following onset of the attacks.

The representation of the second heavy derives directly from the above, simply adding a further long syllable in each cycle to cater for the extra length:

maf'û lun maf'û mafā 'ī lun maf'u(u)
tan tan tan tan tan ta nan tan tan tan ta(n)
 /x o x o x o o o x o + x o o o x x x x x /.

In the second cycle, there results a correspondence between the syllabic organization and the arrangement of pauses and attacks that is not quite so good, however; tackled independently, one might have expected it to begin, rather, with *fa'ilun*. Although the suggestion can only be tentative, it is possible that another factor may have been involved here, namely, a disinclination to begin with something other than a full prosodic foot, if it could possibly be avoided. Thus, whilst one of the prosodic elements is $\sim \sim -$, it does not appear independently as a full foot¹²⁰ but as part of the foot *mutafā'ilun* ($\sim \sim - \sim -$), which would be less than felicitous in this context. This could help explain the preference given to the slightly awkward option of adapting the model of the first heavy. To the objection that *fa'ilun* does in fact appear in the prosodic definition of the light counterpart of the second heavy, it may be responded, quite simply, that for this cycle there was no better option available; and it may be added that the desire to avoid an incomplete prosodic foot wherever possible may explain the use of *mafā'ilun* for the light counterpart of the light, covering two cycles, rather than representing a single cycle by the prosodically fragmentary *mafā* or *fa'û*.

The same applies to the light counterpart of *ramal*, where we generally have *mutafā'ilun* or *mafā'ilun*, both giving a count of seven time units. Discarding the dummy final consonant from the latter, we have an exact match with two rhythmic cycles:

mafā : 'ī lu(n)
 /x x x + x x x /.

120 Though *fa'ilun* does occur, it never initiates a line, and is essentially a reduced form of *fā'ilun*.

But the former, to which the rhythmic mnemonics generally correspond, seems to suggest /x x x o + x x o /, in other words, that this time the dummy element has been added to the representation of the first cycle:

$$\begin{array}{l} \text{mutafa}(a) : 'i \text{ lun} \\ \text{tanana}(n) : \text{tanana} \\ /x \ x \ x \ + \ x \ x \ o \ / \end{array}$$

An equally straightforward case is that of the version proposed for *hazaj*, where to two cycles of /x x o o / corresponds 'fā'ilun fā'ilun' (echoed exactly by 'tan tanan tan tanan'). If there is a query, it concerns not the dimensions — for, again assuming a final dummy consonant in each, we arrive at another perfect fit:

$$\begin{array}{l} \text{fā} \ 'i \text{ lu}(n) : \text{fā} \ 'i \text{ lu}(n) \\ \text{tan tanan}(n) : \text{tan tanan}(n) \\ /x \ x \ o \ o \ + \ x \ x \ o \ o \ / \end{array}$$

— but, rather, the identity of the prosodic foot, for *fa'ūlun* would seem to be a more apt choice.

It remains to consider *mākhūrī*, the light of the first heavy, for which we have, in addition, a bird-song version. As usual, the manuscripts fail to agree, but by far the most common form for the prosodic representation is:

$$\text{mafā'ilu or mafā'ilun} + \text{mutafā'ilun},$$

which yields a total of twelve or thirteen time units, uncomfortably in excess of the expected total of eleven.¹²¹ Ignoring two wayward versions of the rhythmic mnemonics, we are left with three that follow the thirteen-time-unit version exactly, while two have a pattern which coincides with the majority version for the bird-song, and these do yield eleven.¹²²

$$\begin{array}{l} \text{tanana tan tananan tan} \\ \text{kukū kū kukukū kū} \end{array}$$

121 The only significant variant is *mafā'ilu* for *mafā'ilun*, which does not, however, alter the total number of time units.

122 One bird-song version (*kukū kukū kukukū kukū*) has thirteen time units, and one other (*kukūkū kukūkū*) has ten. This last seems too good to be true, but is from one of the least reliable manuscripts and carries insufficient weight as evidence.

If we again hypothesize that the long final syllable is a prosodically forced representation of a short, we arrive at a straightforward correspondence with the version proposed above:

ta nan tan : ta nanan ta(n)
ku kū kū : ku kukū ku(u)
 /x x o x o + o x x x x /.

It would be tempting to follow the alluring call of the bird song, discard the majority version for the prosodic representation of the second cycle, and adopt the reading of ˩, *mafā'ilu(n)*. But this simply does not fit with *tananan ta(n)* (one would expect it to generate *tanantanan*), so that we are forced back to the longer mnemonic versions, despite the fact that they involve a greater degree of distortion than hitherto. However, the introduction of a dummy consonant in the first cycle, as before, is certainly plausible; and it is not implausible to suggest that the extra length in the second is again forced: a beginning with ˩ ˩ rather than ˩ – (presumably because of the fast tempo) requires completion with – ˩ – to produce the only available full foot, *mutafā'ilun*. This overlong representation would then generate a parallel form in some of the rhythmic mnemonics:

mafā 'i lu(n) : mutafā 'i (lun)
ta nan tana(n) : ta natan ta(nan)
ta nan tan : ta nanan ta(n)
ku kū kū : ku kukū ku(u)
 /x x o x o + o x x x x /.

5.6 Ramal and mākhūrī

A possible connection between these two cycles is suggested in two contexts. As noted above, when *ramal* is introduced it is referred to as the 'reverse' ('aks) of *mākhūrī* (= 'the light [counterpart] of the first heavy'). Comparing the interpretations of the two proposed above,

/x o x x o + x x o x x / and /x x o x o + o x x x x /,

it will be seen that this can readily be understood to refer to the

structure of the first cycles of each, /x o x x / being the reverse of /x x o x /. Assuming this to be what was intended, the reference is simply a descriptive aid.

The second context is a passage dealing with changes of cycle. These imply an aesthetic preference for smooth transitions between structures perceived to be similar, and the instances mentioned are changing from a heavy cycle to the corresponding light one or from a light cycle to the corresponding heavy one or another similar. This is a distillation of a more detailed passage by al-Kindī which occurs in slightly different forms.¹²³ These can reasonably be conflated to specify the following moves: from the light counterpart of the first heavy to the first heavy; from the second heavy to *mākhūrī* and vice versa; from the light counterpart of *ramal* to heavy *ramal*; from *hazaj* to the light counterpart of *ramal*; and from heavy *ramal* to *mākhūrī*.

As to the nature of these transitions, al-Kindī gives the specific example of the last move, from heavy *ramal* to *mākhūrī*, and the process is reproduced in full by the Ikhwān. It is effected by stopping at the last two percussions of *ramal*, continuing with a single percussion, making a brief pause, and then beginning *mākhūrī*. From this we may arrive at the following interpretation:

$$\begin{array}{c} /x o x x + o x o \\ /x x \quad o x o + o x x x x / , \end{array}$$

which is evidently in accord with an aesthetic desire to avoid the abrupt, as it allows a smooth transition by creating an overlapping pre-echo of the second cycle within the first.

5.7 Summary

The versions that result from this necessarily rather convoluted discussion of the individual cycles are, it must be conceded, disputable in places; they lack the regular differentiations and complementarities that would allow them to be considered a coherent set rather than a somewhat random accretion of disparate elements. Ignoring the switch of names peculiar to the Ikhwān, we can certainly establish a grouping

¹²³ *Mu'allafāt al-Kindī al-mūsīqiyya*, pp. 84, 98.

of two light/heavy pairs, based on four- and five- or eight- and ten-time units respectively:

	first	second
light	/x x x o /	/x x o x o : o x x x x /
heavy	/x o x o x o o o : x o o x x x x x /	/x o x o x o o o x o : x o o o x x x x x x /

But thereafter regularity recedes:

	<i>ramal</i>	<i>hazaj</i>	light of the light
light	/x x x /	/x x o o /	/x x o /
heavy	/x o x x o : x x o x x /		

Here the light/heavy contrast may not have been as clear-cut; the light counterpart of *ramal* does not obviously relate to the version proposed for *ramal* in the same straightforward way; the light counterpart of the light appears to be little more than a variant of the light counterpart of *ramal*; and the version of *hazaj* proposed here likewise appears to be little more than a variant of the light counterpart of the first heavy. By comparison, the repertoire of seven cycles as described by al-Fārābī is tidier, in the sense that it rejects one unnecessary entry; but it still contains an element of duplication in that both *ramal* and *hazaj* are now statable as cycles of six time units, and although this fits neatly with the association of the two with regard to mood and affect, according to his systematic rules of transformation, the structure of one could be derived from the other and, therefore, relegated to the status of variant.

5.7.1 Variants

A salient and rather surprising feature of these definitions, particularly as they are offered as generic types (*ajnās*), is that for four of the cycles the Ikhwān present two forms. The first corresponds closely or exactly to the generic type given by other theorists, while the second would,

surely justifiably, be considered by them a secondary derivation thereof, and one sometimes quite distant from the putative original form, to the extent that they might even be thought of as showing how (or how far) the generic form could be varied in practice, constituting, in short, a representative sample from the range of variation types systematized by al-Fārābī. Alternatively, they might possibly be interpreted as specific variants preferred by local musicians to avoid the regularity of the generic form. If we prefer to accept at face value the inference that they were an integral part of the generic form, then they were presumably variants that alternated with the basic form to create a normative compound structure.

It is, in any case, worth noting that if the interpretations proposed are valid, all four result from applying a similar process of transformation, that is, the deletion of one of the attacks in the basic form and the addition of one or (usually) more attacks to fill the latter part of the cycle:

$$\begin{aligned} & / x x o x o / \rightarrow / o x x x x / \\ & / x o x o x o o o / \rightarrow / x o o x x x x x / \\ & / x o x o x o o o x o / \rightarrow / x o o o x x x x x x / \\ & / x o x x o / \rightarrow / x x o x x / \end{aligned}$$

The Ikhwān present these examples without comment, almost as if wishing to slip in, alongside definitions of the generic forms, surreptitious examples of how others can be derived from them. But whatever the motivation, by including them in a text not otherwise concerned with the minutiae of practice, they underline the central importance of the processes of transformation that make the rhythmic cycles so much more flexible and alive than the bald outlines of the generic forms might suggest, and give a glimpse into a world of rhythmic variation that, as al-Fārābī reveals, was one of considerable complexity.

(fol. 39a) [p. 183]

Epistle 5

On Music

(Being the fifth epistle from the first section
of the *Epistles of the Brethren of Purity*, on the
Propaedeutical and Mathematical Sciences)*

(fol. 39b) *In the name of God, the Compassionate, the Merciful*

Chapter 1¹

Now that we have completed our account of the spiritual disciplines that are the various fields of speculative knowledge and of the practical, physical disciplines that are the various arts and crafts, and now that we have explained in two of our epistles the essentials of each,² the number of types they contain, and the aims sought for in them,³ in this epistle entitled ‘On Music’ we wish to discuss that art which combines the physical and the spiritual, that is, the art of composition [*ta’līf*] and the knowledge of proportion[al relationship]s [*nisab*]. But it is not our intention in this epistle to give instruction in practical musicianship [*ta’līm al-ghinā’*] and the construction of instruments [*ṣan’at al-malāhī*],⁴ even if such matters have to be touched upon.

* Defined as the fifth epistle (but the fourth in the earliest, Atif Efendi manuscript, as well as in the later Esad Efendi 3637), that on music is indeed put fifth, after the epistles on arithmetic, geometry, astronomy, and geography. But to the extent that this last is an appendage to the epistle on astronomy, music remains effectively fourth, retaining its normal position as a member of the quadrivium of mathematical sciences.

- 1 In no manuscript does the term *faṣl* appear here, so this heading is an editorial insertion (as are, throughout, the chapter numbers). As there is no clear agreement between them on where it should be used thereafter, it has been considered convenient in some cases to include a chapter division not found in the three earliest manuscripts.
- 2 Given the position of this epistle and the nature of the preceding ones, one might wonder what is implied by this apparently disconcerting initial claim to have dealt with matters both spiritual and physical, and of having discussed in two epistles their nature and purposes. The text contrasts ‘*ṣanā’i’ ‘ilmiyya rūḥāniyya’*’ with ‘*ṣanā’i’ ‘amaliyya jismāniyya’*’ (although the Beirut edition, like the Feyzullah MS, unfortunately replaces ‘*amaliyya*’ with ‘*ilmiyya*’), and these two phrases tally exactly with the subject matter of Epistles 7, on the speculative arts (*al-ṣanā’i’ al-‘ilmiyya*), and 8, on the practical arts (*al-ṣanā’i’ al-‘amaliyya*). But there is no need to entertain speculations that the epistle on music was originally intended to follow them and that a different order was overridden at some later stage by the more powerful call of the quadrivium. As it also contains several later pointers to matter said to have been already dealt with elsewhere, including in Epistle 38 (on the resurrection), such indications should be seen not as evidence for the insertion early in the series of a late composition, but simply as a system of cross-references within what is regarded as an already completed work.
- 3 The reading preferred here is that of ζ and λ , rather than the more obvious dual which would refer to the two categories rather than their individual constituents.
- 4 Shiloah understands here ‘performance’. However, the choice of *ṣan’a* rather

Rather, we are concerned with knowledge of proportion[al relationship]s and the modalities of [harmonious] composition, through a command of which one attains skill in all the arts.⁵

You should know, dear brother, may God aid you and us with a spirit of His, that in every manual craft the matter [*hayūlā*] dealt with consists of naturally occurring material, and that all its products are physical forms. The exception is music, for the ‘matter’ it deals with consists entirely of spiritual substances [*jawāhir*], namely, the souls of those who listen to it.⁶ The effects it has on them are also entirely spiritual, for

than *ṣināʿa* suggests that manufacture rather than performance may have been intended. The following phrase supports this to the extent that the discussion of the lute, the only instrument to be considered in any detail, deals with materials, dimensions, and tuning, not with playing technique. The topic is introduced, moreover, by the phrase *ʿṣanʿat al-ʿūd*. One should not read too much into the use here of *malāhī* rather than the more neutral *ālāt* for ‘instruments’, while noting nevertheless that its association with frivolity emphasizes the contrast between the mundane world of performance and the more spiritual, philosophical domain that the Ikhwān intend to explore.

Given the underlying theme of the epistle, it is not surprising to find a disclaimer concerning human and mechanical agents; the aim is not to give a descriptive account of local phenomena, but to observe universal patterns and to reveal in the relationships underlying the production of sound a model of general applicability, and at the same time to suggest spiritual analogies and motivations.

- 5 Although most of the terms used here seem to translate smoothly enough, the match is by no means perfect (see the music chapter in the introductory volume to this series, *The Ikhwān al-Ṣafāʾ and their ‘Rasā’il’: An Introduction*, p. 224 ff. for a fuller discussion). ‘Music’ renders *mūsīqī*, an evident loan word, and one which is thought to require some kind of definition, being glossed as *ghināʾ* (‘song’). But the two are not synonymous: *ghināʾ* points to the practical, *mūsīqī* more to the theoretical and speculative. The concern of the Ikhwān is precisely with access to a higher world manifesting ideal, harmonious proportions, and as a result we find an emphasis on *nisab* (‘relationships’) that can be expressed mathematically as simple ratios and thus exhibit ideal proportions.

Also without a wholly satisfactory equivalent is the term *taʿlīf* (see *The Ikhwān al-Ṣafāʾ and their ‘Rasā’il’*, p. 228). ‘Composition’, with its background etymological sense of ‘putting together’, provides an exact equivalence that still fails to capture the implication that the underlying principle of composition should be an adherence to, and manifestation of, ideal proportions, thereby providing a human analogy to the pure ratios of the celestial realm that generate the music of the spheres. (Shiloah, accordingly, prefers to render *taʿlīf* as ‘harmony’. Further amplification of the intellectual background, together with appropriate references, may be consulted in the extensive footnotes to the opening pages of his French translation.)

- 6 As here, *hayūlā* will generally be rendered by ‘matter’, and *jawhar* by ‘substance’.

melodies, consisting of rhythms [*aṣwāt*] and tones [*naghamāt*],⁷ have effects on the soul analogous to the effects of the art of those who work with the particular material associated with their crafts.

These [p. 184] tones and rhythmic sounds have the power to inspire people⁸ to undertake hard labour and strenuous activities, to encourage them, and to strengthen their determination to perform difficult and physically draining acts demanding the sacrifice of their lifeblood and their accumulated wealth. Specifically, these are the stirring melodies that are used in war and when fighting in the heat of battle, especially when sung to metrical verse describing warfare and praising brave warriors, such as the line, 'If I were from Māzin, the sons of al-Laḳīṭa

The statement here is both surprising and audacious. It is as if music as sound is a mere vehicle or tool, a means towards an end, which is the particular psychological state it brings about in the listener. This has interesting parallels with recent arguments about ontology concerning music and literature, particularly those related to reception theory; see, e.g., Robert C. Holub, *Reception Theory: a Critical Introduction* (London: Methuen, 1984).

7 We are given here a definition of '*alḥān mūsīqiyya*' as *aṣwāt* and *naghamāt*, none of them esoteric or highly technical terms, but their very accumulation is nevertheless problematic, and the version offered here is tentative and, quite possibly, wayward. To begin with, *laḥn* itself (see *The Ikhwān al-Ṣafā' and their 'Rasā'il'*, pp. 227–228) has no single satisfactory equivalent: 'melody' foregrounds the element of pitch, but at least equally important with *laḥn* is the notion of rhythmic structure (it also serves, in fact, as the technical equivalent to 'rhythmic cycle'). It is thus perhaps more accurately rendered by 'measured melody' or 'rhythmic melody'. The following qualification of *alḥān* by *mūsīqiyya* seems redundant, unless the intention is to foreground the melodic rather than rhythmic aspect. But whatever the implication, to equate 'musical *alḥān*' with 'songs and notes' would be pointlessly tautological. The term *naghamāt* corresponds fairly closely to 'notes, tones', but as well as 'songs' *aṣwāt* may, and elsewhere in the *risāla* usually does, equate with 'sounds' in general, non-musical as well as musical. Reference to non-musical sound can be excluded here, but it could, conceivably, be meant to encompass the sound of percussion instruments as contrasted with pitched *naghamāt*. The version offered is, incidentally, quite close to Shiloah's: 'melodies which are composed of notes and rhythms'. See also Farmer, *Sa'adya Gaon*, pp. 24–25.

8 The literal translation is 'souls' (*nufūs*). There are two main levels of reference for the *nafs*, one (sometimes specified as *kullī*, 'universal') being the world soul in the Plotinian scheme of emanations, the other the soul of a person (sometimes specified as *juz'ī*, 'partial, individual'); where the former sense is clearly intended it may be represented as 'Soul'. In the present context, the soul functions as the driving force behind human action and can be viewed as standing metonymically for the person.

of Dhuhl ibn Shaybān would not have dared to raid my camels',⁹ or those of al-Basūs al-Minqariyya:¹⁰

I swear that were I in my tribal land,

Sa'd would suffer no wrong as a [protected] neighbour¹¹ of my people.

But I am a exiled in a place where,

when the wolf attacks, it ravages my sheep.

So, Sa'd, do not be deceived — go away,

for the people you are now with are dead to [the rights of their] neighbours.

These and kindred verses,¹² we are told, helped incite [whole]

- 9 Neither this nor the following example appears particularly bellicose and certainly does not directly describe valorous martial acts. They are to be understood, rather, as verses regarded as particularly effective in provoking action (the first being a reproach using shame as the spur), and they belong to a particular genre of Arabic poetry termed *tahriḍ*, that which encourages or stimulates action, here violent retaliation. This first example is, in fact, the very first line in *al-Ḥamāsa*, a celebrated anthology compiled by Abū Tammām (d. 846). The poet, Qurayṭ ibn Unayf, praises the valour of the tribe of Māzin, who helped him gain redress when his own kinsfolk held back. For a variant reading see the commentary by al-Tabrizī; *laqīṭa* means 'foundling', but rather than forming part of an abusive phrase, it is said to be (a) the name of a real person, and (b) in any case, the wrong name.
- 10 For the tribal conflict known as the war of al-Basūs, see J. W. Fück, 'Al-Basūs bint Munkidh b. Salmān al-Tamiyya', *EI2*, vol. 1, p. 1089. In the version preserved in al-Tabrizī's commentary to the *Ḥamāsa* there are four lines, and compared to the three given here there are also differences in the order of the lines and in the wording, with consequent (and significant) differences of meaning; see *Kitāb Ash'ār al-ḥamāsa*, ed. G. G. Freytag (Bonn, 1828), vol. 1, p. 422. In the Beirut edition the poet is identified as al-Basūs bint Munqidh.
- 11 The term *jār* ('neighbour') implies an obligation to help and defend if needed. The following line provides a deliberate contrast by placing the speaker in a place where no such protection is offered.
- 12 The Basūs verses appear only in ^ف and ^ف, the Beirut edition, and, among the later manuscripts, ^غ, which suggests the possibility that they may constitute a later reinforcement. However, the following comment, '*hādhih al-abyāt wa-akhawātuhā*', is better suited to their presence than to their absence, and the ensuing remark concerning the protracted conflict between two tribes (in some manuscripts 'the two tribes') may be readily understood as a specific reference to the Basūs war, a long drawn-out conflict between the Taghlib and Bakr tribal groups.

peoples to war,¹³ and to a conflict between two Arab tribes that lasted continuously for years.

There are also metrical verses that stir up covert rancour and move the placid to action, inflaming them with anger, such as ‘Remember the deaths of al-Ḥusayn and Zayd, and the one slain beside al-Mihrās’.¹⁴

These and other similar verses have stirred up hatred — the hatred of a [whole] people, arousing their souls to action, inflaming them with anger, and urging them on until they actually killed their cousins, kinsfolk, and fellow tribesmen for the crimes of their fathers (fol. 40a) and the sins of their grandfathers, sparing no one.

There are also rhythms [*alḥān*] and melodies [*naghamāt*] which calm the vehemence of rage, dissolve enmity, bring about peace, and create amicable friendliness. As an example of this, it is related that at a drinking party two men met who were angry with each other and between whom there was long-standing enmity and concealed rancour, and when drink got the better of them their enmity was aroused, inflaming them with anger, [p. 185] so that each one was intent on killing the other. When the musician [*mūsīqār*],¹⁵ who was skilful in his art, realized how things stood between them, he altered the tuning of his instrument¹⁶ and let them hear a melody in a soft rhythm¹⁷ that he played [*ḍarab*] to calm their anger. He continued thus until he had

13 This loosely renders ‘*kānat sababan li-naḥīr aqwām ilā’l-ḥurūb*’ (more literally, ‘were a cause of peoples going/rushing forth to wars’). The Beirut edition, like ك, has *tuthīr*, but the scribal deviation *naḥīr* → *naḥr* or *tuthīr* seems more likely than the reverse. The derivation *tanḥīr* in ت and ف is interesting, suggesting ‘to summon, mobilize’, but, although *istanḥar* has this sense, it is not attested for *naḥr*.

14 Although found in only two manuscripts, the reading *qatilan* (given also in the *Tāj al-‘arūs*, s.v. *mihrās*) is preferable to the *qatīl* of the others (which would yield ‘and of the one slain’). The *Tāj al-‘arūs* informs us that al-Mihrās is a spring near Uḥud, and identifies the unnamed person as Ḥamza ibn ‘Abd al-Muṭṭalib, who was killed at the battle of Uḥud.

15 The manuscripts offer *mūsīqī* and *mūsīqān* as well as *mūsīqār*. On this variety, or confusion, see *The Ikhwān and their ‘Rasā’il*’, p. 228; see also the discussion below in note 34.

16 The literal meaning is, ‘he altered [*ghayyar*] the strings [*awtār*] of the instrument [*ālā*]’. This is the reading in غ; the other manuscripts have ‘he altered the notes [*naghamāt*] of the strings’, making more explicit the change of mode/mood involved.

17 Here, ‘a melody in a soft rhythm’ renders ‘*al-laḥn al-layyin*’, on the assumption

calmed the vehemence of their rage, and they stood up, embraced, and made peace.

Then there are rhythms and melodies that transport people from one state to another and change their outlook from one pole to its opposite. One example is what is related concerning a group of practitioners of this art who, having come together at the invitation of a great man, were ordered by rank at his assembly according to their expertise in their art. Suddenly, there entered a man in a dishevelled state, wearing the garments of an ascetic, but the lord of the assembly set him above them all. As their expressions showed displeasure, the host wished to demonstrate his excellence and dissipate their anger, and so asked him to let them hear something of his art, whereupon the man took out some pieces of wood he was carrying, assembled [*rakkab*] them, stretched [*madd*] strings over them, and set them in motion [*harrak*] in such a way that he made everyone in the assembly laugh from the feelings of well-being, delight, joy, and pleasure that had entered their souls. Then he changed them about,¹⁸ and set them in motion in a different way which made them all weep at the tenderness of the melody [*naghma*] and the sadness in their hearts.¹⁹ Then he changed them about again and set them in motion in a way which sent them all to sleep. He got up and left, and nothing more has been heard of him.

It is clear from what we have expounded that the art of music has differing effects on the souls of the listeners, parallel to the differing effects of the arts of craftsmen on the materials used in their craft. Because of this, all nations of humankind make use of it, as do many animals also. A demonstration that it has effects on the soul is that people sometimes use it when there is rejoicing and pleasure at weddings,

that the desired effect was produced by a conscious combination of modal and rhythmic elements.

18 The verb here is *qallaba* ('to turn upside down, inside out'), not a technical term in music. The implication is of something more drastic than the discreet retuning of a string.

19 One would expect this to be signalled syntactically as an effect rather than a cause, e.g., by '*abkâhum kullahum wa-aḥzana qulûbahum min riqqat al-naghma*', but all manuscripts have '*abkâhum kullahum min riqqat [al-]naghma wa-ḥuzn qulûbihim*', i.e., the melody and the sadness [it causes] result in weeping.

feasts, and invitations, sometimes when there is sadness, grief, and tribulation, and on occasions of mourning [*ma'ātim*],²⁰ sometimes in houses of worship and on feastdays, sometimes in the marketplace, at home, when travelling and when settled down,²¹ at times of ease and at times of weariness, in the assemblies of kings and the dwellings of commoners. It is used by men and women alike, by young and old, by the learned and the ignorant, by artisans and merchants, and by all classes of people.

[p. 186]

Chapter 2

You should know, dear brother, may God aid you and us with a spirit of His, that all the arts were created by the sages through their wisdom, and then people learned these from them and [subsequently] from each other. They became an inheritance handed down from the wise to the common people, from the learned (fol. 40b) to the learners, from teachers to their pupils. The art of music, then, was created by the sages through their wisdom, and people learned it from them and used it like the other arts in their activities and general conduct according to their various purposes. With regard to the use of music by the custodians of divine ordinances in temples and places of worship, when reciting [*qirā'a*] during ritual prayer [*ṣalāh*],²² at sacrifices, when praying [*du'ā'*], supplicating, and lamenting, as the prophet David used to do when reciting his psalms, and as the Christians now do in their churches and the Muslims in their mosques, with sweetness of tone [*naghma*] and a melodic form [*talhīn*] of recitation²³ — all that is used for hearts to be softened and souls to be humble, submissive, and obedient to the commands and prohibitions of God Almighty,

20 Shiloah suggests the presence of a classical reference here and also an allusion to commemorations of the death of Muhammad.

21 The term used, *ḥaḍar*, normally refers to sedentary populations and town life in opposition to Bedouin nomadic life.

22 This topic is not referred to elsewhere. On the introduction of musical elements in the recitation of the Qur'an see, e.g., M. Talbi, 'La qirā'a bi-l-alḥān', *Arabica*, 5 (1958), pp. 183–190.

23 Although derived from *lahn*, *talhīn* has the general sense of 'setting to music', and probably carries no specifically rhythmic implication.

to turn to Him in repentance for their sins, and to return to God, exalted be He, by adopting the practice of His ordinances as they have been prescribed.

You should know, dear brother, may God aid you and us with a spirit of His, that one of the reasons that impelled the sages to institute ordinances and follow their usage is their realization of what the stars decree with regard to good and ill fortune at the beginning of conjunctions [*qirānāt*],²⁴ and of the revolutions of the years²⁵ with regard to the rise and fall of prices, to dearth and plenty, to drought, pestilence and plague, to the coming to power of the wicked and tyrannical, and similar vicissitudes of time and blows of fate. When they realized this, they sought a stratagem which might rescue them from what was predicted if it was bad and grant them a larger share if it was good, and they found no strategem offering surer deliverance, and nothing more effective, than adherence to the practice of the divine laws, namely, fasting, ritual prayers, and sacrifices, all accompanied by praying with fervent supplication to God Almighty, together with humility, submission, lamentation, and an appeal to Him to avert and remove from them the misfortunes and tribulations that had been [p. 187] determined by the ordinance of the stars. They had no doubt that when they prayed to God, exalted be His name, with true intentions, sincerity, modesty, tears, supplication, penitence, and repentance, He would spare them what they feared, release them from what was afflicting them, and mercifully grant them His forgiveness, answer their prayer and respond to their entreaty.²⁶

24 In astrology, this is the close approach of two planets to each other, yielding a stronger influence.

25 See P. Kunitzsch, 'al-Nudjūm', *EI2*, vol. 8, p. 97.

26 The syntax here is slightly suspect. The translation offered assumes that *an* (*yaṣrif*) resumes or cancels the *anna(hum)* immediately following '*lā yashukkūn*'. The obvious initial reading of *an* (*yaṣrif*) as dependent upon *da'aw* (i.e., 'when they prayed[...] for Him to spare them') would result in there being no consequent clause, unless, conceivably, the reading *fa-yatūb* of *ع* is adopted, and is taken to mark its onset.

While praying, praising God, and reciting, they would use a type of melody²⁷ termed ‘sorrowful’.²⁸ These are the ones which, when heard, soften hearts, cause eyes to weep, and instil in souls remorse for past sins, inner sincerity, and a cleansing of conscience. This is one of the reasons why the sages created the art of music and used it in temples, at sacrifices, and for invocations and ritual prayers.

They also created another type of melody called ‘emboldening’, used by army commanders on campaign and in the heat of battle, which instils courage and bravery.

They also created another type of melody that they used around dawn in hospitals. It alleviates the pain patients suffer from illness (fol. 41a) and disease, reduces their severity, and [actually] cures many diseases and sicknesses.

They also created another type of melody, used at times of affliction, sadness, suffering and care, and at funerals, which offers solace, alleviates the suffering caused by misfortune, consoles feelings of loss, and soothes away sadness.

They also created another type of melody that is used during heavy labour and tiring work, like that used by porters, builders, sailors, and boat-builders [*maddādū’l-zawāriq*]²⁹ to alleviate both exhaustion of body and weariness of soul.

27 The Arabic reads ‘*alḥān min al-mūsīqī*’, which seems here to refer to what might be considered a genre, particularly as the following qualifier, *muḥazzin*, does not exhibit normal adjectival gender agreement with *alḥān*, but rather stands independently as a category term.

28 This is not an ideal equivalent for *muḥazzin*, ‘that which evokes *ḥuzn*’. Normally translated ‘sadness, sorrow, grief’, *ḥuzn* is a word still used to refer to a core part of the emotions aroused by Qur’anic cantillation, and implying in this context, in addition to intensity of feeling, a contemplative dwelling on meaning involving introspective gravity. See Peter Bruns, *Al-Ibtihālāt ad-dīniya: eine Form der islamischen, religiösen Vokalmusik Ägyptens*, Islamkundliche Untersuchungen 192 (Berlin: Klaus Schwarz Verlag, 1995), pp. 99–101, 104–114; and K. Nelson, *The Art of Reciting the Qur’an* (Cairo–New York: American University in Cairo Press, 2001), pp. 89–100.

Threefold categorizations involving different emotional ranges are presented by al-Kindī, e.g., joy/sorrow/impetuosity, these being associated with different rhythmic cycles, but there appears to be no precedent for the six types distinguished here. See *Mu’allaḥāt al-Kindī al-mūsīqiyya*, p. 99.

29 The manuscripts agree on *zawāriq* rather than the expected *zawāriq*, pl. of *zawraq*. The word *maddād* does not appear in the classical lexica, but is noted

They also created another type of melody used at times of rejoicing, delight, and pleasure, and at weddings and feasts. This is the type that is well known and widely used in our day.³⁰

This art may also [p. 188] be used in dealing with animals, as with the cameleer's song [*ḥudā'*] used while travelling and during night-time to spur on the camels' progress and to lighten the weight of their burdens for them. It is also used by herdsmen, who whistle when their flocks or cattle or horses come down to water, to encourage their desire to drink. They also use other melodies when the animals are on heat [to encourage them] to mount and copulate, and yet others when milking them, to obtain a copious flow. Hunters of gazelles and onagers and hunters³¹ of francolins, sand-grouse, and other birds use melodies in the darkness of night to make them stay so still³² that they can be caught by hand. Women use melodies with their children to stop them crying and to send them to sleep.

It is clear from what we have expounded that the art of music is used by all peoples and is enjoyed by all animals that possess the sense of hearing, and that musical tones [*naghamāt*] have a spiritual effect on souls, just as the other arts have physical effects on bodies.

We may now say that *mūsīqī* is music [*ghinā'*], the *mūsīqār* is the musician [*mughannī*],³³ and the *mūsīqān* is the musical instrument [*ālāt al-ghinā'*];³⁴ that music consists of harmoniously constructed

by Dozy in this sense. Shiloah follows the Beirut edition, which has '*mullāh al-zawāriq wa-aṣḥāb al-marākib*', and translates it as 'sailors and captains'.

30 The inference that some of the other, more serious types were relatively neglected ties in with the later argument about moral (i.e., Islamic) objections to music on the grounds of its frivolous associations.

31 'Onagers and hunters' may be a later interpolation, but if so, a felicitous one, avoiding the otherwise abrupt jump from gazelles to various birds (after which, incidentally, two manuscripts also add fish).

32 This is based on reading *awqaf* (or *waqqafa*). The alternative (found in ع) would be *waththaqa* (possibly 'to gain their trust').

33 Following the repeated equation of *mūsīqī* with *ghinā'*, there is a logical use of a term derived from it for the following definition. Properly speaking, *mughannī* means 'singer'; but in the *risāla* musicians are also, indeed normally, instrumentalists.

34 The manuscripts are not unanimous here, and *mūsīqār* and *mūsīqān* are often confused. Of the earliest manuscripts, ٱ has a lacuna, and ۞ has *mūsīqār* for both, although one is a marginal addition, which hardly inspires confidence, while the clearest witness is ع, which has *mūsīqān* for the musician and *mūsīqār*

melodies [*alḥān mu'talifa*] and a melody of successive notes [*naghamāt mutawātira*]; that notes are vibrating, sustained sounds [*aṣwāt mutarannima*],³⁵ and sound is an impact [*qar'*] occurring in the air from the collision of bodies against each other.³⁶ We have explained this in the epistle on sense perception and percepts [*al-ḥāss wa'l-maḥsūs*, i.e., Epistle 24], but it is necessary for us to mention aspects of it in this epistle too.

for the instrument. However, *mūsīqār* occurs sufficiently frequently later in the text in the sense of musician to make it clear which is which. The rarer *mūsīqān* is not attested elsewhere, and in fact the reading *mūsīqān* for 'instrument' here only occurs in و and ط (again in a marginal addition, this time in another hand) and, among the remaining Bibliothèque nationale and Bodleian MSS, in غ (although another has *mūsīqāz*, surely a misreading of *mūsīqān*). It may be noted that, in general, the curve of the independent forms of ر, و, and ط in ط is worryingly similar, which may explain the preference for *mūsīqāt* in the Beirut edition, whence, presumably, its appearance in al-Faruqī, *An Annotated Glossary*. For al-Khwārizmī, the musician (*muṭrib*) and composer (*mu'allif al-alḥān*) are called *mūsīqūr* and *mūsīqār* (although the former is just one among several manuscript variants), while al-Kindī has *mūsīqārī*; see al-Khwārizmī, *Mafātīḥ al-'ulūm*, p. 236; al-Kindī, *Mu'allafāt al-Kindī al-mūsīqiyya*, p. 69.

35 The manuscripts offer also *muttazin* and *mutarattib*, which at first sight might seem more likely. The Beirut edition opts for *muttazin*, and it might be thought that the case for this is strengthened by the fact that the phrase '*naghamāt muttazina*' occurs in Chapter 4. According to context, *mutarannim* might be rendered by 'twanging' (of a string), 'ringing', 'quivering', or even 'trilling' (of a voice), and can readily be understood here as referring to the periodic vibration of a musical tone. The other two terms point to organization and regularity, and thus speak more to the rhythmic domain. This, however, concerns notes in succession and is already implied by the preceding *mutawātir*, whereas the point here is to define the musical note as such.

36 We thus have a compressed but clear exposition of a hierarchy of elements: sound is defined as an acoustic phenomenon — *qar'* (a knock, rap, thump), a note as a sound with musical parameters (perhaps as contrasted with raw, non-musical noise). Notes following one another in succession form a melody (*laḥn*, a term with rhythmic as well as melodic implications). Finally, music is an aggregate of melodies, but specifically those that are *mu'talif*, harmonious in the sense of being well formed with regard to their tone relationships.

Chapter 3

On the Way in which the Faculty of Hearing Perceives Sounds

With regard to the way in which the faculty of hearing perceives its sense data, namely, sounds [*aṣwāt*], you should know, dear brother, that sounds are of two categories, one animate in origin, the other not. The latter also falls into two categories, natural and artificial,³⁷ the natural ones being those such as the sound of rock, iron, wood, thunder, wind, and all lifeless inert bodies,³⁸ while the artificial ones are those such as the sound of drums [*ṭabl*], trumpets [*būq*], reed [*zamr*] and string instruments [*awtār*],³⁹ and the like. The animate, too, is of two categories: one is utterance [*manṭiqī*], the other not, this latter consisting of [p. 189] the sounds made by all the animals not endowed with (fol. 41b) rational speech [*ghayr nāṭiq*]. Utterances are thus those produced by man and are of two categories, one meaningful [*dāll*], the other not. The latter consist of such things as laughing, crying, and shouting, in short, every wordless sound, whereas meaningful sounds are speech and utterances consisting of words.⁴⁰

All these sounds result from an impact [*qar*'] occurring in the air caused by the collision [*taṣādum*] of bodies. That is, because of its extremely attenuated nature, the lightness of its substance, and the swiftness of the motion of its molecules,⁴¹ air permeates all the space between bodies, so that when one body strikes another, that air rapidly slips out from between them, eddies forth, and proceeds in waves in all

37 The Arabic term is *ālī*, related to *āla*, 'instrument' (and the following examples of the category are in fact all musical instruments).

38 Here, *lā rūḥ lahā*, literally, 'devoid of spirit', is rendered by 'lifeless'.

39 Again, a broad classification of instrument types is offered here, headed by percussion (*ṭabl*, 'drum', used generically). The next two terms do not appear in the previous list: *būq* may denote (conical bore) horns as well as (cylindrical bore) trumpets; *zamr*, from the same root as *mizmār*, presumably here designates in the first instance reed instruments.

40 'Wordless/words' corresponds to *hijā*, 'alphabet, spelling'; as occurs later in the analysis of rhythm, language analogies are conceived in relation to script, to sounds and words represented in writing.

41 This is a rather free rendering of *ajzā*, literally, 'constituents', associated with which, however, is the more technical philosophical extension: '*ajzā* lā tatajazza', 'atoms'.

directions, taking in its motion a spherical form, widening like the bottle on which the glass-blower works, and the more the shape is enlarged, the more its wave-like motion weakens until it fades into stillness. With its wave-like motion the air enters the hearing of whatever people and animals endowed with ears are present near that place, and reaches the channels of the ear [*ṣimākhān*]⁴² in the posterior region of the brain. The air there oscillates, whereupon the faculty of hearing discerns this movement and alteration.

You should know that every sound has a unique quality, character,⁴³ and pneumatic [*rūhānī*]⁴⁴ form, and that because of the refinement⁴⁵ of its substance and the delicacy of its element, air can transmit every sound, preserving it in its own form and shape so that it is not confused with others, and thus preventing their forms being distorted before it conveys them to their final goal and ultimate aim at the faculty of hearing, [which it does] in order to bring them to the imaginative faculty, which resides in the fore part of the brain, as determined by the wise Almighty, who endowed you with *hearing, sight and hearts* — *how seldom you are grateful!*⁴⁶

Chapter 4

Now that we have completed the exposition of the nature of sounds, the manner in which they are borne on the air, and the manner in which the faculty of hearing perceives them, we shall now expound

42 I.e., the auditory meatus.

43 Here, '*naghma wa-ṣigha*', literally, 'note and shape', is rendered loosely by 'quality, character'. Later in this passage, *ṣigha* is paired with *hay'a*, 'form', and the two appear to be more or less synonymous. More adventurously, one might think of '*naghma wa-ṣigha*' being rendered by 'sonic envelope'.

44 The normal translation of *rūhānī* is 'spiritual', but that hardly seems appropriate in the present context. Better might be 'immaterial', but a more precise equivalent is suggested by the presence of *rūhānī* in the titles of treatises such as *Kitāb Fī'l-ḥiyāl al-rūhāniyya wa-mikhāniqā al-mā'*, where it clearly designates pneumatic devices; see Farmer, *The Sources of Arabian Music*, entry 111. (Etymologically, of course, 'pneumatic' leads us back not just to breath but to spirit.)

45 Rendering by 'refinement' *sharaf*, literally, 'nobility' echoes *sharīf*, 'noble', which appears frequently in the phrase '*nisab sharīfa*', rendered as 'ideal proportions'.

46 Qur'an 23:78.

the various manners in which they occur from the impact [*taṣādum*] of bodies on each other.

We may say that if any two given bodies impact on each other softly and gently, no sound is heard because the air escapes from between them little by little [p. 190] without causing a sound, whereas sound is caused when the impact of the bodies is quick and forceful, because the air is then impelled suddenly, moving swiftly in waves in all six directions [i.e., up, down, left, right, forwards, and backwards]. Accordingly, a sound occurs, and is heard as we have explained in the previous chapter.⁴⁷

When large bodies collide they produce a louder sound because the oscillation of the air is greater. Whenever there are two bodies of the same substance, volume, and shape, the sounds they make on being struck [*nuqira*] together once will be equal, but if one of them is hollow, its sound will be greater because it agitates a large amount of air (fol. 42a) both internally and externally.

The sounds produced by smooth bodies are smooth because the common surfaces between them and the air are smooth;⁴⁸ and the sounds produced by rough bodies are rough because the common surfaces between them and the air are rough. When hard, hollow bodies such as bowls, draining vessels,⁴⁹ and jars are struck [*nuqira*], they resonate [*ṭanna*] for a long time because the air within the concavity vibrates back and forth, striking [*ṣadama*] them over and over again,

47 Although the third chapter division is only present in [†] among the earlier manuscripts, this statement provides a justification for it, for otherwise we would have to construe it in relation to a brief statement towards the end of Chapter 2 above, and it would make little sense to refer to this when all the explanatory material is in Chapter 3.

48 Three manuscripts include a further statement to the effect that the air shared between them is also smooth. There seems to be a slight logical short cut here: neither the air nor the surfaces can, properly speaking, be shared (*mushtarak*). What is shared is the common property of smoothness, so that the two objects can be deemed to affect the air in between (that in this sense is common to them both) in an identical and hence shared fashion. Similarly with the following statement about objects with rough surfaces.

49 This renders *ṭarjahārāt*, glossed in the Beirut edition as *ku'ūs*, 'cups'. A *ṭarjahāra* is 'a receiver for liquid with a curved bottom in which there is a small orifice'; see Banū Mūsā ibn Shākir, *Kitāb al-Ḥiyāl*, tr. D. R. Hill as *The Book of Ingenious Devices* (Dordrecht: D. Reidel Publishing Company, 1979), p. 260.

time after time, until it comes to rest. Those that are wider produce a larger sound because they agitate [*ṣadama*] a large amount of air both internally and externally.

The sounds of long trumpets [*būqāt*] are particularly loud because the air oscillating [*mutamawwij*] within them strikes against them over a long stretch during its passage. Animals with large lungs, long throats, and wide nostrils and mouths make loud sounds because they breathe in large amounts of air and expel it with powerful force.

It is evident from what we have expounded that the reason for the volume of sounds is related to the size of the sound-producing bodies, the force of the impact, and the magnitude of the oscillation of air [as it proceeds] in [all] directions from them.

We may now state that the loudest sound is the sound of thunder. (We have already explained the cause of its occurrence in the epistle on meteorology [*al-āthār al-ʿulwiyya*, i.e., Epistle 18], but we shall go over what is necessary here [too].)

The reason for its occurrence is that when the vapour that ascends into the atmosphere from the sea and [the vapour] that [ascends] from the land rise high into the air [p. 191] and commingle, and the wet vapour encloses the dry, that is, smoke, and the cold of the icy celestial layer [*zamharīr*]⁵⁰ encloses both the wet and the dry vapour and constricts them, the dry vapour is compressed within the wet vapour, ignites, and seeks to escape. It pushes at the wet vapour and splits it; the wet vapour cracks open from the heat of the dry smoke, just as wet objects when surrounded by the heat of fire will suddenly crack open. There results a crash in the air, which bursts out in all directions, and from the outrush of that dry smoke from the inside of the cloud there is ignited a flash called lightning. This is similar to what happens with the smoke of an [already] extinguished lamp when it comes close to a lighted one which is then extinguished.⁵¹ Sometimes some of the wet

50 The space between the surface of the earth and the lunar sphere is considered to be divided into three strata. The stratum touching the earth, *nasīm*, is temperate, being warmed by the earth radiating back the heat of the sun. The third and furthest, *athīr*, is fiery, being heated by contact with the lunar sphere. The intermediate one, *zamharīr*, which begins already at the altitude of high mountains, is, in contrast, bitterly cold.

51 The comparison seems odd, coming immediately after the reference to thunder

vapour eddies about within the clouds and becomes a wind, whirling⁵² into the gaps in the clouds and through the mist seeking escape, and is heard to reverberate and rumble with the kind of sound a man hears from his insides when afflicted by wind and flatulence. Sometimes the cloud just splits open all of a sudden and the wind rushes out, making a tremendous sound called a thunderbolt. (fol. 42b) This is the cause of the sound of thunder and the manner of its production.

With regard to the sounds made by the winds, the cause of their occurrence is that the winds are nothing but the oscillation of air to the east, west, north and south, and up and down, so that when it strikes mountains and walls or trees and plants with its moving currents and passes between them, there results a variety of sounds, echoes, and different forms of reverberation, all according to the large or small size of the bodies impacted, their shapes, and [their degrees of] hollowness, a full account of which would be excessive.

With regard to the sounds produced by the waters in their flowing and undulation and by their impact upon bodies, because of the attenuated substance of air and the fluid nature of its element, it can pass between all of them, so that the incidence and range of these sounds correspond to the [various] causes that we have expounded in relation to the winds.⁵³

With regard to the sounds produced by animals with lungs and the differences in their kinds and the types of tones [*naghamāt*]⁵⁴ they produce, these vary according to whether their necks are long or short, to the width of their throats [*ḥulqūm*], the structure of their larynx

and lightning. It is perhaps best understood as referring back to the commingling of wet and dry vapour, for which the analogy is the turbulence that results when the cooler smoke encounters the warmer.

52 Both 'eddies about' and 'whirling' render *yadūr*, which emphasizes circular motion.

53 The initial parallelism suggests that reference is being made to water as a sound-producing and transmitting element, but there is no reason to reject the following introduction of air as a textual corruption. Rather, it is seen as the essential carrier of sound, so that the movement of the air as water touches water or another object is treated as akin to the noise-producing expulsion of air from in between two objects.

54 In contrast to the preceding *aṣwāt* ('sounds'), *naghamāt* might imply something possibly pitched, and more musical.

[*ḥanjara*],⁵⁵ the power with which they take in the air, and the strength with which they expel their breath through their mouths and nostrils, a full account [p. 192] of which would be excessive.

With regard to the sounds produced by animals without lungs, such as wasps, locusts, crickets, and the like, they set the air in motion with light, swift movements of a pair of wings from which different sounds result, just as happens with the vibration [*taḥrīk*] of the lute strings, and their variety and differences in kind are according to the thinness, thickness, shortness, length, and speed of motion of their wings.

With regard to dumb animals such as fish, crabs, turtles, and others, they are dumb because they have neither lungs nor wings and so produce no sounds.

With regard to the various sounds made by mineral and vegetable substances, such as wood, iron, copper, glass, stone, and the like, the differences between them are according to their degrees of dryness and hardness, the extent to which they are large, small, long, short, thin, or thick, the variety of their shapes with respect to being more or less concave or convex, the force of the impact, and the causes involved. We shall clarify this in due course.

With regard to the various sounds of instruments designed to produce them, such as drums [*tubūl*], trumpets [*būqāt*], kettledrums [*dabādīb*], frame drums [*dufūf*], flutes [*nāyāt*], reed instruments [*sarānī wa-mazāmīr*],⁵⁶ lutes [*ʿidān*], and the like, they differ depending on their shapes and the materials from which they are made; whether they are large, small, long, or short; their interior dimensions, the bore of their holes, and whether their strings are thick or thin; and on the variety of techniques players use on them. We shall need to expound part of this since one of the purposes of this epistle is to clarify the nature of music [*mūsīqī*], which consists of harmonious melodies [*alḥān*

55 The word *ḥanjara* might refer specifically to the larynx, but could equally well be synonymous with *ḥulqūm*.

56 An attempt is made in the Introduction above to survey the various instrument types mentioned in the *risāla*. The nature of the difference between *dabādīb* and the preceding *tubūl* is not easy to establish. 'Flutes' and 'reed instruments' cover adequately the range suggested by the words *nāyāt*, *sarānī*, and *mazāmīr*, but it must be emphasized that in each case identification is hazardous, and precision not always attainable.

mu'talifa] and metrically regulated notes [*naghamāt muttazina*], and is called song [*ghinā*].⁵⁷

Now that our exposition has clarified that music consists of harmonious melodies, (fol. 43a) that a melody consists of metrically regulated notes, and that metrically regulated notes only occur as a result of consecutive attacks [*ḥarakāt mutawātira*] between which there are successive pauses [*sukūnāt mutatāliya*], we need to explain, first, the concepts of motion [*ḥaraka*] and rest [*sukūn*] [to which attacks and pauses relate].⁵⁸

We may state that motion is the transfer of an object from its initial position to a second position at a second [moment in] time. Its antithesis is rest, which is [an object] remaining in the initial position at a second [moment in] time. Motion is of two kinds, fast and slow, fast motion being the one in which the moving object traverses a long distance in a short time, while the slow is the one in which the moving object traverses a shorter distance in the same time. Two motions are

57 As before, *mūsīqī* is explained as being *ghinā*' (see Chapter 1, notes 5 and 7 above). Taken together, the other terms clearly cover the notion of a pleasing organization of both pitches and durations, but the distribution is not quite as in the English. 'Melodies' is an attempt to render *alḥān*, which often implies rhythmic structure, but is here qualified by *mu'talif* ('in accord'). The notion of harmony, however, has nothing to do with different pitches sounding at the same time, but refers to a key concept in the thinking of the Ikhwān, that of proportion manifest as the perfect ratios which express the intervals of the harmonic series generated by the friction of the celestial spheres. There remain 'notes', or tones (*naghamāt*), which perhaps first imply pitch, but must also be realized in time, and are qualified here as 'balanced, regular' (*muttazin*) — and elsewhere by the related and more common *mawzūn*, which adds to the notion of balance that of metrical regularity. The fundamental semantic pattern of this first definition is thus chiasitic, with a melodic qualification for a term with a rhythmic bias, and vice versa; but it is immediately transformed into a sequence going from global concept to basic elements.

58 The terminology here is discussed in more detail in Chapter 7. The basic point is that rhythm is conceived as allied to prosody, which uses a vocabulary in part related to features of Arabic script. Thus, an attack is viewed as analogous to a consonantal onset which must be followed by a vowel, for which the equivalent term is 'movement' (*ḥaraka*). From this we proceed logically to a discussion of movement versus rest in space and time. For a more general discussion of the reliance upon the methods of analysis used in prosody, see the Introduction, 5.2 and 5.2.1.

only considered separate if there is an intervening rest.⁵⁹ Rest is when the [potentially] moving object stays in its initial position for a time during which it could have been in motion.

Having finished expounding what we needed to clarify, we may now say that sounds are divided qualitatively into eight kinds, every two of which form a corresponding pair in comparative terms. They comprise great and small, fast and slow, high and low, and loud and soft.⁶⁰

Great and small sounds are distinguished by comparing one with the other, for example, the sounds of drums one against the other. Thus, when the sounds of parade drums [*tubūl al-mawākib*] are compared with the drums played by *mukhannath* musicians⁶¹ they are great, but if they are compared with the sounds of the *kūs* they are small, and the sounds of the *kūs* are small when compared with the sound of thunder and thunderbolts (the *kūs* being a huge drum played in the marches of Khurāsān when people go forth to battle, the sound of which can be heard from some leagues away). In this way, great and small sounds are discriminated by comparing one with another.

With regard to [discriminating] fast and slow sounds by comparing one with another, the former are the ones where the duration of the

59 The same argument is deployed later in relation to rhythm: without intervening pauses, successive attacks would produce a continuous sound and could not be distinguished one from the other.

60 Some manuscripts (and the Beirut edition) have *khafif* in place of *khafit*, but this is normally a term with tempo implications, and the series already contains the fast/slow contrast. However, it is not easy to distinguish the loud/soft contrast from the initial great/small pair, for which the examples adduced, drawn from contrasting types of drum (and thunder), may well have involved contrasts of timbre and pitch but are essentially to do with dynamics. For the last pair, perhaps not surprisingly, no specific examples are given.

61 The term *mukhannath* is generally rendered as 'effeminate', and the label was applied mainly to certain musicians of the early Umayyad period, some of whom were variously identified as transvestites and/or homosexuals. But the fact that they were considered unsavoury does not mean that they were necessarily thought to be physically feeble; rather, there was an association between *mukhannath* musicians and a particular type of waisted drum which would not have been able to produce the same volume as those, presumably kettle drums or large double-headed drums, that were played during processions and on other outdoor occasions. (The drum in question, the *kūba*, is sometimes singled out for condemnation by association in the legal literature.)

pauses between the attacks⁶² is short in comparison with others. Examples are the sounds of the fullers' beaters and the blacksmiths' hammers, which are quick in comparison with the sounds of the pestles of those who grind rice or gypsum. These are slow relative to them, but quick in comparison with the oars of boatmen. In this way, the [relative] speed or slowness of sounds is discriminated by comparing one with another.

With regard to [discriminating] high and low [p. 194] sounds by comparing one with another, examples are the notes produced by plucking [*naqarāt*] the highest lute string [*zīr*] in comparison with the notes of the second string [*mathnā*], and the notes of the second string in comparison with the third [*mathlath*],⁶³ and the third with the lowest [*bamm*], which [in each case] are [relatively] high. Going in the other direction, the sound of the lowest string is low in relation to the third, and [similarly with] the third in relation to the second, and the second in relation to the highest string. (fol. 42b) Another instance is provided by the sound of each open [*muṭlaq*] string, which is low in comparison with any note produced by stopping it [*mazmūm*]. Accordingly, whether a note is high or low is judged by comparison with another.

As for loud and soft sounds, what causes them has been mentioned above in the first section [of this chapter].⁶⁴

Sounds may be divided quantitatively into two categories, continuous and discontinuous,⁶⁵ the latter being those where there is a perceptible pause between attacks,⁶⁶ as with the plucking [*naqarāt*] of strings and

62 Here the term is *naqra*, the attack itself, not *ḥaraka* as before.

63 Some manuscripts consistently vowel these two terms as *muthannā* and *muthallath*.

64 The term used is *faṣl*, normally rendered 'chapter'; but the reference must be to the beginning of the present chapter, rather than to Chapter I, which does not discuss this topic.

65 The terms 'continuous', or 'conjunct' (*muttaṣil*), and 'discontinuous', or 'disjunct' (*munfaṣil*), are common in music theory, especially with regard to the possible arrangements of tetrachords within the octave. They are, however, also used by al-Fārābī in relation to rhythm, although not with the senses the Ikhwān give them.

66 A reduction of 'bayn azmān ḥarakāt naqarātihā zamān sukūn maḥsūs', literally, 'between the times/durations of the movements of their attacks is the perceptible time/duration of a pause/rest', which in this context is equivalent to saying that the decay after the attack is sufficiently steep to separate one note clearly from the next.

the striking [*iqā'āt*] of percussion sticks [*quḍbān*],⁶⁷ while the former are like the sounds of wind instruments [*mazāmīr wa-nāyāt wa-surnāyāt*],⁶⁸ fiddles [*rabābāt*], and water wheels [*dawālib wa-nawā'ir*]⁶⁹ and the like. Continuous sounds are divided into two types, high and low, and those reed-pipes [*nāyāt*] and shawms [*mazāmīr*] with a wider bore [*tajwīf*] and wider holes [*thaqb*] produce a lower sound, those with a narrower bore and narrower holes a higher sound. In addition, the holes which are nearer the mouthpiece [*mawḍī' al-naḥkh*] produce higher notes, and those further away lower notes.

Chapter 5⁷⁰

You should know, dear brother, that when strings that are identical in thickness [*ghilaḥ*], length [*tūl*], and tension [*ḥaḥq*]⁷¹ are plucked in the same way,⁷² their sounds are identical [*mutasāwī*]; [p. 195] if they are

67 This reflects the textual survival of a much earlier practice (noted in the *Kitāb al-Aghānī* in relation to some early Umayyad singers, but much less common thereafter as the lute becomes the accompanying instrument of preference) of using a *qaḍīb*, a stick, switch, or wand to beat out the rhythm of the song. This would have been nothing like the hefty staff with which Lully fatally injured his foot, but something quite light, since it was sometimes used to tap out the rhythm on a *dawāh*, a scribe's box for pens and ink.

68 With the wind instruments it is presumably a case not only of a contrast with the steep decay on plucked lutes but also of the possibility, on some, of sustaining the sound for long periods by using circular breathing. For *nāyāt* and *surnāyāt* the reed/non-reed distinction may not have been a significant feature. The evidence, such as it is, is discussed above in the Introduction, 4.1.2. In the Arabic, the *rabābāt* are placed between the *nāyāt* and *surnāyāt*.

69 Both *dawālib* and *nawā'ir* are water wheels, and there seems to be no significant difference between them. Adding them to a list of musical instruments might seem surprising, but the subject-matter under discussion is continuous sound in general, for which that produced by the steady flow and discharge of water provides a perfectly suitable example.

70 The Beirut edition has the heading 'On Consonance and Dissonance' (*fi'mtizāj al-aṣwāt wa-tanāfurihā*) for this chapter, but this is not found in any of the manuscripts consulted. It is similarly the case with the headings of most of the following chapters.

71 Here and below, both ع and the Beirut edition have *kharq*, which makes no sense: *ḥaḥq* is to be preferred.

72 Literally, this means 'plucked a single pluck' (*nuqirat naqra wāḥida*), but in this context it is reasonable to suppose that it is less the number of times than the uniform degree of intensity that is implied.

identical in length but different in thickness, the sounds of the thicker ones will be lower [*aghlaz*] and the sounds of the thinner ones higher [*aḥadd*]; if they are identical in length and thickness but different in tension, the sounds of the tenser [*muḥazzaq*]⁷³ ones will be higher and the sounds of the slacker [*mustarkhī*] ones lower; if they are identical in thickness, length, and tension but differently plucked [*naqr*], the one plucked with greater force will have the louder [*a'lā*] sound.

You should know that high and low sounds are opposed to each other, but when they stand in a consonant [*ta'liḥ*] relationship, they accord with each other [*ītalafa*], conjoin [*imtazaja*], and unite [*ittahada*] to form a measured melody⁷⁴ which pleases the ear, and which spirits delight in and souls enjoy.⁷⁵ But when they stand in some other relationship, they are dissonant [*tanāfara*] and clash [*tabāyana*], they do not accord with each other and the ear does not enjoy them; rather, it shuns them: souls feel revulsion at them and spirits detest them.

You should know that high sounds are hot, warming a [too-]heavy mixture of the combination of humours⁷⁶ and moderating them; low sounds are cold and wet, wetting a [too-]hot and dry mixture of the

73 The manuscripts offer *ḥaziq* and *muḥazzaq*, but neither occurs in the classical lexica in the sense 'tensed, pulled tight' (although the latter is at least to be found in modern dialects).

74 Consonance is always to be understood horizontally, defining the nature of the relationship between successive tones. Also to be noted is the inclusion here of 'measured' (*mawzūn*); to be pleasing, a melody must also have, in addition to consonant pitch relationships, a satisfactory rhythmic structure.

75 In such contexts, the Ikhwān habitually prefer a threefold articulation, using the verbs *istaladhdha*, *fariḥa bi* and *surra bi*. These form a complementary set, and the English equivalents ('enjoy', 'delight in', 'be pleased by') will be juggled about quite freely. On the other hand, the equivalences of *arwāḥ* to 'spirits' and *nufūs* to 'souls' will be maintained, even when, as here, we appear to be faced with elegant variation involving essentially synonymous terms.

76 This renders '*mizāj akhlāt al-kaymūs al-ghaliẓa*'. In this first development of the important theme of the desirable balance to be established between the humours there is some semantic overlap: *mizāj* already implies both 'mixture' and 'temperament'; *akhlāt* is also a mixture, but more specifically the four humours (blood, phlegm, and yellow and black bile) from which the temperaments are derived; and *kaymūs* (← Greek *khumos*) is a humour or combination of humours. Attractive, therefore, would be the terser '*mizāj al-kaymūs al-ghaliẓa*' in ٤, except that the gender of the adjective points to a missing element. (According to the reading chosen, *ghaliẓ* initially qualifies *akhlāt* and later in the passage *mizāj*, but the meaning is not changed in any significant way.)

combination of humours; and sounds that are median between high and low keep the balanced mixture of the combination of humours as it is, so as to prevent it from losing its equilibrium.

When great and awesome sounds that lack any harmonious inner relationship [*ghayr mutanāsib*] strike the ear all of a sudden, they disturb the temperaments [*mizāj*] and destroy their equilibrium, sometimes even causing sudden death. There is a mechanical contrivance to produce such sounds called the organ [*urghun*],⁷⁷ which the Greeks used (fol. 44a) in warfare to terrorize the enemy, stopping up the ears of those who manned the bellows [*al-nāfikhīn fihā*].⁷⁸

Well-balanced and well-measured sounds that stand in proportionate relationships [*mutanāsib*] help restore equilibrium to the blend of the humours. They please the natural disposition [*ṭibāʿ*]: spirits enjoy them and souls are delighted by them.

[p. 196]

Chapter 6

You should know, dear brother, may God aid you and us with a spirit of His, that bodies have temperaments of many kinds, and that animals have natures of many types, and that each temperament and nature has a melody which corresponds to it and a rhythm which matches it.⁷⁹ Their number is uncountable, except to God Almighty. The demonstration of the truth of what we have said and the accuracy of what we have described is that you will find, on reflection, that each people has rhythms and melodies which it enjoys and takes delight in, while others do not enjoy them, and only they take delight in them, such as the songs [*ghināʾ*] of the Daylamīs,⁸⁰ Turks, Kurds, Armenians,

77 Considerable interest was shown in the organ as a mechanical contrivance. See Farmer, *The Organ of the Ancients*; 'The Organ of the Muslim Kingdoms', *JRAS* (1926), pp. 495–499; and *The Sources of Arabian Music*, entries 43, 113, 114, 120.

78 The version in $\dot{\text{ا}}$ and ع is preferred here. With variations, that in the other manuscripts reads 'those who man the bellows stop up their ears when using and operating it'.

79 Both here and below, the rendering of *naghma* is 'melody', and of *lahn* 'rhythm'.

80 The Daylamīs hail from Daylam, the mountainous area immediately to

Africans,⁸¹ Persians, Byzantines,⁸² and other peoples with different languages, natures, habits, and customs. Similarly, you will also find within any single one of these nations groups of people who enjoy particular rhythms and melodies which delight their souls while others neither enjoy them nor take delight in them. Again, you may also sometimes find an individual who at a certain moment will delight in a song and take pleasure in it, but at another will not and may indeed sometimes dislike it and suffer upon hearing it. You will find people similarly disposed with regard to food, drink, scents, clothes, and other matters of pleasure, adornment, and beauty, all according to changes of temperament, differences of nature and bodily constitution, and conditions of place and time, as we have partially explained in the epistle on the humours.⁸³

Chapter 7

You should know, dear brother, may God aid you and us with a spirit of His, that each people possesses its own musical idiom, with its own rhythmic and melodic articulation,⁸⁴ which does not resemble those of

the south of the Caspian sea. A distinction is often maintained between the inhabitants of this region, those from Fars in the south-west of Iran, and those from Khurāsān in the north-east.

81 The term *zanj* probably implies East Africans from the coastal region or Ethiopians.

82 Two manuscripts add Indians to this list, while four add *a'rāb*, which, from the sophisticated perspective of city dwellers in Basra or Baghdad, probably refers not to the urban music with which they were most familiar but to the tribal musics of the Bedouin Arabs.

83 This is possibly a reference to Epistle 23: 'The Composition of the Body'.

84 The rendition of '*alḥān min al-ghinā' wa-aṣwāt wa-naghamāt*' (literally, 'melodies/rhythms of song/music and sounds/songs and notes') as '[...] its own musical idiom, with its own rhythmic and melodic articulation' is very free. The phrase could either be taken as a rhetorical accumulation of near synonyms saying little more than 'melodies' or as an attempt to encompass in non-technical language various parameters characterizing the musical style of a given group. The latter has been assumed, but the terms used are, as usual, slippery and could be variously rendered. To work backwards, *naghamāt* might refer by extension to typical features of pitch organization, that is, to modal structure and melodic habits; *ṣawṭ* could mean 'song' as a generic term (as in the *Kitāb al-Aghānī*) but even, more widely, 'sound' as encompassing also instrumental timbres; *ghinā'*, 'singing', may also imply musical practice in general, including instrumental

others. They are uncountable, except to God Almighty, who created these peoples, formed them, and gave them their natures with all their differences of habit, language, and colour.

[Here,] however, we wish to expound the basic elements of music [*uṣūl al-ghinā'*] and the rhythmic principles [*qawānīn al-alḥān*]⁸⁵ from which everything is compounded. Thus music is made up [*murakkab*] of melodies [*alḥān*]; a melody, of notes [*naghamāt*]; [p. 197] while notes result from attacks which are rhythmically ordered [*naqarāt wa-īqā'āt*].⁸⁶ Basic to all of them is temporal organization,⁸⁷ just as lines of poetry are made up from hemistichs; hemistichs, from prosodic feet; and prosodic feet, from set sequences of short and long syllables,⁸⁸ all of

accompaniment; and *lahn* may foreground the rhythmic component. Shiloah suggests '*des mélodies, des chants et des rythmes*'.

85 The emphasis in this chapter is on rhythmic structure, and although the pitch element is not absent from the following definition of *alḥān* as being made up of notes, these are immediately placed in a rhythmic rather than tonal context.

86 The literal meaning is 'impacts/percussions and rhythms/rhythmic cycles', the point being that not only does a note begin at a particular point in time, with an attack, but that an arrangement of notes in a melody must conform to a particular rhythmic pattern so as to be assignable to a given cycle and thereby become meaningful.

87 Here 'temporal organization' renders the very different '*ḥarakāt wa-sukūnāt*', which contrasts movement and stasis. It would have been logical, perhaps, for the Ikhwān to have described rhythmic phenomena in terms of arithmetic (numerical proportions) or geometry (points and lines), but in the event they chose, like other theorists, to take a ready-made jargon from the technical terminology of prosody (hence the following comparison).

The musical equivalent of the short syllable, 'attack + (short) duration' (*naqra mutaharrika*), is viewed as the shortest perceptible separate sound (anything shorter and the attacks would run together, forming a continuous sound). The Ikhwān symbolize it either by one of the short syllables (*mu*, *ta*, *i*) occurring in the abstract word-shapes used to represent prosodic feet or by *ta* or *na* in syllable strings representing rhythmic structures. In effect, the attack is viewed as instantaneous, without duration, just as a point in geometry has no extent: it can only be perceived in time because of the following duration separating it from the next attack, so that the combination 'attack + duration' is an indivisible entity. To symbolize this, 'x' may be used, and 'o' may be used to symbolize its silent counterpart (i.e., 'non-attack + duration').

88 The phrase 'set sequences of short and long syllables' renders a set of three standard prosodic terms: *sabab*, which equates to one long syllable (CVC, where 'C' is a consonant and 'V' a short vowel) or, equivalent in duration, two short syllables (CVCV); *watid*, short + long (CVCVC); and *fāšila*, two short + one long

which are based, in turn, on consonants with or without a following vowel, as has been explained in manuals of prosody.

Similarly, all utterances are made up of words; words, of nouns, verbs, and auxiliary elements;⁸⁹ and all of these are made up of consonants with or without a following vowel, as has been demonstrated in works on language [*manṭiq*].

To sum up, (fol. 44b) he who wishes to delve into this science must first become sufficiently well versed in grammar, prosody, and [the analysis of] language. In our analytical epistles on language [*fī rasā'ilinā al-manṭiqiyyāt*]⁹⁰ we have dealt with what is required by learners and beginners, and here we need to expound the fundamental rules of prosody, for the rules of music are analogous to those of prosody.

We may say, then, that prosody is the means of measuring verse by which one distinguishes the correct from the lax.⁹¹

In Arabic poetry, there are eight prosodic feet, namely:

◡ — —	◡ — — —	◡ ◡ — ◡ —	— — ◡ —
— ◡ — —	— ◡ —	— — — —	◡ — ◡ ◡ — . ⁹²

(CVCVCVC). Using the standard symbolization of a short syllable as ◡ and a long as —, these become — (or ◡ —), ◡ —, and ◡ ◡ — respectively.

89 The tripartite division is standard, the normal terminology being *ism* ('noun', but subsuming also adjectives and participles), *fi'l* ('verb') and *ḥarf* (usually rendered 'particle', but basically encompassing everything that cannot be assigned to the other two categories). Instead of *ḥarf* the Ikhwān use *adawāt* ('instruments', i.e., grammatical tools such as conjunctions and prepositions).

90 Epistles 10–14 cover Aristotelian logic, and among the most pertinent is Epistle 12, which begins by outlining the need to approach the analysis of propositions through a study of syntax. It should be noted that the semantic field of *manṭiq*, in this context to be thought of in its primary sense of 'speech, language', also includes 'logic', and this aspect is stressed in these four epistles, which move swiftly from an analysis of *nutq* ('speech') and *kalām* ('utterance, discourse') to more formal logical territory, to the world of types of proposition and the syllogism.

91 The translation does not capture the distinction exactly. The second term, *munzahif*, refers to forms containing a variant (*ziḥāf*) perceived as deviating from the standard, but still admissible, and therefore not incorrect.

92 Transcribing into prosodic symbols the following abstract word shapes are formed:

fa'ūlun mafā'ilun mutafā'ilun mustaf'ilun
fā'ilātun fā'ilun maf'ulātun mufā'alatun.

These eight are compounded from three basic elements:

— ◡ — ◡ ◡ —.⁹³

The first of these consists of a long syllable (CVC),⁹⁴ as in the words *hal*, *bal*, *man*, and the like.⁹⁵ The second consists of a short syllable followed by a long, as in the words *na'am*, *balā*,⁹⁶ *'ajal*, and the like. The third consists of two short syllables followed by a long, as in the words *'alimat*, *fa'alat*, and the like. All three are based upon long and short syllables.⁹⁷ These are the rules and fundamentals of prosody.

In the rules of music [*ghinā'*] and rhythmic cycles [*alḥān*] there are also the same three fundamental sequences of long [p. 198] and short durations.⁹⁸ The first consists of an attack [*naqra*] followed by a pause [*sukūn*], as in *tan tan tan* repeated over and over again.⁹⁹ The second consists of two attacks followed by a pause, as in *tanān tanān tanān* repeated over and over again. The third consists of three attacks followed by a pause, as in *tanānan tanānan tanānan* repeated over and over again. These three are the basis that regulates all note combinations

These provide the sum total of the prosodic feet in terms of which all the poetic metres can be articulated.

93 The terms *sabab*, *watid*, and *fāṣila* are represented by prosodic symbols.

94 See the Introduction, 5.2 and 5.2.1.

95 Prosodists recognize a second form consisting of CVCV (two short syllables), but no account is taken of this by the Ikhwān.

96 This word conforms to the same CVCVC pattern as the others in that the letter representing length in *ā* may be analysed orthographically as 'motionless', so that *ba* = CV and *lā* = CVC. Prosodists again recognize a second form which the Ikhwān ignore, this time reversing the order of the syllables: CVCCV.

97 An alternative rendering of '*ḥarf sākin wa-ḥarf mutaharrik*', literally, 'a letter without a following vowel [i.e., one final in a closed syllable] and a letter with a following vowel', would be 'open and closed syllables'.

98 The same three prosodic terms are used, *sabab*, *watid*, and *fāṣila*, which in the following definitions are translated into musical mnemonics.

99 As we have seen, in prosody the *sabab* is defined as (CVCV or) CVC, exemplified by, e.g., *bal*, but *tan* would have done just as well. However, it should be noted that *tan* does not represent the smallest rhythmic element, which is an 'attack' (*naqra*). As noted above, this has an inherent (short) duration that follows, and is thus equivalent to *ta* (x, corresponding to CV). We have here a kind of shorthand notation: 'attack' = attack + (short) duration; while 'pause' = non-attack + (short) duration. Here and in the following definitions, 'pause' (corresponding to syllable-final C) is deemed equivalent in duration to 'attack [+ (short) duration]'.

[*mā yatarakkab*], all combinations of notes in rhythmic cycles, and the resulting combinations of these in songs, in whatever language.¹⁰⁰

When you combine these three elements in pairs, there result nine duple note combinations, as follows:

1 attack + 2 attacks, as in a recurrent *tan tanan*¹⁰¹

1 attack + 3 attacks, as in a recurrent *tan tananan*

2 attacks + 2 attacks, as in a recurrent *tan tanan*

2 attacks + 3 attacks, as in a recurrent *tan tananan*

3 attacks + 3 attacks, as in a recurrent *tananan tananan*

3 attacks + 2 attacks, as in a recurrent *tananan tanan*

3 attacks + 1 attack, as in a recurrent *tananan tan*

2 attacks + 1 attack, as in a recurrent *tan tan tan*

1 attack + 1 attack (which is the fundamental basis [*al-aṣl wa'l 'amūd*]), as in a recurrent *tan tan tan tan*.¹⁰²

These are all the duple [sets of] notes.

100 The expression may be rather muddy, and certainly in most manuscripts this passage is mangled, but the meaning is tolerably clear: having moved analytically towards the smallest constituent elements, we now go in the opposite direction, seeing the fundamental rhythmic units as the basis of ever larger entities, from groups of notes to melody plotted onto a rhythmic cycle, to whole songs, to vocal music as a universal human expression not limited to any one culture and language.

101 As the syllables *ta* and *tan* confirm, in these tables each attack or group of attacks is followed by a pause of the value of an attack.

102 No manuscript has the full list, and in many cases the order is somewhat illogical, but there is enough consistency to suggest that a pattern of this type was intended. Only for the final entry is the presence of the pause that follows the attack groups spelled out, and the expression of this combination is also atypical in that in most manuscripts it is elliptical, consisting only of '*naqra wa-sukūn qadr naqra*', 'an attack and a pause to the value of an attack', which is equivalent to a single *tan*. This is clear, especially when the repetition is made explicit later, but nevertheless anomalous in a list of duple combinations, and possibly to be explained by the reductive pull of the following definition of it as the 'fundamental basis', which is more appropriate to a single element than to a combination. For the sake of clarity, preference has been given to the reading in ج and ط, which does mention two attacks, even if it might be a later rationalization.

The triple ones consist of ten combinations:¹⁰³

- 1 attack + 2 attacks + 3 attacks
- 2 attacks + 1 attack + 3 attacks
- 1 attack + 3 attacks (fol. 45a) + 2 attacks
- 3 attacks + 1 attack + 2 attacks
- 2 attacks + 3 attacks + 1 attack
- 3 attacks + 2 attacks + 1 attack
- 1 attack + 3 attacks + 1 attack
- 2 attacks + 3 attacks + 2 attacks
- 3 attacks + 1 attack + 3 attacks
- 3 attacks + 2 attacks + 3 attacks.

These are all the types of rhythmic patterns [*īqāʿ*] compounded from [the three sets of] attacks: three of them are single, nine duple, and ten triple, making twenty-two combinations in all. [p. 199] From these, the following eight types are compounded in Arab music:

the first heavy [*thaqīl awwal*] and its light counterpart
[*khafifuh*]

the second heavy [*thaqīl thānī*] and its light counterpart
ramal and its light counterpart

hazaj and its light counterpart.

These eight genera [*ajnās*] are the fundamentals [*uṣūl*] from which the remaining types [*anwāʿ*] of rhythmic cycles¹⁰⁴ are derived and to which

103 As no numerological case is made for this figure, it is puzzling; nor does it add up with the other sets to yield a symbolically significant number. The total number of possible combinations is twenty-seven, but it is clear that despite the lack of agreement amongst the manuscripts, as before, on exactly what the ten are, some have been excluded systematically. Thus all six combinations involving all three terms appear, but none of the three combinations involving only one term does, while, of those involving two, the repeated term is always separated by the other. So far so good, but this second set is not complete: for reasons that are not clear, the possible combinations of 1 and 2 (1 2 1 and 2 1 2) are omitted.

104 When speaking of the rhythms used in practice, the term used is *alhān*, whereas in relation to the abstract patterns listed above, we encounter *īqāʿ*. Both the logical hierarchy (*ajnās/anwāʿ*), the enumeration, and the later definitions of the cycles are derived, even if not necessarily directly, from al-Kindī (see

they are related, just as all the prosodic metres¹⁰⁵ are derived from the eight prosodic feet.

It is clear from what we have expounded that in each of the propaedeutic disciplines there are four fundamentals from which the remainder is compounded, and that these four are based upon one single principle: in the epistle on arithmetic [Epistle 1], we have demonstrated the manner of combining numbers from the unit 1, which is prior to 2;¹⁰⁶ in the epistle on geometry [Epistle 2], we have shown that the point in the science of geometry¹⁰⁷ is comparable to 1 in the science of numbers; in the epistle on astronomy [Epistle 3], we have demonstrated that the sun, given its position¹⁰⁸ amongst the heavenly bodies, is like the 1 amongst numbers and the point in geometry; in the epistle on numerical proportions [Epistle 6], we have demonstrated that the equation is the fundamental rule in the science of proportions, like 1 in the science¹⁰⁹ of numbers; and in the present epistle, we have demonstrated that:

Mu'allafāt al-Kindī al-mūsīqiyya, pp. 80–82, 97–98), while there is nothing to connect them to the more detailed analyses of al-Fārābī.

- Specifically, the meaning is, ‘all that is in the prosodic cycles’, the reference being to the cyclical alignment of the metres devised by al-Khalil ibn Aḥmad; see ‘Arūd’, *EI2*, vol. 1, pp. 667–677. Displayed in linear form this shows, for example, how the metres *baṣīṭ* and *ṭawīl* can be mapped onto each other:

mustaf'ilun fā'ilun mustaf'ilun fā'ilun

— — — — —

fa'ūlun mafā'ilun fa'ūlun mafā'ilun.

On the role of al-Khalil ibn Aḥmad in the formulation of rhythmic analysis, see Neubauer, 'Al-Khalil ibn Aḥmad', pp. 255–323.

- 106 The literal meaning is ‘1 which is before 2’, but presumably with the notion of precedence.
- 107 The term here is *handasa*, as against the previous *jūmiṭriyā*, but there appears to be no difference in meaning.
- 108 This is a rather tentative rendering of *wa-aḥwāluhā*, ‘and its states’, which may refer not just to its absolute precedence, but to its particular relationships to the other heavenly bodies as it progresses from mansion to mansion.
- 109 In relation to numbers and geometry, ‘science’ renders *ṣinā’a*, but in relation to proportions it renders ‘ilm. Elsewhere *ṣinā’a* may more appropriately be rendered by ‘art’ or, where manual dexterity is involved, ‘craft’.

x¹¹⁰ is like 1,
 x o is like 2,
 x x o is like 3, and
 x x x o is like 4.

All [durations of] notes [, both at the level] of the rhythmic cycles and [at that of] songs[,]¹¹¹ are compounded from these, just as all numbers, whether units, tens, hundreds, or thousands, are compounded from 4, 3, 2, and 1;¹¹² in the epistle on logic,¹¹³ we have also demonstrated that substance [*jawhar*] is like 1, and the nine other categories [*maqūlāt*] are like the nine units. Four of them take precedence over the others: substance, quantity, quality, and relationship, the others being compounds of these;¹¹⁴ in the epistle on matter,¹¹⁵ we have demonstrated that the body is compounded from substance, length, breadth, and depth, all bodies being compounded from the body of the cosmos [*jism muṭlaq*];¹¹⁶ and in the epistle on principles [Epistle 32], we have demonstrated that the relationship of the Creator, exalted be His name, to existing things is like the relationship of 1 to the numbers. The

110 The text here has just *ḥaraka* rather than ‘*naqra mutaḥarrika*’ (or ‘*ḥarf mutaḥarrik*’), but the ‘movement’ must be taken as appended to an understood attack, hence the use of ‘x’ as the equivalent. The following three symbolizations correspond to the terms *sabab*, *watid*, and *fāṣila* respectively.

111 This is a clumsy rendering of ‘*sā’ir naḡhamāt al-alḥān wa’l-ghinā*’. But, as before, unless *alḥān* and *ghinā*’ are more or less synonymous (yielding a bland but still, in context, meaningful ‘all the notes of melodies and song[s]’), the implication seems to be of pitches mapped first onto a rhythmic cycle and then viewed against the larger (but equally rhythmically structured) canvas of a complete song.

112 That is, in the sense that the remaining numbers up to and including 10 are produced by the addition of some or all of these (e.g., 10 = 4 + 3 + 2 + 1). Similarly, the following reference to nine categories and units also requires the inclusion of 10.

113 The term is, again, *manṭiq*, pointing to the language/logic interface, but the following remarks make it clear that the specific epistle intended is 11, ‘On the Meaning of the Categories’.

114 The ten categories (those that can be predicated of an entity) are Aristotelian. The remaining six are place, time, position, state, action, and affection (or passivity).

115 Presumably Epistle 15 is meant — but here it is a question of matter, *hayūlā*, rather than *jawhar*.

116 The literal translation of ‘*jism muṭlaq*’ is ‘the absolute body’ — that from which the heavens and all that is in them are made.

intellect [*ʿaql*] is like 2, the soul [*naḥs*] like 3, and matter [*hayūlā*] like 4;¹¹⁷ and all creatures are compounded from matter and form [*ṣūra*].

Our purpose throughout these epistles has been to demonstrate to the practitioners of each art the oneness of the sublime Creator in relation to that art, [p. 200] so that they may understand more readily and be provided with clearer arguments and more cogent (fol. 45b) proofs (just as we have done in all the other epistles), and also to show the manner in which existing things come into being one from another, with the permission of the Creator, exalted be His name, and through his perfect care, supreme wisdom, and subtle artifice. Praise be to God, Lord of the worlds, the best of creators, most merciful of the merciful, and most generous of the generous.

Let us now return to our [main] topic. We may say that every two attacks made by striking the lute strings or by percussions with sticks must be separated by a pause [*zamān sukūn*], whether long or short, and when the attacks on the lute strings or the percussions made with sticks follow one another successively [*tawātar*], there will also follow successive pauses between them.¹¹⁸ Further, the durations of these pauses must be equal to or longer than the durations associated with these attacks, but cannot be shorter;¹¹⁹ the practitioners of this art concur

117 That is, the universal intellect (*ʿaql*), the universal soul (*naḥs*), and matter (*hayūlā*), which are the first three in the series of emanations.

118 What was previously implied or understood is now to be made explicit, but attention needs to be paid to the way the concept of the pause is used. The first terms to be introduced are *naqra* and *iqāʿ*, both indicating an attack, and the pause separating them from the next attack is termed *sukūn*. The question is whether this represents any duration or only that necessarily associated with the attack, the two together yielding the minimum indivisible rhythmic unit, 'x'. But the fact that the pause is immediately qualified as either long or short points clearly to the former and to discriminations of note length (i.e., number of time units per attack) and/or of tempo. The manner in which these are defined below is, in fact, consonant with the previous use of *sukūn*, namely, in relation to the equivalent (but separate) pause, 'o', of the same duration as 'x'.

119 It would be tempting to adopt the reading of ε , which is the clearest as well as much the simplest, yielding 'or shorter', and leaving the rebuttal for the next statement. However, it is most likely a tidying-up operation of an earlier state of affairs, an unacceptable degree of syntactic clumsiness revealed by the other manuscripts. The clause they contain, beginning variously with *wa-idhā*, *wa-idh*, or *idh*, nevertheless makes sense, and anticipates the rejection that is made immediately after. The version in the Beirut edition presents a logical contradiction.

that the duration associated with an attack cannot be longer than the pause of the same class.¹²⁰

If the durations of the pauses are equal in length to those associated with the attacks, and it is not possible to intercalate another attack within them, the notes are then called the first fundamental, the 'light' [*al-khafif*], which is the fastest of all possible [tempi], because if another attack were intercalated within them, the note concerned would fuse with the notes produced by the preceding and following attacks, the whole becoming one continuous sound.¹²¹ If the length of the pauses is such that it is possible to intercalate one other attack, these notes are termed the second fundamental and the 'second light' [*al-khafif al-thānī*]. If the length of the pauses is longer than these, such that it is possible to intercalate two attacks, these notes are termed the 'first heavy' [*al-thaqīl al-awwal*]. And if the durations are longer than these, such that it is possible to intercalate three attacks, these notes are termed the 'second heavy' [*al-thaqīl al-thānī*].

This is what we have enunciated and described according to the dictates of analogy and rule. (However, what contemporary singers

120 The possibility that the pause might be shorter is now excluded by reversing the terms of the argument: since at a given tempo successive time units cannot vary in duration, the duration associated with an attack ('x' or a multiple thereof) cannot be longer than the equivalent pause ('o' or a multiple thereof). The term rendered as 'class' is *jins* (literally meaning 'genus'), probably to be identified here with one of the four grades or specific tempo bands which are about to be defined.

121 It is clearly implied that the pauses (*sukūnāt*) are not to be identified with the durations associated with the attacks (*ḥarakāt*). This allows two possible readings. One is that it is immaterial whether we are dealing with an attack or a pause; the shortest possible tempo (*khafif*) is that in which their durations cannot be subdivided to allow the intercalation. The other is that it is not immaterial, and that the theoretical intercalation applies to the pause. The logical consequence of this reading is that the basic unit for this tempo is x o , and the next x o o o (and not x o o, since the intercalation of an attack, which must imply not just x but x o, would not be possible). This is contrary to the previous definitions, where the shortest value is not *tan* (x o) but *ta* (x), and if we consider also the purely abstract nature of this articulation of relative duration, it is not surprising to encounter the final admission that musicians see things differently. However, there is a congruence between the slowest tempo, which would accordingly be equatable to eight time units, and the definition below of the longest permissible duration between attacks.

and instrumentalists understand by 'light' and 'heavy' is different, and will be discussed after this chapter.)¹²²

You should know, dear brother, that if the durations of the pauses between the attacks [p. 201] or percussions exceed this length, they fall outside the fundamental structure, violating the norm and [what] analogy [permits], that is,¹²³ they cannot be perceived and distinguished by the sense of hearing. The reason for this is that sounds do not endure in the air for a long time; rather, by the time that one's ears have taken in their resonance, they (fol. 46a) are [already] fading from the air that bears them and conveys them to one's hearing, as we have demonstrated in a preceding chapter.¹²⁴ In the same way, the resonance of sounds does not remain in one's hearing for a long time; rather, by the time that the imaginative faculty has formed [mental] pictures of them, these vibrations are [already] fading from hearing.¹²⁵ Thus, when the durations of the intervals between attacks or percussions are so long that they exceed the above-mentioned limit, the first note and its vibrations fade from the hearing before the arrival of the next note, so that the cognitive faculty is unable to recognize and determine the amount of time separating them and thereby recognize the relationship that subsists between them,¹²⁶ for fine discrimination in hearing is recognition of the extent of the durations between notes,¹²⁷ and of the magnitude of the durations of the pauses and the durations of the attacks, and the relationship between them.

122 Although the terminology for the four grades overlaps with the names of the cycles used, in practice it is not coincident, and among the latter it is difficult to be more specific than to say that in general *khafif* and *thaqil* imply faster and slower tempo bands respectively. The elaboration here of a fourfold set of tempo discriminations is one of the few points in common between the Ikhwān and al-Fārābī.

123 The reading (or emendation) '*a'nī min*', found in the Beirut edition, is adopted here as it seems preferable to either the *a'nī* or the *min/wa-'an* of the manuscripts.

124 Presumably, this is a reference to Chapter 4, although that does not cover the specific issue discussed here.

125 The imaginative faculty (*al-quwwa al-mutakhayyila*) is that which forms images from sense impressions and transmits these to the cognitive faculty (*al-quwwa al-mufakkira*).

126 Some manuscripts use dual pronouns here, referring specifically to 'the first note' and 'the next'; others prefer the feminine singular, for which the antecedent would presumably be more generally 'the durations of the intervals'.

127 Most manuscripts here have a dual, i.e., 'between two [given] notes'.

The other sensibilia, and the sensory capacity to perceive them, function in the same way; the faculty of sight is similarly only able to recognize the magnitude of the distances between visible objects when they are proximate in space. When the spatial distances between them are as great as the [excessive] temporal distances between things heard, that faculty is only able to perceive them [as related] and to distinguish the distance between them by using the measuring units [*ālāt*] of surveying,¹²⁸ such as the inch, foot, cubit, ell, and perch,¹²⁹ as we have explained in the epistle on geometry [Epistle 2]. In the same way, when the durations associated with the attacks are extended along with the durations of the pauses,¹³⁰ the faculty of hearing is only able to perceive and comprehend the distance between them by using

128 Considered to be part of geometry, *handasa* is the term used here.

129 This is a very approximate rendering of the following sequence of measures: finger (*iṣba'*) = the width of five stalks of barley; fist (*qabḍa*) = 4 fingers; cubit (*dhirā'*) = 8 fists; gate (*bāb*) = 6 cubits; rope (*ashl*) = 10 gates. (According to the *Lisān al-ʿArab*, *ashl* is a local Basran unit of measurement. Its dimensions are not specified, and the only definition offered is of the plural, *ushūl*, equated with *hibāl*, 'ropes'.) The original order is random, beginning with *dhirā'* and ending with *iṣba'*.

130 This passage is, to all appearances, a classic case of not leaving well alone. The motive for the seemingly pointless return to the previous argument is, presumably, symmetry: to allow the introduction of the following references to a parallel set of measuring devices. But the introductory statement is a tautology (it is precisely the length of the pauses that determines the durations between the attacks; more simply, the pauses and the times between the attacks are one and the same thing). More to the point, however, is that, given the absence of appropriate instruments for measuring time with sufficient accuracy on a small-enough scale, recourse has to be had to a mixed bag of implements that operated on much larger scales, so that, despite the logic of the spatial-temporal analogy, they were hardly relevant to music. The astronomical connection suggested by the astrolabe is emphasized by Shiloah, who gives alternative interpretations for the other terms, but ones that avoid the surely central function of measuring time; and while the astrolabe might in certain contexts serve as a reminder that for the Ikhwān the movements of the heavenly bodies and the harmonious sounds they generate are the perfect model for the ordered arrangement of tones in human music, the reason for its inclusion here is undoubtedly more mundane, for it was certainly used to determine the time.

observational tools such as float timers,¹³¹ water-clocks,¹³² astrolabes,¹³³ and the like. But when they are [p. 202] close together, the ear can

- 131 Rather than the previous *ṭarjahāra* (pl. *ṭarjahārāt*), we here find *ṭarjahār*; see Chapter 4, note 49 above. They have in common the feature of a hole allowing water to pass through, but the *ṭarjahār* is a float constructed to sink after a given time; see Banū Mūsā ibn Shākir, *The Book of Ingenious Devices*, p. 260. However, the distinction was probably not hard and fast, for *ṭarjahāra* also appears as a technical term for a chamber in a water-clock (indeed, one where water created air pressure through a pipe that produced the whistling sound of silver birds), and it is listed among the time-keeping devices (*ālāt al-sā'āt*) by al-Khwārizmī. See *On the Construction of Water-Clocks: Kitāb Arshimīdas fi 'amal al-binkamāt*, ed. and tr. D. R. Hill (London: Turner and Devereux, 1976), pp. 32–34; al-Khwārizmī, *Mafātīh al-'ulūm*, ed. G. van Vloten (Leiden: Brill, 1895), p. 235.
- 132 In place of *banākīn* some manuscripts have *banākīr*, while in others we find *shāhīn/shayāhīn* or *fayājīm*, all presumably corruptions resulting from scribal ignorance or misunderstanding. A relevance of sorts attaches to *shāhīn* (pl. *shayāhīn*, the reading preferred by the Beirut edition and followed by Shiloah), which denotes the tongue of a balance, in that it is certainly part of a measuring device; but it has nothing to do with time. In *banākīn* we may identify an Arabized plural of the Persian *bingān*, and note also the link with the related *pingān* → *finjān* (Arabic). But while *pingān* is glossed in Steingass as 'clepsydra' as well as 'cup', *bingān* is said to denote a copper bowl that operated on the same principle as the *ṭarjahār*: it had a hole in the base, and the time taken for it to fill when placed in water marked the time allotted to a farmer to draw water from a canal to irrigate his land. In Arabic it is generalized to mean a time-keeping device — see Riḍwān ibn Muḥammad al-Sā'ātī, *Ilm al-sā'āt wa'l-'amal bihā*, ed. Muḥammad Aḥmad Dahmān (Damascus: Maktab al-Dīrāsāt al-Islāmiyya, 1981), pp. 16–18, where al-Jāhīz is quoted as saying that it is used as a nocturnal substitute for the astrolabe — while in the form *binkān* it refers more precisely to a water-clock (cf. the previous footnote). It is likely that the Ikhwān are using the term in this more specific sense.
- 133 Two terms are used here: to the familiar *aṣṭurlāb* is added *dawāriq* or *zawāriq*. The word *dawraq* may denote various kinds of container, from a water-pot with handles to a cistern, and, latterly, the glass bowl of a water-pipe: all, then, associated with water, but with no indication of chronometric filling or emptying. The *zawraq* is an apparently less relevant 'skiff', but one notes again an aquatic association, which might suggest yet another water-based form of measurement or water-driven mechanical device. Dictionaries give no forms from which the plurals *dawāriq* or *zawāriq* could be derived, but the appropriate singular for the latter, *zawraq*, is attested later in the *risāla*. However, the best clue to its meaning is given by al-Khwārazmī (see note 131 above), who points us away from water-clocks and back to the astrolabe by including *zawraqī* (or *dawraqī*) among a number of types of astrolabe named after their shape, presumably, then, a boat shape; see also W. Hartner, 'Aṣṭurlāb', *EI2*, p. 725.

perceive them and has the sensitivity to discriminate between them, as is well known in prosody.

Through what we have expounded, the cause of the pauses between attacks has been clarified, and also the fact that when their length is greater than the above-mentioned measure, they go beyond the basic structure and the norm. There is also another reason [for this], namely, that when a single note comes to the faculty of hearing, its image, before it fades, only remains for the amount of the duration of three other similar attacks, between each one of which is the duration of a single pause, so that in all they come to eight time units organized in the following way:

x	o	x
o		o
x	o	x

where ‘o’ symbolizes the pause, and ‘x’ the attack.¹³⁴

Having thus completed our account of the magnitude of the durations of the attacks and pauses, and of the distance and the relationship between them, we wish to discuss some sound-producing instruments and the nature of their construction and set-up, and which of them is complete and perfect.

Chapter 8

You should know, dear brother, that the sages constructed many instruments [*ālāt*] and devices [*adawāt*] for [providing] the pitches used in music [*naghamāt al-mūsīqī*] and the rhythms of songs [*alḥān*]

¹³⁴ In most manuscripts, the attacks and pauses are displayed in this format, clearly meant to represent movement around a circular orbit before arriving back at the beginning, which would be the next attack. It may thus be regarded as a prototype of the circular display of the rhythmic cycles that comes to the fore in (and gives its name to) the influential thirteenth-century *Kitāb al-Adwār* by Ṣafī al-Dīn al-Urmawī. The letter symbols used in the original (◦ = x and ◡ = o) are also those used by al-Fārābī.

al-ghinā'].¹³⁵ They are varied in form and of many types,¹³⁶ such as drums [*tubūl*], frame drums [*dufūf*], and cymbals [*ṣunūj*], different kinds of flute and reed instrument,¹³⁷ (fol. 46b) *shulyāq* and *shawshak*,¹³⁸ short- and long-necked lutes [*ʿidān wa-ṭanābīr*], the harp [*jank*], the fiddle [*rabāb*], instruments with unstopped strings [*maʿāzif*], the organ [*urghun*] and *armūnīqī*,¹³⁹ and other such sound-producing instruments and devices.

However, the most perfect instrument devised by the sages, and the best of their creations, is the instrument called the lute [*ʿūd*], and we now need to say something about the nature of its construction, set-up [*iṣlāḥ*],¹⁴⁰ and use, and to quantify the relationships between the notes its strings produce and their length, thickness, tension, and [the force of the] attack. This will be a kind of introduction or prolegomenon to inform the minds of students of the branches of philosophy and

135 This again assumes that the combination of *naghamāt* and *alḥān* is not just rhetorical but deliberately references the domains of pitch and rhythm.

136 In going considerably beyond the earlier generic list, this catalogue raises several problems of identification and is discussed in more detail in the Introduction above. Quite simply, it is not always possible to match items in the early vocabulary with specific instruments, for, in the absence of definitions, only context can provide clues, and the Ikhwān include one or two unusual names for which even this aid is lacking.

137 This is a particularly difficult area of nomenclature, hence the retreat to a generalization. The names mentioned are *nāy*, *mizmār*, *ṣurnāy*, *ṣaffāra*, and *shabbāba*. In the absence of precise descriptions, early contexts of occurrence are seldom informative enough to assign wind instrument names to one type or another with any certainty; indeed, it is clear that some names could be applied across the reed/non-reed divide. Nevertheless, it is reasonable to suppose that collectively these names cover the range from end-blown (and possibly duct) flutes (probably *ṣaffāra* and *shabbāba*) to single- and double-reed instruments (*mizmār*), with *nāy* at this stage remaining a generic term. For further discussion see the Introduction, 4.1.2.

138 The confusion about these two terms in the manuscripts, which give *s.lbāq* / *sh.lbāq* / *sh.lhāq* / *shilbā* / *silyā* and *shawshak* / *shawshal* / *shawāshil* / *sawsal* / *sawsak* respectively, indicates that they were evidently not known to the copyists. The reading for the first suggested here takes into account that given by al-Khwārizmī and other lexical evidence; see *Mafātīḥ al-ʿulūm*, p. 236. The various readings and identifications suggested are discussed above in the Introduction, 4.1.3.

139 The identification of this final term, which is not attested elsewhere, as panpipes is discussed in the Introduction, 4.1.2.

140 That is, attending to the correct positioning of the bridge, the tuning of the strings, and the accurate setting of the frets.

inquirers into the propaedeutic sciences,¹⁴¹ and to make clear to them the finer points of wisdom and the secrets of the arts [*ṣanāʿiʿ*],¹⁴² all of which are revelatory of the wise artificer who is the Creator, praised and exalted be He, [p. 203] God who created the artists and inspired them with their crafts, with wisdom, knowledge, and insight — blessed be God, the best of creators and the wisest of judges.

But let us first begin by mentioning what the practitioners of this art say, for, as the proverb has it, ‘In every craft seek help from those who practise it’. We may therefore state that according to the practitioners of this art, the instrument called the lute should be made with a body [*jism*] the length, breadth, and depth of which are in perfect proportion, that is, the length should be one and a half times the breadth; the depth, half the breadth; and the neck [*unq*] of the lute, a quarter of the [entire] length. Its strips [*alwāḥ*] should be thin, taken from a hard, light wood that rings when struck, and the table [*wajh*] should similarly be thin, hard, and light.¹⁴³ One then takes four strings [*awtār*], each thicker than the next, according to the ideal proportion; that is, the thickness of the [fourth and] lowest string [*bamm*] should be one and a third of that of the third string [*mathlath*], the thickness of the third string should be one and a third of that of the second string [*mathnā*], and

141 The phrase ‘*ādāb riyādiyya*’ is a little unexpected as a complement to ‘*ulūm falsafīyya*’. Shiloah offers a contrast of ‘philosophical sciences’ and ‘exact sciences’ (and discusses the ramifications of the term *adab* in al-Ḥasan ibn Aḥmad ibn ‘Alī al-Kātib, *La perfection des connaissances musicales* (*Kamāl adab al-ghinā*), tr. A. Shiloah (Paris: Geuthner, 1972), pp. 7–8.

142 As before, and in what follows, this should be understood to encompass also crafts.

143 Further translations of the passage on the lute may be consulted in H. G. Farmer, ‘The Structure of the Arabian and Persian Lute in the Middle Ages’, repr. in *Studies in Oriental Music*, ed. E. Neubauer, *The Science of Music in Islam 2* (Frankfurt: Institut für Geschichte der Arabisch-Islamischen Wissenschaften, 1997), pp. 223–233; and E. Neubauer, ‘Der Bau der Laute und ihre Besaitung nach arabischen, persischen und türkischen Quellen des 9. bis 15. Jahrhunderts’, *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften*, 8 (1993), pp. 279–378, at pp. 343–346. Neubauer postulates that the phrase about the strips (*alwāḥuh*) was at a certain point repeated as a result of a copyist’s error, with the first word of the repetition then being changed to *al-wajh* (‘the table’), and discusses this passage in detail on pp. 289–291. It is certainly the case that the phrase about the table is absent from some manuscripts, but the tradition as a whole allows the text proposed here, which avoids the particular point of difficulty.

the thickness of the second string should be one and a third of that of the highest string [*zīr*]; that is, the lowest string should be sixty-four threads¹⁴⁴ of silk; the third, forty-eight threads; the second, thirty-six threads; and the highest, twenty-seven threads.¹⁴⁵

These four strings are then stretched over the table of the lute, the bottom ends being attached to the bridge [*mushṭ*] and the top ends to the pegs [*malāwī*] [situated] above the neck of the lute. When this is done, their lengths will be equal but their thicknesses different, according to the ratio 64:48:36:27.

The length of an aliquot string is then divided into four equal sections, and the little finger fret [*dastān al-khinṣir*] is attached at the three-quarter point towards the neck of the lute.

The length of the string is then divided into nine equal parts from the top, and the first finger [*sabbāba*] fret is attached at the ninth nearest [the top end of] the neck of the lute; then that part of the string from the first finger fret to the bridge is divided into nine equal parts, and the ring finger [*binṣir*] fret is attached at the ninth, its position being below the little finger fret towards the first finger fret; then that part of the string from the little finger fret to the bridge is divided into eight parts, and a further similar part is added (fol. 47a) on what remains of the string above; and it is here [p. 204] that the middle finger [*wuṣṭā*] fret is attached, its position being between the first finger and the ring finger. This is the way the lute is set up, the relationship between its strings, and the positioning of its frets.¹⁴⁶

144 Each thread consists of three twists; Neubauer, 'Der Bau der Laute', p. 315.

145 That is, the relationship between each is 4:3, the same ratio as the interval between them, the perfect fourth.

146 This Pythagorean diatonic fretting, identical with that presented by al-Kindī (albeit described differently; see *Mu'allafāt al-Kindī al-mūsīqiyya*, pp. 48–49, 125–126), fails to reflect the realities of practice, which also involved the use of neutral intervals, as al-Fārābī's account makes clear; see *Kitāb al-Mūsīqī al-kabīr*, pp. 127, 500, 511. The omission may be deliberate; the Pythagorean fretting is based on, and restricted to, simple ratios (2:1, 3:2, 4:3, and 9:8) which accord with Neoplatonic numerology. To take into consideration the irrational ratios associated with the neutral intervals would mean disturbing the cosmological clarity of this scheme.

With regard to the manner of establishing [*iṣlāḥ*] the pitches [*nagham*] and understanding the relationships between them,¹⁴⁷ [one proceeds] as follows: the highest string is attached and tightened as much as it will bear without breaking; then the second string is attached next to¹⁴⁸ the highest string and tensioned. It is then stopped [*yuzamm*] with the little finger and sounded [*yunqar*] together with the open highest string, and if the notes they produce are heard to be identical [*mutasāwī*], the two are in tune [*istawā*]. If not, the second string has to be tightened further or loosened [*irkhā'*] until they are in tune. Then the third string is attached and stopped with the little finger and sounded together with the open second string, and tightened further or loosened until they are in tune and their two notes are heard as a unison. Then the lowest string is attached and stopped with the little finger and sounded together with the open third string, and if the notes they produce are heard to be identical, as if they were a single note, these two [strings] are in tune.

If [all] these strings are properly tuned as described, then each open string, compared to the note produced [on it] by stopping with the little finger, will be one and one third (4:3), both in thickness [*ghilaz*] and in pitch [*thiqal*];¹⁴⁹ and the note of each string, when stopped with the little finger, will also be found to be exactly the same as that of the open string above it,¹⁵⁰ and the note of each open string will also be found to give a note equivalent to one and one eighth (9:8) of the note produced by stopping with the first finger;¹⁵¹ and the note of each open string will also be found to give the [lower] octave of the next-but-one

147 Some manuscripts have a dual pronoun here, which does not have an antecedent but makes perfect sense, as the relationships to be discussed are between pairs of notes.

148 The original has 'above', that is, the strings are defined not immediately in terms of high and low pitch but in terms of their relative positions on the vertical plane of the face of the lute as held by the performer. Thus the *zīr*, the string with the highest pitch, is placed lowest, while the *bamm*, the string with the lowest pitch, is placed highest.

149 That is, it will sound a perfect fourth lower. The reference to thickness seems gratuitous, but by referring back to the previous definitions of the composition of the strings it reinforces the importance of the 4:3 ratio.

150 That is, above it in pitch. The original has 'lower', i.e., in position (see note 148 above).

151 That is, the open-string note is a whole tone below that produced by stopping

string above when stopped with the first finger; and the first-finger note of each string will also be found to give a note equivalent to one and one eighth (9:8) of the note produced by stopping with the ring finger; and the middle-finger note [p. 205] of each string will also be found to give a note equivalent to one and one eighth (9:8) of the note produced by stopping with the little finger.¹⁵²

All together, none of these strings and frets produces notes that are not in proportion to one another, except that some of them are ideal and perfect and others less so. For a proportion to be ideal, either the notes should be in unison with one another or the lower note should stand in the relationship 4:3, 3:2, 5:4, or 9:8 with the higher.¹⁵³ If the strings are tuned so as to produce these ideal proportions, and are agitated [*hurrika*] to produce successive proportional motions, there then result from them successive proportional notes, quick high ones and slow low ones,¹⁵⁴ and if they are harmoniously combined in various ways, as mentioned in the preceding chapter,¹⁵⁵ the slow low notes will stand in relation to the quick high notes like bodies, and the latter to

with the first finger. The same whole-tone relationship is repeated below in other positions.

152 The specification of the various whole-tone relationships concludes the survey of the tuning and fretting. A resulting representation of the pitches may be consulted in the Introduction, 4.2.

153 With the exception of 5:4, these simple ratios correspond to the perfect fifth and fourth and the whole tone, which together produce a Pythagorean scale. Within the fourth there are then two whole tones and a semitone. This last is neither discussed nor defined, precisely because its ratio, $(4/3 \div (9/8 \times 9/8) =) 256/243$, is an exception in not being an 'ideal proportion'; it is referred to only guardedly by the previous admission that some proportions are less than ideal. These would also include, within the tetrachord in this diatonic Pythagorean fretting, the minor third (32/27) and the major third (81/64). The latter is marginally larger than the major third produced by the 5:4 ratio which, however, stands outside the basic Pythagorean scale. The 5:4 third is thus excluded from the definition of the lute fretting, but the temptation to cite it as a further 'ideal proportion' proved irresistible nevertheless.

154 In addition to *ḥadd* ('high') and *ghalīz* ('low'), the terms used are *khafīf* ('light') and *thaqīl* ('heavy'), which presumably here, as in the analysis of rhythm, carry implications of tempo rather than of pitch, given the need to compensate for the faster decay of high notes on the lute.

155 Presumably, then, this refers to rhythmic structures. The use of *ḍurūb* ('ways') might be thought a punning transition, as it also means 'blows, strokes', related to the verb *ḍarab* ('to strike'), which is a standard verb for 'to play (the lute)'.

the former like spirits, the two being united with each other, mingling together to form rhythmic melodies and song. The attacks on these strings then have the status of pens; the ensuing high notes,¹⁵⁶ that of letters; the rhythmic melodies, that of words; song, that of utterances; and the air (fol. 47b) conveying them, that of parchment.

The ideas contained in these notes and measured melodies have the status of the spirits lodged in bodies, so when these melodies are brought to the ears of these souls, their natures take delight in them, the spirits enjoy them, and the souls are pleased by them, because the onset of these notes and the pauses that occur between them become a measure and a yardstick for time, and an imitation of the movements [*ḥarakāt*]¹⁵⁷ of the individual celestial bodies, just as the proportional successive movements of the heavenly bodies and the celestial spheres are also a measure and yardstick for whole ages,¹⁵⁸ so when time is measured out by them in a regular, equally proportioned way, their notes are similar to the notes emitted by the movements of the celestial spheres and the heavenly bodies, and correspond to them. The individual souls in the world of generation and corruption then recall the joys of the world of the celestial spheres and the delights of the souls that are there, and they realize clearly that they are in the best possible state, enjoying the sweetest delights and the most enduring pleasures, because those notes are purer and those melodies sweeter, because those bodies are better coordinated, more finely structured, [p. 206] purer in substance, and their movements are better regulated and their relationships more excellently organized. So when the individual souls in the world of generation and corruption understand the state of the world of the

156 At first sight, it would seem that the reading *ḥādithāt* ('occurring'), which some manuscripts have, is preferable to *ḥāddāt* ('high'), since it would also encompass the otherwise absent low notes. But their absence is readily explicable as being in accord with, indeed reinforcing, the inference derivable from other sources, that for the most part the melody was carried by the upper two strings of the lute, while the lower register, and in particular the notes on the *bamm* string, would play a more supporting role.

157 Here, this is to be understood literally as 'movements', in contradistinction to the prosodic implication of the '*ḥarakāt wa-sukūnāt*' above, where it is rendered as 'onset of these notes' rather than the more dryly technical 'attacks'.

158 See Alessandro Bausani, *L'enciclopedia dei Fratelli della Purità* (Naples: Istituto Universitario Orientale, 1978), pp. 220–223.

celestial spheres and become convinced of the truth of what we have described, they then yearn to ascend there and join their fellow souls, saved long ago from amongst the people of yore.

If it is objected that the celestial spheres are of a different nature [*ṭabīʿa khāmisa*],¹⁵⁹ so that their bodies cannot emit sounds and notes, the objector should understand that even if the celestial spheres are a quintessence, there is nothing in this that would deny any attributes to these bodies. Thus, among them there are those that are radiant like fire, and these are the heavenly bodies, and among them are those that are translucent like crystal, and these are the celestial spheres, and among them is one which is polished like the surface of a mirror, and this is the body of the moon, and among them are those which are receptive to light and dark like the air, and these are the celestial spheres of the moon and Mercury. This is demonstrated by the fact that the cone of the earth's shadow reaches the celestial sphere of Mercury. These are all characteristics of natural bodies which celestial bodies share with them, for it has been demonstrated that even if the celestial spheres are a quintessence, this does not mean that they differ from natural bodies with regard to all attributes, but only [with regard to] some rather than others. That is, they are neither hot nor cold nor wet, but they are dry, and of an extreme solidity, greater than that of sapphire, and they are purer than air, more translucent than crystal and more polished than the surface of a mirror. They touch one another, knock together and create friction, and resonate like ringing iron and copper. Their notes are proportional to one another and consonant, (fol. 48a) and their melodies are rhythmically measured, just as we have shown with respect to the notes of the strings of the lute and their correspondences.

Chapter 9

You should know, dear brother, may God aid you and us with a spirit of His, that if the movements of the individual heavenly bodies did not

159 Literally, this means 'a fifth nature' or quintessence, the substance of the celestial spheres that differentiates them from the four standard elements of which the sublunary world is constituted; see Yves Marquet, *La philosophie des Iḥwān al-Ṣafā'* (Algiers: Société Nationale d'Édition et Diffusion, 1973), p. 109.

emit sounds and notes, there would be no point to their inhabitants possessing the power of hearing that they have, and if they lacked hearing they would then be *deaf, dumb, and blind*,¹⁶⁰ which is the condition of lifeless, inert, inanimate objects [p. 207] at the lowest [level] of being.¹⁶¹ It has been conclusively demonstrated and proved by means of philosophical logic that the people of the heavens and the inhabitants of the celestial spheres are God's angels and the most devoted of his servants, who hear, see, reason, know, recite, and *they glorify Him tirelessly night and day*,¹⁶² and their praise is [in the form of] melodies sweeter than David's recitation of the psalms at the prayer niche,¹⁶³ and tones more pleasing than those of true-sounding¹⁶⁴ lute strings in the high-vaulted [palace] alcoves.¹⁶⁵

If someone objects that they must also have the senses of smell, taste, and touch, this person should know that smell, taste, and touch were given to creatures that eat and drink so that they could use them to distinguish what is beneficial from what is harmful and to guard their bodies against excessive heat and cold, both of which are lethal. The

160 Qur'an 2:171. Logic is overridden by the temptation to use a Qur'anic phrase as rhetorical reinforcement, one which is then taken even further in the following gloss.

161 This renders 'al-jamādāt al-jāmidāt al-nāqīṣāt al-wujūd'.

162 Qur'an 21:20.

163 The term is *miḥrāb*, the recess in a mosque indicating the direction of prayer. As the Ikhwān must have been fully aware of the incongruity as well as the anachronism, one might have expected rather *haykal* ('temple') or '*bayt al-'ibāda*' ('house of worship'), both of which occur elsewhere in the *risāla*, and in his English translation Shiloah does in fact tactfully substitute 'temple'. In the circumstances, it is just possible that the Islamic transposition is not an unexpected solecism but acoustically deliberate: a pre-echo of the larger-scale architectural support for resonance implied in the next reference.

164 The term used here, *faṣīḥ*, which is not technical, implies both clarity and eloquence.

165 The architectural setting specified here is the *iwān*, a large recess opening onto a central area. The shape is normally curved, presumably to acoustic advantage, while the use of the plural and the additional mention of height suggest an imposing setting, probably palatial. Indeed, it is possible that we are invited to see here a reference to the Sāsānian palace at Ctesiphon, the musical glories of the biblical David being balanced by the sophisticated musical tradition of the Sāsānian court, about which various tales are recorded in Arabic literature, and echoes of which find their way into a famous poem by al-Buḥturi on the palace at Ctesiphon.

people of the heavens and the inhabitants of the celestial spheres, on the other hand, have been spared these things and have no need to eat and drink; their nourishment is praising, their drink is acclamation, and their fruit is thought, reflection, knowledge, insight, sentiment, feeling, delight, joy, pleasure, and repose.

It has therefore been demonstrated through what we have expounded that the movements of the heavenly bodies and the stars produce tones and melodies that are sweet, delightful, and joyful to the souls of their inhabitants, and that these tones and melodies remind the simple¹⁶⁶ souls that are there of the joy of the world of the spirits above the celestial realm, whose substances are more noble than those of the world of the celestial spheres, which is the world of the souls and that eternal¹⁶⁷ abode whose blessing is all *rest, ease and a Garden of Bliss* as mentioned by God on high in the Qur'an.¹⁶⁸ What demonstrates the genuineness of what we have stated and proves what we have described to be true is that the tones produced by the movements of the musician remind the individual souls that are in the world of generation and corruption of the joy of the world of the celestial spheres, just as the tones produced by the movements of the celestial spheres and the heavenly bodies remind the souls that are there of the joy of the world of the spirits. This is the conclusion derived from the premises associated with them by the sages, that is, their assertion that the states of secondary, caused entities imitate those of the primary entities that cause them. This is one premise, and the other [p. 208] is their assertion that the higher phenomena are primary causes to the phenomena that are in the world of generation and corruption, and that their movements are the cause of the movements of the latter, and that the movements of these imitate

166 Why these should be *basīṭ*, 'simple' (or, in a textual alternative, *nashīṭ*, 'active'), is not clear, unless it is a comparative term distinguishing them from others more complex. The passage begins by referring to 'the people of the heavens and the inhabitants of the celestial spheres', and as it develops it becomes clear that the two are not synonymous, for a hierarchy is established in which the souls of those in paradise are deemed nobler than those dwelling in the celestial realm. On such distinctions see Y. Marquet, *La philosophie des Iḥwān al-Ṣafā'*, pp. 106–108.

167 Here, as elsewhere, *ḥayawānī* reflects the Qur'anic (29:64) use of *ḥayawān* in the meaning of (eternal) life.

168 Qur'an 56:89.

(fol. 48b) their movements, from which it necessarily follows that the tones of these imitate their tones.

An example of this is provided by the movements of children at play, for they imitate the movements of their parents. Similarly, in their actions and deeds pupils and students imitate the actions and states of their teachers and masters. Most of the wise know that the individual celestial bodies and their regular movements are existentially prior to the creatures of the sublunary sphere and their movements, and the world of souls is existentially prior to the world of bodies, as we have demonstrated in the epistle on matter [Epistle 15] and the epistle on intellectual principles [*al-mabādi' al-'aqliyya*].¹⁶⁹ In the world of generation, the existence of regular movements producing tones in proportional relationships to each other demonstrates that those continuous regular movements in the world of the celestial spheres create tones in proportional relationships that produce joy in their souls and make them yearn for what is above them, just as one finds in the nature of children a yearning towards the condition of the parents; in the nature of pupils and students, a yearning towards the condition of their teachers; in the nature of the common people, a yearning towards the condition of kings; in the nature of kings, a yearning towards [the condition of] the intellectuals and the learned; and in the nature of the intellectuals and the learned, a yearning towards the condition of the angels and towards becoming like them, just as it has been stated in a definition of philosophy that it consists of an approximation to the divine as far as human potential allows.

It is said that because of the purity of the substance of his soul and the intelligence of his heart, Pythagoras the sage was able to hear the tones of the movements of the celestial spheres and the heavenly bodies, and through the outstanding quality of his thought was able to derive the basic principles of music and the tones of melodies. He is the first of the sages to have spoken about this science and to have given instruction concerning this secret, and after him came Nicomachus, Ptolemy, Euclid, and other sages.

This was one aim of their use of musical melodies and of the notes of the strings at sacrifices in temples and places of worship, according

169 The reference is probably to Epistle 32.

to divinely ordained practice, and especially of sad melodies that soften hard hearts and provide a reminder to distracted souls and heedless spirits forgetful of the joys of their spiritual world, their radiant dwelling and abiding home. Accompanied by strokes on these strings, they would intone metrically structured words and verses [p. 209] composed to express this idea, in which the blessed state of the world of the spirits and the pleasure and joys of its inhabitants are described, in the same way that, when they go forth to battle, Muslim warriors recite verses of the Qur'an revealed concerning the same idea, in which desire is aroused for the blessings of paradise, such as His utterance:

*God has purchased the persons and possessions of the believers in return for the Garden — they fight in God's way: they kill and are killed — this is a true promise given by Him in the Torah, the Gospel, and the Qur'an. Who could be more faithful to his promise than God? So be happy with the bargain you have made: that is the supreme triumph.*¹⁷⁰

and many other cognate verses in the Qur'an. In battle and when attacking in war, Muslim warriors also recite verses (fol. 49a) describing the houris and the blessings of paradise in order to make souls long to go there, and also to encourage them to charge and attack. These are in Arabic and Persian,¹⁷¹ such as:

I am obliged by my virtue and obliged by my valour,
by the gainful praise I can win,
By thrusting myself forward against what is hateful,
and striking at the head of a brave foe,
And saying to myself, whenever hectic and agitated,
'Be calm, praise or repose will be yours [soon enough]',
To champion pious deeds
and ever protect an honour that is true.

170 Qur'an 9:111.

171 This phrase, and the Arabic verse that follows, are in neither ع nor ف, and may be a later addition, perhaps to counterbalance the Persian verse that comes after. Neither quote touches on the delights of paradise, stressing rather heroic virtue, disdain for worldly matters, and devotion to holy war.

And, in Persian:

Come, let us entrust our hearts and souls to God.

Let us have neither the worry of wealth nor the cares that
money brings.

Let us sell our souls for the sake of faith
and spend this mortal life in battle.

As for the poetry and verse the divine sages used to intone when they made use of music in temples and houses of worship to soften hard hearts and to awaken heedless souls from neglectful sleep and spirits idling in ignorant slumber, in order to make their spiritual world, their radiant domain, and their abiding home enticing to them, and to free them from the world of generation and corruption [p. 210], save them from drowning in the sea of materiality, and rescue them from the trammels of nature, their sense is as follows:

O soul plunged into the body's gloomy depths,
O spirits submerged in the darkness of dense matter,¹⁷²
forgetting to recall the life to come,¹⁷³
diverted from the ways of righteousness,
remember the promise of the covenant,
when God said to you
'Am I not your Lord?' and you replied 'Yes, we bear witness.' So
you cannot say on the Day of Resurrection, *'We were not aware
of this,' or, 'It was our bodily forefathers who, before us, ascribed
partners to God, and we are only the physical descendants who
came after them'*¹⁷⁴
in the world of deception
and the oppression of the grave.
Remember your spiritual world,
your abiding home

172 The phrase *'al-ajrām dhāt al-thalāthat al-ab'ād'* means literally 'three-dimensional bodies'. This seems to represent a jarring change of tone, but is rescued somewhat by the fact that the following phrases rhyme with *ab'ād*.

173 In place of *ma'ād*, ع has *mī'ād*, 'the appointed hour', a perfectly good alternative.

174 Qur'an 7:172–173, with the substitution of 'you replied' (*qultum*) for 'they replied' (*qālū*) and the insertion of the two adjectives not in italics. The word *qālū* appears in two of the later manuscripts, but surely represents a correction, suppressing the earlier deviation from the Qur'anic text.

and your radiant domain,
 and long to be with your spiritual fathers, mothers, and
 brethren
 who are in the highest heaven,
 who are free of physical taint
 and innocent of contact with natural bodies.
 Prepare and equip yourselves and set forth
 from the world that will be obliterated
 to the one that is eternal
 before you are suddenly and forcibly dispatched there,
 unprepared,
 regretful,
 and doomed.¹⁷⁵

With such descriptions and on themes [*ma'ānī*] of this nature, the sages would intone [*lahhana*] [texts], accompanied by an instrumentalist's notes [*ma'a naghāmāt al-mūsīqār*], in temples and houses of worship.¹⁷⁶

What we have outlined clarifies some of the aims of the sages in their use of music and in their invention of the rhythmic principles of its melodies and the combination of its notes.¹⁷⁷

The reason why music has been proscribed in some of the prophetic laws is that people have made use of it in a way different to that of the sages, in fact, for idle entertainment¹⁷⁸ and to incite a craving for the

175 The typographical layout makes some attempt to reflect the rhetorical and stylistic characteristics of this passage, which distills poetry into equally highly wrought prose marked by syntactic and morphological parallelism and frequent internal rhyme. Thus, of the first six lines, two, three, and four rhyme (and in six, one manuscript has a variant rhyming with line five), while of the last six, minus six rhymes with minus five, and the remainder contain an accumulation of plurals in *-īna* and morphologically identical pairs.

176 This passage could be variously interpreted. Shiloah has the sage compose (*mis en musique*) and the musician sing (*chanté*), while the suggestion here is that, rather than produce compositions for a singer to perform, the sage chanted with (*ma'a*; the preposition is surely significant) instrumental accompaniment. A further but much less likely possibility is to regard *mūsīqār* not specifically as an instrumentalist, and have the phrase '*ma'a naghāmāt al-mūsīqār*' qualify the verb *lahhana*, i.e., the sage intoned or chanted with the tones of a musician, i.e., with a musical use of pitch.

177 A more dryly technical rendering of '*uṣūl al-hānīh wa-tarkīb naghāmātih*' might be 'its fundamental principles in terms of rhythm and pitch organization'.

178 The key word in the *āya* that provides the one Qur'anic weapon in the

pleasures of this world and its deceptive desires. The verses that have been recited with this kind of theme are those such as:

Take your share of ease and delight,
for everything, however long it lasts, will come to an end.

Or,

No one has come back to tell us that he
has been in paradise or in hellfire since he died.

You should know, dear brother, may God aid you and us with a spirit of His, that when most people hear such verses they are deluded into thinking (fol. 49b) that delight, felicity, pleasure, and joy are only to be found in what they perceive through their senses, and that the messages the prophets have conveyed about the blessings of paradise and the delight of its inhabitants and the messages the sages have conveyed about the joy, virtue, and nobility of the world of the spirits are lies and deception, devoid of truth. They are therefore prey to doubt and confusion.

You should know, dear brother, may God aid you, that if you do not believe in what the prophets have conveyed to you about the blessings of paradise, and do not give credence to what the sages have informed you about the joy of the world of the spirits, but accept the false imaginings and corrupt views that have been fed to you, you will remain perplexed, doubting, mired in error, and liable to lead others into error.

You should know, dear brother, may God aid you, that the purpose of the prophets in laying down laws and the purpose of the sages in laying down rules¹⁷⁹ is not just to set right the affairs of this world; their

armoury (otherwise based solely on *ḥadīth*) of the legists who disapprove of music is *lahw*, translated here as 'idle entertainment'. The following remark summarizes in a rather decorously restrained way the nature of the charges levied in the juridical literature.

179 This offers a particularly clear example of a distinction, which is at the same time a complementarity, that also appears elsewhere in the *risāla*: the prophets are associated with *sharāʿīʿ* (sg. *sharīʿa*), a legal system based on divine authority, the sages with *nawāmīs* (sg. *nāmūs*), laws derived from philosophical principles. The two overlap, or coincide, in aims and methods, but given the divine origin of the former, it is still surprising to find no reference to revelation here (despite frequent Qurʾanic citations elsewhere); the same verb, *waḍaʿ* ('to put down'),

common purpose is to set right both religious and worldly matters. Their ultimate aim, then, is to free souls from the travail of this world and the suffering of its inhabitants, and to enable them to attain the happiness of the next world and the blessed state of its inhabitants.

To return to our previous topic, we may say that when the meanings conveyed by melody and rhythm reach the mind [*aḥkār al-nufūs*]¹⁸⁰ via hearing, so that an image is formed there of the ideas that were contained within those rhythms and melodies, their existence [as vibrations] in the air can be dispensed with, just as writing on tablets can be dispensed with once the ideas written on them are understood and memorized. Such is the case with individual souls when they grow to complete maturity and fully achieve their purpose within the body, at which point the bodies perish, either through natural or accidental death or through sacrifice in holy war, and the souls are extracted from the bodies just as a pearl is extracted from the oyster shell, the foetus from the womb, the seed from the calyx, or the fruit from the rind. They then begin a new life, just as the pearl begins a new life when it is taken out of the discarded shell. Similar is what happens to fruit and grain when they mature and ripen [p. 212], for it consists of harvesting and gathering: the husks and stalks are thrown aside to reach the core, which then begins another life. What happens to the soul after it departs the body is similar, for a new fate awaits it, as God, praised be He, said:

*Consider [the semen] you eject — do you create it yourselves or are We the creator? We ordained death to be amongst you. Nothing could stop Us if We intended to change you and recreate you in a way unknown to you.*¹⁸¹

Similar also is the fate of the souls of animals after slaughter, for you must not suppose, dear brother, that the purpose of those who set down ordinances allowing the slaughter of beasts in temples on days

is used in both cases. However, it should not be thought that the distinction is a hard and fast one, for elsewhere (e.g., in Epistle 47) the concept of *nāmūs* is related explicitly to prophets.

180 The literal meaning is 'the thoughts of souls', but the following corresponds exactly to accounts elsewhere of mental processes.

181 Qur'an 56:58–61.

of sacrifice is just the consumption of meat; their purpose, rather, is to free their souls from the defilement of the hell that is the world of generation and corruption,¹⁸² (fol. 50a) as we have explained in the epistle on the providential nature [*ḥikma*] of death [Epistle 29].¹⁸³

Now take heed, dear brother, may God aid you, consider, and understand that your body is an oyster shell and your soul a precious pearl that should not be neglected, for it is of great value to its Creator. It has already reached the last door in [the] hell [of the world of generation and corruption],¹⁸⁴ so if you take heart, make ready, and hasten to come out of this door which patently leads to torment, and go in through the door wherein is concealed divine mercy,¹⁸⁵ prostrated, having taken on angelic form,¹⁸⁶ you will have succeeded, achieved your goal and been saved.

You should know, dear brother, may God aid you and us with a spirit of His, that angelic form is the one your soul will be provided with when it departs the body, as God, exalted be He, mentioned when He said: *Say, 'The Angel of Death put in charge of you will reclaim you, and then you will be brought back to your Lord.'*¹⁸⁷

182 Here some manuscripts add a further passage: 'and to convey them from an imperfect to a complete and perfect state in human form, this being the most complete and perfect form in the sublunary world. This form is, further, the final door in the hell that is the world of generation and corruption.'

183 The literal meaning is 'the wisdom of death'. Death is providential in that it is a second birth, releasing the soul into eternity, a theme referred to elsewhere in the present epistle too.

184 That is, as clarified in the additional passage given in note 182 above, by virtue of being human.

185 The translation is rather clumsy, yet still fails to capture the stark contrast of the association with the doors of the terms 'exterior' (*zāhir*, meaning 'evident', 'exoteric', usually used in relation to the literal sense of scripture) and 'interior' (*bāṭin*, meaning 'internal', 'esoteric', used in relation to what are assumed to be its hidden, symbolic meanings). Shiloah's version is rather free, but certainly more elegant: 'si tu t'écartes du côté extérieur de la porte qui ouvre sur le châtiment et que tu entres du côté intérieur de cette porte qui est la miséricorde'.

186 That is, the soul takes on angelic form. Two of the older and generally more reliable manuscripts (Ā and ع) have *wa-hiya* rather than *fi*, which would suggest 'prostrated, this being the form [presumably here in the sense of posture] of the angels'.

187 The Qur'anic passage (32:11) does not seem to follow logically from the preceding statement, but what the translation fails to capture is the link between

You should know, dear brother, that the angel of death is the one who receives spirits and is the midwife of souls, just as the midwife of bodies is the one who receives the new-born.

[p. 213] You should know, dear brother, that the souls of all the believers have parents in the world of the spirits, just as bodies have parents in the physical world.¹⁸⁸

Let us return to our previous topic. We may say that the musician sages restricted the number of lute strings to four, no more, no less, so that what they produced should correspond to natural phenomena in the sublunary world, thereby following the model of the wise Creator, exalted be He, as we have explained in the epistle on arithmetic [Epistle 1]:

the highest string [*zīr*] resembles the element of fire, and its note corresponds to its heat and fierceness [*ḥidda*];¹⁸⁹

the second string [*mathnā*] resembles the element of air, and its note corresponds to the wetness and softness of air;

the third string [*mathlath*] resembles the element of water, and its note corresponds to the wetness and cold of water;

the lowest string [*bamm*] resembles the element of earth, and its note corresponds to the heaviness and thickness of earth.

These characteristics that they have are according to the correspondences between them and according to the effects of their notes on the mixture of the temperaments of those listening to them. This is because [of the following]:

the two supplied by the related verbs *tawaffā*, ‘to take in full’ (here yielding ‘[he] will reclaim’), and *wāfā*, ‘to provide [fully]’.

188 Missing from ¹ and ², but found in ³ and three other manuscripts, is the following continuation: ‘As the Messenger of God, peace be upon him, said to ‘Alī, peace upon him: “You and I, ‘Alī, are the parents of those of this faith [*umma*]”, and as God on high has said: ... *the faith of your forefather Abraham. God has called you Muslims* [22:78]. This is a spiritual paternity, not a physical one.’

189 The word *ḥidda* also has the musical sense of ‘[sharpness of] pitch’. This particular set of relationships between the strings of the lute and the elements will reappear within the more complex set of interconnections laid out in Chapter 14 below, on the tetrads.

the note of the highest string strengthens the humour of yellow bile, increasing its power and effect, and opposes the humour of phlegm, attenuating it;

the note of the second string strengthens the humour of blood, increasing its power and effect, and opposes the humour of black bile, softening it;

the note of the third string strengthens the humour of phlegm, increasing its power and effect, and opposes the humour of yellow bile, reducing its intensity;

the note of the lowest string strengthens the humour of black bile, increasing its power and effect, and opposes the humour of blood, calming its passion.¹⁹⁰

When these notes are combined in rhythmic melodies [*alḥān*] corresponding [*mushākila*] to them, and these melodies¹⁹¹ are then used at the times of day or night whose nature is counter to that of the prevailing illnesses and sicknesses occurring, they will alleviate them, reduce (fol. 50b) their severity, and ease the pain they inflict on the sick, because when things that correspond in their characteristics are multiplied and combined, their effects become more powerful and

190 The positive relationships of the *zīr* string to yellow bile, the *mathnā* to blood, the *mathlath* to phlegm, and the *bamm* to black bile, are already found in al-Kindī (*Mu'allafāt al-Kindī al-mūsīqiyya*, pp. 86–88). He does not, however, mention the negative counterparts.

191 Although pitch seems to be more important here than duration, it is again difficult to decide exactly where the emphasis lies. With regard to the first occurrence of *alḥān*, it seems sensible to think of the structures with which the notes are associated as being primarily rhythmic rather than melodic; they are characterized as 'corresponding to them', whereas melodies are, rather, formed from them. On the other hand, it could be thought that the reference is to the tessitura of the melody. In any case, it is clear from the context that the therapeutic function is a consequence of the associations between the humours and the differently pitched strings, and no comparable correlations are mentioned for rhythm, even during the later and much more detailed treatment of the rhythmic cycles. It is also relevant to note that in the later medical literature, although there is no longer a role for the individual strings, treatment employs appropriate melodic modes, not rhythmic cycles; see E. Neubauer, 'Arabische Anleitungen zur Musiktherapie', *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften*, 6 (1990) [pub. 1991], pp. 227–272.

their influence prevails, overcoming their opposites — just as people realize during wars and disputes.

[p. 214] From what we have outlined above, something will have become clear of the wisdom of the musical sages who made use of them in hospitals at times contrary to the nature of the illnesses and maladies, and why they confined themselves to four strings, no more, no less. The reason why they made the thickness of each string one third greater than the next higher-pitched one¹⁹² is also because they imitated the wisdom of the Creator, exalted be His name, following the marks of His creation in natural phenomena. Specifically, scholars of the natural sciences [*ḥukamā' tabī'īyyūn*] have pronounced that the diameters of each of the spheres [*ukar*] of the four elements of fire, air, water, and earth is one third greater than that of the next lower one with regard to its quality [*kayfiyya*], that is, thinness and thickness.¹⁹³ They have stated that the diameter of the sphere of ether [*athīr*] — that is, fire — which lies immediately beneath the celestial sphere of the moon is one third greater than the diameter of the sphere of bitter cold [*zamharīr*]; the diameter of the sphere of bitter cold is one third greater than the diameter of the sphere of air [*nasīm*]; and the diameter of the sphere of air is one third greater than the diameter of the sphere of earth.

This [set of] relationship[s] means that, [expressed] in [terms of relative] thinness, the substance of fire is one third more than air; the

192 Again, the literal expression is 'the one below', i.e., on the vertical plane of the lute held in playing position.

193 Two series are conflated here: the elements are projected onto the scheme of sublunary concentric spheres and are consequently spoken of as if they themselves had spheres. As the upper sublunary sphere, the ether, is associated with fire, the projection is driven by the match between the first and last terms:

fire, <i>nār</i> ;	air, <i>hawā'</i> ;	water, <i>mā'</i> ;	earth, <i>arḍ</i>
ether, <i>athīr</i> ;	bitter cold, <i>zamharīr</i> ;	air, <i>nasīm</i> ;	earth, <i>arḍ</i> .

The middle two, however, spoil the relationship, there being no sphere in the lower line corresponding to water. Accordingly, there is no mention of water when the spheres are discussed, as elsewhere, in terms of their relative diameters; it is smuggled in discreetly in the following series of relative thinness/thickness. (Bausani, at *L'enciclopedia dei Fratelli della Purità*, p. 62, combines the two, inserting water in the latter, so that there are four rather than three 4:3 relationships between the spheres.) It may be noted, finally, just to confuse matters further, that the remainder of this chapter will present a different set of relative diameters for the sublunary spheres.

substance of air is one third more than water; the substance of water is one third more than earth.

As for the reasons why they attached¹⁹⁴ the highest string, which corresponds to the element of fire while its note corresponds to the heat and intensity of fire, above all the others; and why they attached the lowest string, which corresponds to the element of earth, below them all; and the second string, next to the highest string; and the third string, next to the lowest — there are two of these. One [reason] is that the note of the *zīr* string is high [*hādd*], light, and moves upwards, while the note of the lowest string is thick, heavy, and moves downwards, so that this [placement] is more appropriate for when they are to be combined [*mizāj*] and brought together [*ittiḥād*],¹⁹⁵ and the case of the second and third strings is similar. The other is that the relationship of the thickness of the highest string to that of the second string, of that of the second string to that of the third, and of that of the third to that of the lowest is like the relationship of the diameter of earth to that of the sphere of air, that of the sphere of air to the sphere of bitter cold, and that of the sphere of bitter cold to that of the sphere of ether.¹⁹⁶ This is why they attached them in this [p. 215] arrangement.

With regard to their use of the relationship of the eighth¹⁹⁷ for the notes on the strings, rather than that of the fifth, sixth, or seventh,¹⁹⁸

194 This renders *shadd*, which elsewhere means ‘tensioning’, ‘tuning’ (and in later texts ‘mode’) but here, rather, ‘tying on’; the emphasis in this context is on position rather than pitch.

195 The expression here is a little unexpected. Shiloah understands it as implying that the high and low sounds meet and produce harmony, but having previously been told that the high and low notes tend in opposite directions one might prefer a more mundane explanation, namely that although they must needs coexist in performance, the contrast between them is such that their respective strings are best placed as far apart as possible.

196 This restates of the tuning in perfect fourths (4:3, identical with the 1½ set of relationships set out above with regard to the successive increase in size of the various spheres). The parallelism is clear (the thinnest string and smallest sphere come first), but the resulting order is the opposite of the associations between the two sets (from *zīr* with fire to *bamm* with earth).

197 I.e., the ratio 9:8, which yields the Pythagorean whole tone.

198 In contrast to the 9:8 whole tone, the intervals corresponding to the ratios 8:7, 7:6, and 6:5 do not form part of the Pythagorean scale system, despite the fact that the last is a minor third (for which the Pythagorean ratio is 32:27 = 4:3 – 9:8). By this logic the list could also have included the quarter, since the

and their preference for it, this is because it is derived from 8, and 8 is the first cube number. Further, given that 6 is the first perfect [*tāmm*] number,¹⁹⁹ the cube is the supreme [*afḍal*] hexahedron, being set above the others because of the equality [*tasāwī*] [of its proportions], as we have demonstrated in the epistle on geometry [Epistle 2]. This is because the length, breadth, and depth of this figure are all equal; it has six (fol. 51a) square sides all of which are equal; it has eight three-dimensional [*mujassam*] corners [*zawāyā*], all of which are equal; it has twelve parallel and equal sides; it has twenty-four equal right angles, which are the product of 3 x 8;²⁰⁰ and we have previously stated that any entity [*maṣnūʿ*] in which there is a greater degree of equality is superior, and after the form of the sphere there is no form with a higher degree of equality than the cube.²⁰¹ It is for this reason that, in the last section of his book, Euclid said that the form of the earth bore a strong resemblance to the cube, and the form of the celestial spheres to the dodecahedron. We have explained the superiority [*faḍīla*] of the spherical form and the number 12 in the epistle on astronomy [Epistle 3].

Concerning the superiority of [the number] 8, we may add the statement of the wise mathematicians that between the diameters of the celestial spheres and that of the earth and the air²⁰² there is a musical proportion. What this means is that if the diameter of earth is 8 [units] and the diameter of the sphere of air is 9,²⁰³ then:

5:4 major third is likewise excluded. However, it is elsewhere recognized as a consonant interval, even if the lute fretting does not provide for it.

199 A perfect number is defined as a number equal to the sum of its divisors (excluding the number itself), i.e., $6 = 1 + 2 + 3$. The next perfect number is $28 = 1 + 2 + 4 + 7 + 14$.

200 That is, referring back to the corners, each of which contains three right angles.

201 The idea of the sphere as perfect, indeed the figure encompassing all others, may be found in Plato's *Timaeus*.

202 These appear to be lumped together, with just one diameter being mentioned for the two of them, but they are differentiated immediately afterwards.

203 The celestial geometry is confusing enough without the extra contribution of a textual substitution in these two cases of 'radius' (*nisf quṭr*) for (the emended) 'diameter' (*quṭr*); the resulting values would lead to the sphere of the moon being smaller than that of the earth. Confusion arises from the use, if the pun can be excused, of two scales. The previous one was based on the projection of the fourth (4:3) relationship between the strings onto the sublunary strata, so that if the earth were 27, the *nasīm* would reach up to 36, the *zamharīr* to 48, and the *athīr* to 64, which would be the sphere of the moon. Here, however, we

the diameter of the sphere of the moon is 12;
 the diameter of the sphere of Mercury is 13;
 the diameter of the sphere of Venus is 16;
 the diameter of the sphere of the sun is 18;
 the diameter of the sphere of Mars is $21\frac{1}{2}$;
 the diameter of the sphere of Jupiter is 24;
 [the diameter of the sphere of] Saturn is $27\frac{4}{9}$;²⁰⁴
 and the diameter of the sphere of the fixed stars is 32.

Accordingly:

the relationship of the diameter of [the sphere of] the moon
 to that of [the sphere of] the earth is 3:2, and to that of the
 air 4:3;
 the relationship of the diameter of Venus to that of the earth
 is 2:1, and to that of the moon 4:3;
 the relationship of the diameter of the sun to that of the air
 [p. 216] is 2:1, to that of the earth $2\frac{1}{4}$:1, and to that of the
 moon 3:2;
 the relationship of the diameter of Jupiter to that of the moon
 is 2:1, and to that of the earth 3:1, and to Venus 3:2;
 the relationship of the diameter of the fixed stars to that of
 Jupiter is 5:4,²⁰⁵ to Venus 2:1, to the sun $1\frac{3}{4}$:1,²⁰⁶ to the moon
 $2\frac{3}{4}$:1,²⁰⁷ and to the earth 4:1.

begin with a whole tone (9:8) relationship between the earth and the sphere of air, and it may well be because of (or to disguise) this difference that air is here termed *hawā'*, rather than the previous *nasīm*. The following fourth telescopes (and fails to mention) the next two strata, arriving directly at the sphere of the moon. For further details, see the Introduction, 3 (and, for yet another set of measurements, Epistle 18 on meteorology; see also Bausani, *L'enciclopedia dei Fratelli della Purità*, pp. 117–118).

204 Shiloah follows the Beirut edition here, which has sevenths rather than ninths.

205 Except for a marginal note in ϵ , the manuscripts are unanimous, but the proportion is incorrect, and should read 4:3.

206 This is an approximation: the precise figure is $1\frac{7}{9}$, (which appears as a marginal addition in ϵ).

207 Another unanimous error; correct is $1\frac{1}{2}$:1 (again noted in the margin of ϵ).

Mercury, Mars, and Saturn have different relationships, for which reason they are said to be of ill omen.

These sages have also said that between the relative sizes of these heavenly bodies, there are relationships of various orders, arithmetical, geometrical, or musical, and, similarly, such relationships also subsist between them and the body of the earth, some being noble and perfect [*sharīfa fāḍila*], others less so, this being a matter too long to explain. Given what we have said, we have clarified that the sum total of the physical world — with all its celestial spheres and individual heavenly bodies, its four elements, and the way the whole is internally arranged²⁰⁸ — is organized, combined, and [its parts] placed in relation to one another according to the above-mentioned proportions; and that the whole physical world functions like a single organism [*ḥayawān*] or human being or city, and that He who organized, formed, arranged, composed, instigated, and created it (fol. 51b) is One and unique. This was one of the aims of this epistle.

A further noble property [*fāḍila*] of 8, dear brother, may God aid you and us, is that when you consider and peruse the things that exist, you will find that many of them are eightfold, like the natures of the four elements, [which, with their combinations,] hot and dry, hot and wet, cold and dry, cold and wet, make eight. These are the bases of whatever exists in nature and the origin [*‘unṣur*] of living things subject to corruption.

It is also a noble property of 8 that you will find the complementary positions [*munāzarāt*] of the heavenly bodies at eight specific locations in the heavenly sphere, to the exclusion of others. These are [as follows]: the base position [*markaz*]²⁰⁹ and its opposition [*muqābala*], and the

208 Grammatically this phrase could qualify just the elements, possibly referring back to the conflation with the concentric sublunary spheres, but it seems more likely that the whole of the cosmos is intended, in which case the ‘internal’ arrangement could be a reference to the various concentric spheres of the celestial bodies.

209 The reading of this whole section is indebted to Shiloah’s explication of its astrological content. Here, however, he rejects *markaz*, found in all seven manuscripts, in favour of *muqārana* (‘conjunction’), attested in ج. The reason is primarily logical, being based on the assumption that the text only mentions five rather than eight positions, and therefore appeal is made to a list of eight combinations found elsewhere which is headed by *muqārana*. But the text as

trine, quartile, and sextile aspects.²¹⁰ [p. 217] These eight are also one of the causes [*asbāb*] of [astrological influence upon]²¹¹ living things subject to decay in the sublunary sphere.

When you consider and reflect further, you will find that the [names of the] twenty-eight letters of Arabic, which correspond to the twenty-eight mansions of the moon,²¹² are spelt with [the aid of] the eight letters *ā, l, f, y, m, n, d*, and *w*;²¹³ the prosodic feet found in Arabic poetry are eight in number;²¹⁴ and the [rhythmic] types [*ajnās*]²¹⁵ of Arab song are also eight in number, as we shall also make clear in another chapter.

It is said that paradise has eight levels and the fires [of hell] seven gates,²¹⁶ and we have explained the truth of this in the epistle on the resurrection and the day of judgement [Epistle 38].²¹⁷

If you consider existing things in this way, dear brother, may He aid you, and examine the conditions of living beings, you will find many things that are twofold, threefold, fourfold, fivefold, sixfold, sevenfold, eightfold, ninefold, tenfold, and so on. By mentioning eightfold things we wished to arouse you from the slumber of forgetfulness. You should know who the Seveners are, obsessed with expatiating on sevenfold

we have it yields eight positions readily enough, for each of the last three of the five listed implies two positions.

210 See P. Kunitzsch, 'al-Nudjūm', *EI2*, vol. 8, p. 97; and also Susanne Diwald, *Arabische Philosophie und Wissenschaft in der Enzyklopädie. Kitāb Iḥwān aṣ-ṣafā' (III). Die Lehre von Seele und Intellekt* (Wiesbaden: Otto Harrassowitz, 1975), pp. 115–116. These terms define the angle between two bodies: trine 120°, quartile 90°, and sextile 60° (which complement the 180° between *markaz* and *muqābala*).

211 See the discussion of *sabab* in Andrew Rippin, 'The Exegetical Genre *asbāb al-nuzūl*: a Bibliographical and Terminological Survey', *Bulletin of the School of Oriental and African Studies* 48 (1985), pp. 1–15.

212 As noted above (see note 199), 28 is the second perfect number.

213 That is, these are the letters that combine with the initial letter, the orthographic symbol of the sound itself, to form the names of the twenty-eight letters. Thus *ā* (with the values *ā* and ') appears in, e.g., *bā'*; *l* and *f* in *alif*; *y* (= *ī*) and *m* in *mīm*; *n* in 'ayn; *d* in *ṣād*; and *w* (= *ū*) in *nūn*.

214 See Chapter 7 above and also the Introduction, 5.2.

215 More properly, *ajnās* means 'genera', so one might have expected *alḥān*, as the reference must be to the rhythmic cycles discussed in Chapter 13 below. (The corresponding eight melodic modes are not discussed in the *risāla*.)

216 See Qur'an 15:44.

217 But there is no elucidation in Epistle 38 of the seven gates; we are informed, rather, that hell has many layers (*ṭabaqāt*). The reference to the seven gates alongside the catalogue of merits of 8 is not germane to the argument.

things, setting them above [all] others; their views are partial and their pronouncements incomplete. Similarly with the dualists as regard twofold things, the Christians with their trinitarianism, the scholars of the natural sciences [*ṭabī'īyyūn*] with sets of four, the Khurramiyya²¹⁸ with sets of five, and the Hindus and the Kayyāliyya²¹⁹ with their sets of nine. But this is not the way of our noble brethren, may God aid them and us with a spirit of His, wherever they may be; on the contrary, their views are rounded, their researches comprehensive, their knowledge encyclopaedic, and their insight all-embracing.

Let us return to our topic, and state that we have clarified, through what we have expounded, aspects of the construction of the lute, the number of its strings, the relationship between their respective thicknesses and thinnesses, the number of their frets, the method of mounting [*shadd*]²²⁰ them and the [intervallic] relationship between them,²²¹ according [to the principle] that the best-made artefacts, the most perfect combinations [*murakkabāt*], and outstanding compositions [*mu'allafāt*], are those in which the arrangement [*ta'lif*] of the parts and the organization of the structure [*tarkīb*] are perfectly proportioned. It is because of this that most listeners come to enjoy them and most people of intelligence approve their creation [p. 218] and use, and [it is because of this that] they are sung in the assemblies of kings and rulers.

218 The Khurramiyya was a movement, going back to Mazdak in the fifth century, associated in the early Islamic period with various sectarian uprisings and noted, if anything, for dualism; see Wilferd Madelung, 'Khurramiyya', *EI2*, vol. 5, p. 63. The association made here with 5 remains unclear. It is, however, repeated elsewhere; see S. Diwald, *Arabische Philosophie und Wissenschaft in der Enzyklopädie*, p. 102. Mention is also made in this parallel passage, despite the present encomium, of those concerned with music (*mūsīqīyyūn*) as having an exaggerated veneration for 8.

219 The Kayyāliyya were followers of Aḥmad ibn al-Kayyāl, a Sufi/Gnostic ninth-century philosopher; see al-Shahrastānī, *al-Milal wa'l-niḥal*, pp. 138–141; Diwald, *Arabische Philosophie und Wissenschaft*, p. 117; W. Madelung, 'al-Kayyāl', *EI2*, vol. 4, p. 847.

220 An alternative translation would be 'tensioning', 'tuning' (see note 194 above), which is in any case a prerequisite for (and is therefore implied by) the next statement.

221 Four manuscripts add here, 'and the number of notes played on its strings, either open or stopped, and the [intervallic] relationship[s] between them'. It is likely that this is a later amplification, as it does not appear in either ع or ف, although it does in ط.

Chapter 10

Another perfect, well-structured product is the art of language and speech. That is, the best utterance is that which is clear and effective (fol. 52a), and the most perfectly effective is that which is eloquent, and the supremely eloquent is that which has metre and rhyme; the most enjoyable metred verse is that which is regular and without prosodic variations,²²² and the verse without prosodic variations is that in which the long and short syllables follow a regularly recurring pattern.²²³

Examples of such [patterns] are the metres *ṭawīl*, *madīd*, and *basīṭ*, each of which is compounded from eight prosodic feet, namely:

◡ - - / ◡ - - - / ◡ - - / ◡ - - - /
 ◡ - - / ◡ - - - / ◡ - - / ◡ - - - /²²⁴

and these eight are compounded from twelve long syllables [*sabab*] and

222 As noted above (Chapter 7, note 91), *ziḥāfāt* deviate from the full form of the metre, but are considered allowable variations rather than defects. They consist, specifically, of reductions (of a long to a short syllable or of two shorts to a long) within any foot of the hemistich save the last.

223 This is a free rendering of the more literal, 'its quiescent letters [*ḥurūf sākina*] and their durations [i.e., the long syllables] are corresponding [*munāsiba*] to its moving letters [*ḥurūf mutaharrikāt*] and their durations [i.e., the short syllables]'. For these terms and the rudiments of prosody, see the Introduction, 5.2 (also 5.5). There is no explicit reference here to the vital notion of a recurring pattern, but something of the kind may be thought to be implied by the notion of correspondence.

224 These are expressed as:

fa'ūlun mafā'ilun fa'ūlun mafā'ilun
fa'ūlun mafā'ilun fa'ūlun mafā'ilun.

The particular set of prosodic feet given here is that of a complete line of the *ṭawīl* metre (consisting of two identical, and here superimposed, half-lines). The other two metres named begin at different points within the same recurring pattern of long and short syllables. The starting point of *madīd* is at the third syllable, with *basīṭ* at the sixth (both marked by /):

◡ - / - ◡ - / - - ◡ - - -
ṭawīl *fa'ūlun mafā'ilun fa'ūlun mafā'ilun*
madīd *fā'ilātun fā'ilun fā'ilātun*
basīṭ *mustaf'ilun fā'ilun mustaf'ilun fā'ilun*

It is hardly fortuitous that the exposition should begin with these three metres, which are those occupying the first of Aḥmad ibn Khalīl's circles.

eight short + long syllable pairs [*watid*].²²⁵ In all, they are made up of forty-eight letters, twenty of which are syllable-final, and twenty-eight syllable-initial.²²⁶

Each hemistich is made up of twenty-four letters, ten syllable-final and fourteen syllable-initial. The half hemistich, or quarter line, is made up of twelve letters, five syllable-final and seven syllable-initial. The relationship of the five to the seven in the quarter line is like the relationship of the ten to the fourteen in the hemistich and the twenty to the twenty-eight in the whole line.

Similarly with the structure of the metres *wāfir* and *kāmil*. Each of these is compounded from six prosodic feet, namely:

$\cup - - - / \cup - - - / \cup - - -$
 $\cup - - - / \cup - - - / \cup - - -$ ²²⁷

([i.e., 'cup - - -'] six times).²²⁸ The relationship of syllable-final letters to syllable-initial letters in one third of the line [6:8] is like the relationship of syllable-final to syllable-initial letters in a hemistich and like the relationship of syllable-final to syllable-initial letters in a whole line. This is an example of the structural principle that applies in every line

225 That is, using standard prosodic elements to analyse each foot into an initial $\cup$ – (*watid*) followed by either – (*sabab*) or – – (two *sababs*).

226 Each symbol ($\cup$ and –) represents a syllable. There are twenty-eight syllables, and a syllable is, by definition, consonant-initial. In a short syllable, the script represents only the initial consonant, while a long syllable is written with two letters, the second representing the syllable-final element, which may be, phonologically, either a consonant or a long vowel.

227 These are expressed as:

mafā'ilun mafā'ilun mafā'ilun
mafā'ilun mafā'ilun mafā'ilun.

228 Similarly, the particular set of prosodic feet given here is that of a complete line of the *wāfir* metre, while the *kāmil* metre begins at a different point (syllable three, marked /) within the same recurring pattern of long and short syllables. The structure of the hemistichs of these two metres (with // marking the end of *wāfir*) is:

$\cup - / - - \cup - - - \cup - - - // \cup -$
wāfir *mafā'ilun mafā'ilun mafā'ilun*
kāmil *mustaf'ilun mustaf'ilun mustaf'ilun*

(These two metres are usually given in a form with two short syllables in place of one of the three longs, the *wāfir* foot becoming $\cup - \cup - \cup -$ *mufā'alatun* and the *kāmil* foot $\cup - \cup - \cup -$ *mutafā'ilun*.)

of verse when it is free of prosodic deviations, whether divided into two, four, or six parts. The same holds for the durations between [their elements]. It may be represented thus: [p. 219]

١ ٥ ١ ٥ ١ ٥ ٥

[this is repeated six times, forming the circumference of a circle running counter-clockwise]

(The symbol ‘٥’ represents the syllable-initial letters and the symbol ‘١’, the syllable-final letters.)

We have also demonstrated through this example that the best-formed products and the most perfect combinations are those in which the conjunction of the parts and the structural basis both accord with the proportional ideal.²²⁹

Another example of this is provided by calligraphy, the most noble of the arts, that in which, with its many forms and varied styles, ministers, scribes, and cultured courtiers all take pride. This is because every people has a script which differs from those of the others — for example, Arabic, Persian, Syriac, Hebrew, Latin, Greek, Indian,²³⁰ etc., the total being known only to God, who created them with their varied tongues, colours, natures, characters, arts, sciences, and fields of knowledge — all this by His extensive knowledge, His effective will, and His perfect (fol. 52b) wisdom, glory and praise be unto Him.

229 Three manuscripts add a further ponderous gloss: ‘This is just as we have explained through both elucidation and exemplification in this diagram, in order to make it more comprehensible to those learning and studying it and pondering its meanings with clarity of mind, thoughtfulness, perspicacity, and reflection.’

230 Exactly which scripts are to be understood is not quite clear. By ‘Persian’ it is possible that Pahlavi is meant (and one manuscript even has *fahlawiyya* in place of *fārisiyya*). By *rūmiyya* would normally be understood ‘Byzantine’, i.e., Greek, but given the inclusion of *yūnāniyya* it presumably refers rather to the Latin script. The following examples make it clear that the reference to *hindiyya* relates not to Devanagari script but to numerals. However, for the alphabets they provide no help; only Hebrew and, to a lesser degree, Syriac appear in some manuscripts in more or less recognizable form. For the others we have, in the main, either regular or distorted Arabic letters or nothing at all.

In this chapter we wish to mention the fundamental structure of letters, the way their [elements] are combined, the measure of their dimensions, and the ideal proportions of their shapes. We may state that the foundation of the letters of scripts, for whichever language they have been devised, to whichever nation they belong, with whichever form of pen they have been written or with whichever kind of engraving they have been formed, and however many they may be, is based in every case on the straight line which is the diameter of a circle and the curved line which is its circumference. All letters, then, are compounded from these two and composed in the way we have elucidated in the epistle on geometry, which introduces this science [*handasa*].²³¹

With regard to what we have stated, let us give an explanatory example taken from the letters of the Arabic script, to provide proof of the veracity of our claim and of the truth of our characterization of the letters as being all derived from straight and curved lines, one being the diameter of a circle and the other its circumference. They are [as follows]:²³²

ا ب ت ث ج ح خ د ذ ر ز س ش ص ض ط ظ ع غ ف ق ك ل م ن ه و ي

Now, if you look [closely], dear brother, may God aid you with a spirit of His, consider, and reflect, you will find that some of these letters, for example, ت, ب, ا, and ث are straight lines,²³³ and some [p. 220], for example, د, ز, and ن are curved, while others are combinations of the two, for example, خ, ح, ج, etc. The letters of the scripts of all other nations will be found to be analogous. For example, the Indian [numerals]:

٩ ٨ ٧ ٦ ٥ ٤ ٣ ٢ ١

and similarly Syriac [script], and Hebrew:

231 The word *handasa* seems to be synonymous with the *jūmiṭriyā* ('geometry') of the epistle title.

232 Five manuscripts, including ع and ا, add 'ل' to the following list. But as the Ikhwān insist elsewhere that the alphabet consists of twenty-eight letters, this must be a later interpolation.

233 After the first letter, a straight vertical stroke, the shape of the remaining three is deemed to consist of a straight horizontal stroke between the initial and terminal upward turns and not, as in the modern typeface used here, of a slight curve.

כב ג ו ס ו נ ע ל ח ט י כ ל מ נ ס ע פ צ ק ר ש ת²³⁴

א ב ג ד ה ו ז ח ט י כ ל מ נ ס ע פ צ ק ר ש ת²³⁵

Now that we have demonstrated with the above that all letters and scripts are derived from a straight line which is the diameter of a circle and a curved line which is its circumference, we wish, further, to demonstrate that the most excellent of scripts, the soundest style of writing, and the best composed is that in which the measurement of the letters relative to each other stands in the most perfect proportion. Let us first quote the practitioners of this craft, that is, the craft of penmanship, in order to give a stronger justification [for this] and a clearer demonstration, leading to a more secure analogical rule.

The skilful scribe and geometer²³⁶ has said that he who wishes to have an excellent hand and a correct style should give it a basic measure [*aṣl*], according to which his letters are constructed, and a standard [*qānūn*], to which his strokes are correlated.²³⁷ An example of this in the Arabic script would be first to assign an arbitrary unit of measurement to the letter **ل**, making its width in the proportion of one eighth of its length, then to make **ل** the diameter of a circle. The remaining letters are then structured in proportion to the length of **ل** and to the circumference of the circle to the diameter of which **ل** is equal.

Accordingly, the length of each one of **ت**, **ب**, (fol. 53a) and **ث** is made equal to that of **ل**, with their initial and terminal upward turns

234 Only **ل** makes a serious effort at reproducing the Syriac (Estrangelo) script. The others use Arabic letters and numbers, some distorted.

235 Similar distortions and substitutions affect the representation of the Hebrew alphabet in the manuscripts.

236 The Arabic reads, '*al-muḥarrir al-ḥādhiq al-muhandis*'. It is only in relation to calligraphy that this phrase appears, and if, as seems likely, the Ikhwān are relaying a statement attributed to a specific individual, one might think it a particularly apposite characterization of Ibn Muqla (886–940), an outstanding scribe who was at the same time the formulator of an innovative geometric armature for the cursive script types that would, in manuscripts, oust the earlier angular forms collectively termed Kufic. It may be added that when the phrase reappears it again introduces a summary statement of structural principles attributed to a figure of evident authority.

237 The two phrases are fundamentally equivalent, providing stylistic balance rather than further information.

being one eighth of ا [in length]. For each of ح , ج , and خ the [horizontal] extension at the top is made half of ا , and the curvature downwards, half of the circumference of the circle to the diameter of which ا is equal. Then each one of د and ذ is made equal to ا when it is curved. Then each one of ر and ز is made equal to a quarter of the circumference of the circle. Then the upward points of each one of س and ش are made equal to one eighth of ا [in length], and their extent downwards, equal to half the circumference of the circle. Then the forward extension of each one of ص and ض is made equal to the length of ا ; their aperture, the amount of one eighth of ا ; and their extent downwards, equal to half the circumference of the above-mentioned circle. Then the length of each one of ط and ظ is made equal to the length of ا , their aperture equal to one eighth of ا , and their vertical strokes equal to ا . Then the curvature of the upper part of each one of ع and غ is made one quarter of the circumference of the circle, and the curvature downwards is made equal to half the circumference of the circle. Then the forward extent of ف [p. 221] is made equal to the length of ا , and its aperture, one eighth of ا . Its circle and those of ق , و , م , and ه are all equivalent to one third of ا turned into a circle; and the downward extent of ق is made equal to half the circumference of the circle. Then the forward extent of ك is made equal to the length of ا ; its aperture, one eighth of ا ; and its angled line above, one quarter of ا .²³⁸ Then the length of ل is made the same as that of ا , and its forward extent, one half of ا .²³⁹ Then the downward extent of each of م and و is made equal to the curvature of ر and ز . Then the curvature of ن is made equal to half the circumference of the circle to the diameter of which ا is equal. Then ي is made equal to

238 This description is best understood not to relate, as with the other letters, to a final/independent form similar to the later Naskh, in this case 'ك', but to the Kufic equivalent. The *kisra* ('fragment, broken off piece') would then designate the upper part, which is written with a second, separate stroke. The first stroke would be the lower rotated U-shape, with the two horizontal sides parallel, like □, and it is to the gap between them that the term 'aperture' (*futha*) relates.

239 In relation to the modern independent form (ل), one would have expected a reference to the downward curvature being equivalent to half of the circumference of the circle, so that what is referred to here is the alternative written form with a flat final stroke.

و and its extension backwards equal to the length of ل, and its curvature downwards equal to half the circle.²⁴⁰

What we have enunciated about the proportions of the letters and the measures of their dimensions relative to one another is determined by the laws of geometry and ideal proportions. However, what is generally acknowledged by people and approved by scribes is not congruent with the measures and proportions we have enunciated because, according to function, they have selective preferences,²⁴¹ as determined by long experience and force of habit.

Now that the measures of the letters and the magnitude of their lengths have become clear, given what we have stated about the essence of noble proportions, we wish to add something about the nature of their forms, the drawing of their shapes, and the manner in which they are conjoined, according to the requirements of analogy and rule, in geometric fashion.

[p. 222] You should know, dear brother, may God aid you and us with a spirit of His, that the forms of the letters (fol. 53b) of scripts are multifarious and of different kinds, as has been mentioned above, and they accord with the functions and selections agreed on by master scribes, for reasons that it would take too long to explain. However, we may make an abbreviated statement in three propositions, based upon the laws of geometry and the analogical method of philosophy, as stipulated by the skilful scribe and geometer, who has said that the forms of all letters, to whichever community²⁴² they belong, in whichever language they are expressed, and with whichever type of pen they are drawn, must follow the norms of curvature and inclination — except for the ل in the Arabic script; the thickness of the letters must follow the norms of rotation;²⁴³ and when they are put together, the changes of direction must all follow the norms of being angled or rounded.

240 The description seems to be related to the alternative final form of س which is precisely that illustrated in ع, the one manuscript to provide exemplification.

241 This renders 'bi-ḥasab mawḍū'ātihim', implying that scribes will choose a style of composition (from very informal to highly formal) appropriate to the subject matter and purpose of the document in question, and will vary the hand accordingly.

242 The use of *umma* here might reflect awareness of the close relationship between religious affiliation and script.

243 The reference is presumably to the differences in thickness caused by maintaining

This is what has been said by the practitioners of this art concerning the calculation and the proportions of the individual letters. When they are combined and joined together, they may sometimes alter and change but in ways that would be too long to elucidate, although, when teaching calligraphy, the master scribe must dwell on such features.

Given what we have said, it has become evident that the things that are the most wisely produced, the most perfectly arranged, and the best composed are those where the arrangement of the structure and the composition of the parts accord with the ideal proportion.

You should know, dear brother, that the ideal proportion, as we have explained before, consists of the ratios [2:]1, 3:2, 4:3, 5:4, and 9:8.²⁴⁴ This is further exemplified by the human form and the structure of its frame. Thus the Creator, exalted be His name, has made the height proportionate to the width of the body; the width of the body, proportionate to depth of its internal cavity; the length of the forearms, proportionate to the length of the shins; the length of the upper arms, proportionate to the length of the thighs; the length of the neck, proportionate to the length of the spine; the size of the head, proportionate to the size of the body; the circumference²⁴⁵ of the face, proportionate to the width of the chest; the shape of the eyes, proportionate to the shape of the mouth; the length of the nose, proportionate to the width of the forehead; the size of the ears, proportionate to the measure of the cheeks [p. 223]; the length of the fingers, proportionate to the toes; the length of the intestines, proportionate to the length of the jugular veins; the cavity of the stomach, proportionate to the size of the liver; the volume of the heart, proportionate to the size of the lung; the shape of the spleen, proportionate to the shape

the angle of the nib unchanged as it goes round a curve.

244 The absence of 6:5, 7:6, and 8:7 from this series is readily explained; none of them corresponds to an interval within the Pythagorean scale produced by the lute fretting. But then neither does 5:4, therefore its inclusion, if not an inadvertent but natural addition, might be thought to relate to some of the following proportions given for the human anatomy; see above, Chapter 8, note 153. The first set of relationships, however, is not quantified, and although a 5:4 relationship is present in the second set (the relationship of height + extended arm above to height = 10:8), it slips by without comment.

245 The term used here is *istidāra* rather than the standard '*muḥīṭ al-dā'ira*', but there seems to be no difference in meaning in this context.

of the stomach;²⁴⁶ the width of the throat, proportionate to the size of the lung; the length and thickness of the limbs, proportionate to the size of the bones; the length and curvature of the ribs proportionate to the rib-cage;²⁴⁷ and the length and width of the veins proportionate to the distance between the sections of the body.

In this way, when every part of the human body is carefully considered, it will be found to be in a certain proportion to the body as a whole and to have another proportion in relation to each individual part, (fol. 54a) knowledge of the true nature of which belongs solely to God Almighty, who created it and gave it form as and how He wished. As God, majestic is His bounty, has stated, *We create man in the finest state*,²⁴⁸ and, further, *He created you, shaped you, proportioned you, in whatever form He chose*.²⁴⁹

Chapter 11

You should know, dear brother, may God aid you and us with a spirit of His, that when the sperm in the womb is unaffected by the harm that may come to it there from defects of the humours, alterations of temperament [*mizāj*], or inauspicious astrological conjunctions, both at the moment of conception and month by month during the early stages [of pregnancy], and when the body is completely developed and reaches its final form, as we have explained in an[other] epistle of ours [Epistle 25],²⁵⁰ the child emerges from the womb physically sound and perfectly formed. It will have a height of eight of its hand-spans [*shibr*]; two hand-spans from its knee-caps to the soles of its feet; two hand-spans from its knees to its groin; two hand-spans from its groin to the top of the heart; two hand-spans from the top of the heart to the parting.

246 'Stomach' (*ma'ida*) is the reading of ع and ل, whereas the other manuscripts have 'liver' (*kabid*). Either, presumably, would do.

247 This is even more uncomfortably tautological than the previous entry, but the only variant is the unhelpful '*ṣundūq ṣahriḥ*' ('back cage') in ع.

248 Qur'an 95:4.

249 Qur'an 82:7–8.

250 Epistle 25 deals with conception and the stages of pregnancy, importance being attached to varying astrological influences during the successive months.

When it opens its hands and stretches [its arms] right and left like a bird stretching its wings, the distance from the finger-tips of the right hand to those of the left will be found to be eight hand-spans, [p. 224] the half-way point being reached at the clavicle,²⁵¹ and the quarter, at the elbow.

When it stretches its hand out above its head, and a pair of compasses with one point on its navel is extended to its fingertips, and a circle is described to the tips of its toes, the distance between them will be equal to ten hand-spans — a quarter more than its height.²⁵²

The length of its face from the point of its chin to the onset of hair above its forehead will be found to be a hand-span and an eighth; the distance between its ears will be found to be a hand-span and a quarter; the length of its nose will be found to be a quarter of a hand-span; the length of each of the apertures of its eyes will be found to be an eighth of a hand-span; and the length of its forehead, a third of the length of its face; the length of the aperture of the mouth and each lip will be found to be equal to the length of the nose; the length of each foot will be found to be a hand-span and a quarter; and the length of the hand from the base of the wrist to the tip of the middle finger, a hand-span; the length of its thumb and little finger will be found to be equal; the tip of the ring finger is one eighth of a hand-span longer than that of the little finger; the same difference occurs between the middle and the ring finger and also [between the middle finger and] the first finger; the width of its chest will be found to be a hand-span and a half; the distance between its nipples, a hand-span; the distance from its navel to its genitals, a hand-span; and from the top of its heart to its clavicle, a hand-span; and the distance between its shoulders will be found to be two hand-spans.

On the same basis, when one considers the length of the intestine and gut, of the blood vessels of the body, of the sinews that adhere to the bones and the tendons of the joints, it will be found, according to this

251 To be understood is the inner end of the clavicle, although, to be pedantic, this is still not quite the centre, which is properly on the vertical throat to breast-bone axis, so that one would have expected here *nahr* rather than *tarquwa*.

252 As noted above, the comparison with the Leonardo da Vinci drawing of Vitruvian man is irresistible. See the Introduction, 3.2.2.

model, that they are proportionate to one another in length, thickness, and depth in the same way as we have described for the measurements of the (fol. 54b) external parts. According to this model, and by analogy, the anatomical structure [*binya*] of all animals will be found to be proportionate; the parts of every form of every species [*naw'*] [are proportionate] to its body as a whole and [also] proportionate to each other, either quantitatively, qualitatively, or both, being in no way deficient if they are unaffected by the harm that may come to them at conception and during gestation from the defects of the humours, alterations of temperament, [p. 225] and inauspicious astrological conjunctions. And it is according to the same analogy and model that skilled artists produce their artefacts, whether shaped, sculpted, or painted, so as to be proportionate to one another in construction, composition, and arrangement, in all these respects emulating the work of the Creator, exalted be His name, and imitating His wisdom, just as it has been stated in defining philosophy that it is an imitation of the deity to the extent that human faculties allow.

Chapter 12

You should know, dear brother, may God aid you and us with a spirit of His, through considering the examples mentioned above in these chapters which demonstrate that the best-made artefact, the most masterly construction, and the most beautiful composition is that in which perfect proportion determines the form of its structure and, likewise, the composition of its parts, that they provide an analogy and a demonstration to every reflective, intelligent thinker that the structure of the celestial spheres and their heavenly bodies, the dimensions of their parts, the measures of the elements, and what is derived from them are also placed in relation to each other according to the most perfect proportion, and likewise the order of the distances of these spheres and stars, with their motions corresponding to one another [*mutanāsib*] and being set according to the most perfect proportion; and that these corresponding motions engender delightful, pleasing,

harmonious²⁵³ tones, as we have explained in relation to the motions and tones of the strings of the lute. If a person of intelligence ponders and considers [the matter] it will thereupon become clear to him and he will know that they have a creator who has made them and a skilled artificer who has constructed them and a benign composer who has organized them. He will be convinced of this, and there will be an end to the deluded suspicions which beset the erring mind of many a sceptic; doubts will be allayed and the truth will be evident; and he will also know and see clearly that from the movements of these bodies and the tones they produce, their inhabitants experience pleasure and delight, just as the inhabitants of this world experience pleasure and delight from the tones of the lute strings, whereupon their souls yearn to ascend [to the world above] in order to listen to these [harmonies] and to gaze upon these [movements], just as the soul of Hermes [p. 226] Trismegistus ascended and saw — he who is Idris the prophet, peace be upon him, referred to in His words *We raised him to a high position*²⁵⁴ — and just as the soul of the sage Pythagoras heard, after it had been purified of its base physical desires and refined by spiritual thought and arithmetical, geometrical, and musical mathematics.

So strive, dear brother, may God aid you and us with a spirit of His, to purify your soul and free it from the sea of matter, the fetters of nature, and the enslavement of physical appetites; (fol. 55a) do as the wise have done, for the substance of your soul partakes of the substances of theirs, and act according to the prescriptions of the books of the prophets, peace be upon them. Purify your soul of that which is morally bad, of corrupt ideas, of accumulated folly, and evil acts, for it is such characteristics that prevent it from ascending there after death, as God, exalted be He, has enunciated: *The gates of heaven will not be open to them; even if a thick rope were to pass through the eye of a needle they would not enter the Garden.*²⁵⁵

253 This is a slightly different rendering of *mutanāsib*. Some manuscripts add also *muttazin*, suggesting a balanced, proportionate temporal relationship.

254 Qur'an 19:57. Idris is stated in the Qur'an to be a prophet and is later identified either as Enoch or as Hermes. See G. Vajda, 'Idris', *EI2*, vol. 3, pp. 1030–1031.

255 Qur'an 7:40. This echoes the New Testament, 'It is easier for a camel to go through the eye of a needle than for a rich person to enter the Kingdom of God.' (Mark 10:25 and Luke 18:25), and, as there, the usual understanding

You should know that the substance of your soul comes from the celestial sphere; it descended at the time of conception, as we have explained in one of our epistles [Epistle 25], and it will return there after death, which marks its separation from the body, just as the body is of dust and will return to dust after death.

You should know, dear brother, that this terrestrial life, for the souls that are incarnated until the moment of separation that is death, is comparable to the time the foetus spends in the womb from the moment of conception until birth.

You should know that death is nothing other than the soul's departure from the body, just as birth is nothing other than the foetus' departure from the womb, as Jesus, peace be upon him, said, 'whoever is not born twice shall not ascend to the kingdom of heaven'²⁵⁶ and as God, praised be He, has said, concerning the attributes of the inhabitants of paradise, *After the one death they will taste death no more*,²⁵⁷ which is the departure of the soul [p. 227] from the body a single time according to the above-mentioned condition. These are the blessed ones to whom He referred when saying, *They will say, 'Praise be to God, who guided us to this: had God not guided us, We would never have found the way.'*²⁵⁸ As for the damned, they are those who desire to return to this world and to cleave to their bodies once more; but they will taste death once more, as God, exalted be He, has stated, quoting them, *They will say, 'Our Lord, twice You have caused us to be lifeless and twice You have brought us to life. Now we recognize our sins. Is there any way out?'*²⁵⁹ May God protect you and us, and all our brethren, wherever they may be;²⁶⁰ He is merciful to those who serve Him.

of the term *jamal* is 'camel'. The present translation prefers an alternative interpretation, usually associated with the reading *jummal*, which means 'thick rope' or 'hawser'.

256 A reflex of John 3:3: '[Verily, verily I say unto thee:] Except a man be born again, he cannot see the kingdom of God'.

257 Qur'an 44:56.

258 Qur'an 7:43.

259 Qur'an 40:11.

260 Implied here is 'from such a fate'. The thought is, indeed, made explicit in ١ and ف, with the phrase '*min ḥāl ḥādhih al-ṭā'ifa*', 'from the plight of this [doomed] group'.

Chapter 13

Let us return to the rules of the Arab rhythms [*alḥān*]²⁶¹ that we had promised to discuss. We can state that Arab song and its rhythms have eight fundamental structures [*qawānīn*] that are like its species [*ajnās*]; everything is derived [*yatafarra*'] from them, and the remaining [manifestations] are traced back [*yunsab*] to them, in the same way that in poetry there are eight feet [*maqāṭi'*] — all the prosodic cycles [*dawā'ir*] and the metres [*anwā'*] they contain are compounded [*yatarakkab*] from them, and the remaining [manifestations] are traced back to them, being assessed by analogy [*yuqās*] with them,²⁶² as is stated in treatises on prosody and commentaries on them.²⁶³

Of the eight which are the fundamentals [*qawānīn*] of Arab song, the first is the first heavy [*thaqīl awwal*]; then the light of the heavy [*khafīf al-thaqīl*]; then the second heavy [*thaqīl thānī*]; then its [corresponding] light [*khafīfuh*]; then *ramal*; then the light of *ramal* [*khafīf al-ramal*]; then the light of the light [*khafīf al-khafīf*]; then *hazaj*.²⁶⁴ These eight are like species [*ajnās*], and the remainder are like (fol. 55b) subtypes [*anwā'*] that branch off from them and are subsumed by them.

The first heavy consists of nine attacks [*naqārāt*]:²⁶⁵ three consecutive

261 The context here clearly brings the rhythmic dimension of *lahn/alḥān* to the fore. The other authority to use *alḥān* for rhythmic cycles is Saadiyah Gaon; see Farmer, *Sa'adya Gaon*, p. 29. It is worth noting the repeated qualification that the phenomena to be discussed relate to Arab music, and the point is emphasized after the exposition of the individual cycles, where it is stated that other musical traditions have different rules. This is a theme that recurs in later theoretical writing: Šafi al-Dīn al-Urmawī (d. 1294), for example, is equally explicit, stating that the main set of rhythms he describes are those used by the Arabs, and adding a further one specific to the Persians; *Kitāb al-Adwār*, pp. 143, 153; tr. in R. d'Erlanger, *La musique arabe*, vol. 3 (Paris: Geuthner, 1938), pp. 485, 513.

262 Taking here *bāqihā* to be the subject of both preceding verbs, i.e., construing the second as an insert, expanding the repetition.

263 This a condensed restatement of material discussed much more fully in Chapter 7. The reference to cycles, *dawā'ir*, is a recognition of the prosodic analyses of al-Khalil ibn Aḥmad. For rhythmic cycles, however, music theorists generally prefer the cognate *dawr* (pl. *adwār*) to *dā'ira* (pl. *dawā'ir*).

264 Whereas the previous list was perfectly symmetrical, the last two entries being *hazaj* and the light [counterpart] of *hazaj*, the present one is not. It is likely that the present asymmetry accords better with contemporary practice (see the Introduction, 5.3).

265 The following definitions are all couched in terms of *naqārāt*. The structure

[*mutawālī*] ones, one heavy isolated [*mufrad*] one followed by a pause [*sākin*],²⁶⁶ then five attacks following one which is suppressed [*wāhida maṭwiyya fī awwalihā*].²⁶⁷ It is like uttering

maf'ūlun maf mafā'ilun maf,

that is,

*tan tan tan tan tanan tan tan tan.*²⁶⁸

Then the pattern [*īqā'*] returns and is constantly repeated until the musician [*mūsīqār*] falls silent.

The second heavy consists of eleven attacks: three consecutive ones, then a pause [*naqra sākina*], [then another attack,]²⁶⁹ then one heavy one, then six attacks following a suppressed one [*fī awwalihā ṭayy*]. It is like uttering

maf'ūlun maf'ū mafā'ilun maf'ū,

or

tan tan tan tan tan tanan tan tan tan tan.

Then the pattern constantly returns.²⁷⁰

of the cycles is in some instances clear, but in others, as in the present case, not immediately obvious. The interpretative problems raised by the definition are best tackled in the context of the whole set, since this and the other longer cycles, where similar problems appear, are more efficiently examined together, and it is also helpful to consider them in the light of principles derivable from the shorter, simpler ones. Accordingly, rather than lengthy and rather repetitive footnotes for each, a general treatment of the topic is provided in the Introduction, 5.4–5.7, including separate discussions of each individual cycle (in this case, 5.4.5). These also deal with the relationship between the verbal definitions and those given by al-Kindī, to whose account of the rhythmic cycles the Ikhwān are indebted.

266 'Followed by a pause' renders *sākin*, the term applied to a letter not followed by a vowel.

267 The term *maṭwī* derives from the prosodic term *ṭayy* ('folding'), which refers to the substitution of a short value for a long. See the discussion in the Introduction, 5.4.4, where it is argued that the concomitant reduction is to be understood not as the omission of the first of the attacks mentioned but as the omission of an attack from a preceding time unit.

268 The mnemonic representation seems to point to a total number of time units different from that suggested by the verbal definition. This is a recurring problem, alluded to in the discussions of the individual cycles in the Introduction, and examined more particularly in 5.5.

269 The reasons for this emendation are put forward in the Introduction, 5.4.6.

270 This cycle is discussed in the Introduction, 5.4.6.

The light [counterpart] of the first heavy consists of seven attacks: [p. 228] two consecutive ones between which there is no time for an[other] attack, then a heavy isolated one, then four attacks following a suppressed one. It is like uttering

mufā‘i lun mutafā‘i lun,

or

tanān tanān tanātan tanān.

It is constantly repeated until the musician falls silent. Our contemporaries call this rhythm *mākhūrī*.²⁷¹ It is like the call of the ring-dove: *kukū kukū kukukū kukū*.

The light [counterpart] of the second heavy consists of three consecutive attacks between which there is no time for an[other] attack, but between each [group of] three attacks and the next is the time of an attack. It is like uttering

fā‘ilun fā‘ilun,

or

*tanānan tanānan.*²⁷²

It is constantly repeated until the singer [*mughannī*]²⁷³ falls silent.

Ramal is the reverse [‘aks] of *mākhūrī*, that is, it likewise consists of seven attacks but begins with an isolated heavy one, followed by two consecutive ones between which there is no time for an[other] attack, then four attacks, each two of which are consecutive, with no time for an[other] attack between them.²⁷⁴ It is like uttering

fā‘ilun mufā‘ilun,

271 The name relates this rhythm to the wine-tavern (*mākhūr*). It is discussed in the Introduction, 5.4.4.

272 This is one of the more straightforward definitions, yielding a cycle of four time units which the prosodic and rhythmic articulations give twice. This cycle is discussed in the Introduction, 5.4.2.

273 It is unlikely that any importance should be attached to the substitution here of *mughannī* in place of the previous *mūsīqār*.

274 Ibn Hindī has ‘four attacks, each two o’ which are consecutive, with between the two the time of an attack’ which, if understood to mean that the two pairs are separated by a pause of one time unit, gives a clearer and more precise account of the situation.

or

tan tanan tanan tanan,

like the call of the francolin: *kay kakay kakay kakay*.²⁷⁵

The light [counterpart] of *ramal* consists of three consecutive attacks.²⁷⁶ It is like uttering

mutafā'ilatun,

or

tananan tananan.²⁷⁷

The light [counterpart] of the light consists of two consecutive attacks between which there is no time for an[other] attack, but between each successive pair there is the time of an attack. It is like uttering

mufā'ilun mufā'ilun,

or

tanan tanan tanan tanan.²⁷⁸

*Hazaj*²⁷⁹ consists of a soft attack [*naqra musakkana*]²⁸⁰ and another [even] lighter [*akhaff*] one, with[out] the time of an attack between

275 Whereas the previous cycle names are peculiar to music, *ramal* is also the name of a poetic metre. But whatever might be conjectured about earlier links, by the ninth century, if not before, no structural overlap can be detected. The metre is based upon the foot – ◡ – – (*fā'ilātun*). The cycle is discussed in the Introduction, 5.4.7.

276 It is peculiar to this cycle that the attacks are qualified as *mutaḥarrikāt*, especially as it is not contrasted with another term (in the emendation proposed above for the second heavy, *mutaḥarrik* counters the preceding *sākin*). Since every attack is automatically followed by a duration (*ḥaraka*), the term *mutaḥarrik* (= ' + duration') here may in fact be redundant. If not, we may refer to the primary sense of *taḥarrak* ('to move') and possibly read into it the suggestion of a characteristically fast tempo.

277 Here the verbal definition is terse; it says nothing about pauses and mentions only three consecutive attacks. The manuscripts are far from unanimous on the mnemonic definitions, and that offered by Ibn Hindī (see Neubauer, *Arabische Musiktheorie*, p. 325), *mufā'ilun*, is unhelpful. They appear, however, to offer a (repeated) cycle of four time units. This cycle is discussed in the Introduction, 5.4.3.

278 The verbal definition is almost identical with that given by al-Kindī, and corresponds to a cycle consisting of three time units, given four times over in the mnemonic definitions. This cycle is discussed in the Introduction, 5.4.1.

279 As with *ramal*, *hazaj* is also the name of a poetic metre (based upon the foot ◡ – – – *mufā'ilun*).

280 Several manuscripts have the more straightforward-sounding *sākina*.

them; and between each successive pair there is the time of two attacks.
It is like uttering

fā'ilun fā'ilun,

or

tan tanan tan tanan.

These are the eight genera which we have stated to be the fundamental matrices [*aṣl wa-qawānīn*] of all Arab song. The songs and rhythms of non-Arab [musics], such as Persian, Byzantine, and Greek,²⁸¹ have other matrices that differ from these, but despite their multiplicity of genera [*ajnās*] and variety of types [*funūn anwā'ihā*], none of them dispenses with the basic principles that we have mentioned before this chapter. If you ponder and consider well, dear [p. 229] brother, you will find what we have stated to be correct, and you will recognize the truth of what we have described.

(fol. 56a)

Chapter 14

You should know, dear brother, may God aid you and us with a spirit of His, that God, majestic is His bounty, through the dictates of His wisdom, has made both the natural phenomena that are subject to being and decay and the causes and reasons that occasion their existence to be mostly fourfold. Some are in opposition to each other [*mutaḍādd*], others concordant [*mutashākil*], according to the precision of their creation and the perfection of [the divine] wisdom [that underlies them],²⁸² knowledge of the essence of which none of His creatures can

Reasons for preferring the less usual *musakkana* (which is also the reading of Ibn Hindī), and for suggesting an emendation to the text, are given in the Introduction, 5.4.8.

281 What seems to be a distinction between (contemporary) Byzantine and (ancient) Greek is almost certainly illusory, in the sense that it can hardly reflect awareness of Greek theoretical literature; the reference to 'Greek' is a gesture, a mark of cultural reverence for the classical tradition of learning.

282 The phonological and semantic echoes of these two phrases ('*iḥkām al-ṣan'a*', '*itqān al-ḥikma*') overlap and reinforce each other; divine wisdom is inherent in their creation.

attain — only He who has created, originated, occasioned, combined, and assembled them as He intends.

We wish to enumerate some of these opposed and concordant tetrads in order to alert those heedless spirits that have failed to consider them, to urge them to reflect and learn from them, and to aid those spirits searching for knowledge of their causes and seeking [to fathom] the wisdom they embody.

Among the most evident and obvious of tetrads are the four seasons into which the year is divided: spring, summer, autumn, and winter.²⁸³

Corresponding to spring, we have: of the zodiac, the section from the beginning of Aries to the end of Gemini; of the quarters of the celestial sphere, the eastern quarter that ascends [the ecliptic from the vernal equinox] to the turning point of the summer solstice [*watid al-samā'*];²⁸⁴ of the month, the first quarter: seven days from the beginning of the month; of the applications [*ittiṣālāt*] of the heavenly bodies, [the movement through] the left quadrant[, from east to north];²⁸⁵ of the elements, air; of the natures, heat and wetness; of the cardinal points, south;²⁸⁶ of the winds, the south; of the quarters

283 Obvious, because it is a given within the intellectual tradition. The characteristics of the seasons are given elsewhere; see Diwald, *Arabische Philosophie und Wissenschaft*, pp. 239–242. A useful tabular presentation of the whole range of associations (if with one or two differences of detail from what follows here) is given in the notes to Shiloah's French translation. The whole scheme is a reworking of material from al-Kindī's *Risāla fi ajzā' khubriyya fi'l-mūsīqī (Mu'allafāt al-Kindī al-mūsīqiyya)*, pp. 100–106, tr. in Farmer, 'Al-Kindī on the "êthos" of Rhythm, Colour and Perfume', pp. 29–38. The organization is broadly similar, with the one major difference that al-Kindī begins each section not with a season but with one of the strings.

284 Although freer, the translation is here indebted to Shiloah's French version, not only for its explication of the astrological technicalities but also for the valuable accompanying diagram. In astrology, *watid* ('peg') can refer to one of the four signs of the zodiac deemed to be more potent in influence but here designates points of transition, the sequence beginning from the spring equinox; Shiloah offers 'point culminant' and 'pivot'.

285 Dozy cites a gloss of *ittiṣāl* as 'conjunction', but the implication here appears to be that of an approaching movement, more akin, therefore, to the technical term 'application', which in astrology has the sense of 'the action of approaching'. Shiloah refines this further as 'mouvement tendant vers un aspect caractéristique qui est ici la quadrature'.

286 For al-Kindī, who does not include the cardinal points, it is the east wind.

of the day, the first six hours of the day-time; of the humours, blood; of the four ages of man, childhood; of the natural faculties [*quwā ṭabīʿiyya*], the digestive [*hāḍima*];²⁸⁷ of the mental faculties [*quwā ḥayawāniyya*],²⁸⁸ the imaginative [*mutakhayyila*]; of manifestations in action [*afʿāl zāhira*], joy, pleasure, and delight; of moral qualities [*akhlāq*], generosity, nobility, and justice. [p. 230] The sensibilia [*maḥsūsāt*] that also correspond to them include such things as the g string [*mathnā*] and its notes; and of rhythms, the *zīr-bamm*;²⁸⁹ of speech and poetry, panegyric; of tastes, sweet things; of colours, the moderately tinted, like the wall-flower; of scents, a perfume of musk and ambergris, violets, marjoram, and similar warm, gentle scents — in sum, all moderate tastes, scents, and colours.

Corresponding to summer-time, we have: of the quarters of the celestial sphere, the quarter that descends from the turning point of the summer solstice to that of the autumn equinox [*watid al-maghrib*]; of the zodiac, from the beginning of Cancer to the end of Virgo; of the quarters of the month, the second quarter, seven days; of the applications, that which goes beyond the left quadrant to the position opposite [*muqābala*] [the starting point]; of the elements, fire; of the natures, heat and dryness; of the cardinal points, east; of the winds, the east;²⁹⁰ of the quarters of the day, the six hours to the end of day-time; of the humours, yellow bile; of the four ages of man, young adulthood

287 The four faculties derive from the Galenic medical tradition; the digestive corresponds to Galen's retentive, one of the examples adduced being, precisely, the stomach, which retains food until digested.

288 The use of *ḥayawānī* here is perhaps unexpected (and to be noted is the substitution of *nafī* in ʾ), but the contrast with the previous entry is clear: al-Kindī expresses them as 'in the body' and 'in the head' respectively; see *Muʿallafāt al-Kindī al-musiḳiyya*, p. 101. Shehadi offers a literal 'animal powers'; see Fadlou Shehadi, *Philosophies of Music in Medieval Islam* (Leiden: Brill, 1997), p. 42. Shiloah, more appropriately, gives 'les facultés de l'âme'. Other possibilities might be 'intellect' or 'consciousness'.

289 Despite the fact that this startling juxtaposition of two of the string names is not recognized anywhere else as a rhythmic feature, the manuscripts are in general agreement (and none mentions a rhythmic cycle instead), and given that the tripartite division of the cycles established elsewhere is maintained by distributing them, at least by implication, over the other three blocks, there seems to be no pressing need for emendation. See the Introduction, 5.3.2.

290 For al-Kindī, this is the south wind.

[*shabāb*]; of the natural faculties, the attractive [*jādhiba*];²⁹¹ of the mental faculties (fol. 56b), the cogitative [*mufakkira*]; of moral qualities, bravery and liberality;²⁹² of manifestations in action, swiftness of movement, strength, and endurance. The sensibilia that correspond²⁹³ to them include such things as, the notes of the c' string [*zīr*]; and of rhythms, *mākhūri* and the like; of speech and poetry, corresponding panegyrics of warriors and citations of the brave;²⁹⁴ of tastes, spicy things [*hirrifāt*]; of colours, yellow and red; of scents, musk, jasmine, and the like — in sum, all hot and dry colours, tastes, and scents.

Corresponding to autumn-time, we have: of the quarters of the celestial sphere, the quarter that descends from the turning point of the autumn equinox to that of the winter solstice [*watid al-arḍ*]; of the zodiac, from the beginning of Libra to the end of Sagittarius; [p. 231] of the quarters of the month, the third quarter: the seven days after the mid-point; of the applications, from the opposite point to the right quadrant; of the elements, earth; of the natures, cold and dryness; of the cardinal points, west; of the winds, the west wind;²⁹⁵ of the quarters of the day, the six hours from nightfall to midnight; of the humours, black bile; of the four ages of man, maturity [*kuhūla*]; of the natural faculties, the retentive [*māsika*];²⁹⁶ of the mental faculties, memory [*dhākira*]; of moral qualities, virtuousness; of manifestations in action, deliberation and caution. The sensibilia that correspond to them include such things as the notes of the d string [*mathlath*]; and of rhythms, the heavy and suchlike; of speech and poetry, that which

291 For Galen, this has to do with nutrition; each part of the body attracts to it, through the veins, the appropriate nutrient.

292 Since generosity (here *sakhā'*; above, *jūd*) is such a core value, it is hardly surprising to find it in more than one set.

293 'Correspond' is an emendation by analogy with the remaining three seasons, all of which have *mushākila*. Here, however, we encounter in virtually all manuscripts *muqawwiya* ('reinforcing'), which, if not original, must be a very early scribal slip, in either case presumably being influenced by the preceding *quwwa* ('strength').

294 Again, since panegyric is such an important genre, there is nothing untoward in finding it, suitably qualified, in more than one set.

295 For al-Kindī, the north wind.

296 This corresponds even more directly than the previous 'digestive' to the Galenic retentive; the duplication is possibly to be explained by a degree of carelessness in filling a gap left by al-Kindī, who has no comparable entry in this set.

describes reason, composure, gravity, and sound judgement; of tastes, tartness; of colours, black and dusty [grey] and suchlike; of scents, rose, aloes, and similar cold, dry scents.

Corresponding to winter-time we have: of the quarters of the celestial sphere, the quarter that ascends from the winter solstice to the vernal equinox [*ufuq al-mashriq*];²⁹⁷ of the zodiac, from the beginning of Capricorn to the end of Pisces; of the quarters of the month, the last quarter: seven days; of the applications, the right quadrant; of the elements, water; of the natures, cold and wetness; of the cardinal points, north; of the winds, the north wind;²⁹⁸ of the quarters of the day, the second half of the night; of the humours, phlegm; [of the four ages of man, old age];²⁹⁹ of the natural faculties, the expulsive [*dāfi'a*];³⁰⁰ of the mental faculties, the recollective [*mutadhakkira*];³⁰¹ of moral qualities, forbearance and tolerance; of manifestations in action, ease in dealing with people and sociability. The sensibilia that correspond to them include such things as the notes of the A string [*bamm*]; and of rhythms, *hazaj* and *ramal*; of [p. 232] speech and poetry, that which praises liberality, nobility, justice, and good character; of tastes, rich and sweet dishes; of colours, green [to brown]; of scents, the scent of narcissus, gillyflower, water lily, and suchlike — in sum, all cold and wet colours, tastes, and scents.

By (fol. 57a) analogy with this model, dear brother, if you scrutinize the conditions of things occurring [*mawjūd*] in nature and consider the attributes of existing [*kā'in*] sensibilia,³⁰² you will find that they all fall into these four divisions, some concordant with each other, others

297 Literally, this means 'to the dawn horizon': the point at the far east where this annual traversal of the ecliptic begins.

298 For al-Kindī, the west wind.

299 Although absent from all manuscripts, logic requires the addition here of old age, *shaykhūkha*. It is included by al-Kindī.

300 For Galen, this is the opposite of the attractive faculty. It may, however, have acquired the meaning 'repulsive', in the sense that it leads an animal, say, to avoid what is inimical to it.

301 The distinction between the closely related terms *dhākira* in the autumn list and *mutadhakkira* is by no means clear, but the latter has a slightly more ruminative feel to it, representing memory at work.

302 A case of rhetorically charged parallelism, so that *mawjūd* and *kā'in* can be taken straightforwardly as synonymous.

opposed to one another, as specified by God Almighty when He said, *and We created pairs of all things*,³⁰³ and when He said, *He created all the pairs of things that the earth produces, as well as themselves and other things they do not know about*.³⁰⁴

You should know, dear brother, may God aid you and us with a spirit of His, that when these concordant things are joined together in a harmonious relationship [*nisba ta'lifiyya*], they combine [*i'talafa*], doubling their potency; their effects become manifest, they overcome their opposites, and subdue that which is contrary to them. Through knowledge of them, doctors have been able to create medicines that successfully treat illnesses and cure sicknesses, like the antidotes, ointments, and potions³⁰⁵ which are known to medical practitioners and are described³⁰⁶ in their works. A similar approach is adopted by the makers of talismans in preparing [*naṣab*] them on the basis of their knowledge of the nature and properties of things, their correspondences, how they are structured, and the relationships underlying their composition. An example of this is the [magic] nine-slot square which eases childbirth when the nine numbers are entered in the ninth month of pregnancy at the ninth hour of labour. The lord of the ascendant will be in the ninth [house], or the lord of the ninth [house] will be in the ascendant, or the moon will be in the ninth [house], or in aspect with [*muttaṣil*] a heavenly body in the ninth [house] from it, and similarly with other ninefold things.

[p. 233]

Chapter 15

You should know, dear brother, may God aid you and us with a spirit of His, that for every class of object [*jins*]³⁰⁷ in existence, God, majestic is His bounty, by the dictates of His wisdom, has established a particular

303 Qur'an 51:49.

304 Qur'an 36:36.

305 This probably covers most preparations, from medicines to broth, in liquid form. Two manuscripts add *ma'ājin*, 'electuaries'.

306 Or 'prescribed'; *waṣaf* covers both.

307 The animal or vegetable implication of the more obvious and smoother equivalent, 'species', would be too narrow here: the argument is global.

sense that can perceive them, and a specific faculty in the soul by which it can grasp them and understand them in a way that no other would be capable of. Further, He has made it part of the natural disposition of every perceptive sense or cognitive faculty to take delight in its perception of the sensibilia related to it and to long for them when it is deprived of them, but to become bored with them when it dwells on them too long³⁰⁸ and seek refreshment with others of the same type, as is well known amongst people in respect of their food, drink, dress and scents, and what they see and listen to. Accordingly, the skilful musician is the one who, when he realizes that the listeners have become bored with a particular rhythmic-melodic combination [*lahn*],³⁰⁹ will sing to them in a different one, whether contrastive or similar.

You should know, dear brother, that leaving [*khurūj*] one such combination and moving [*intiqāl*] from it to another can only be done in one of two ways: either he stops completely, pauses to adjust [*yusliḥ*] the frets and the strings, increasing or decreasing the tension, and then begins again, resuming with another mode;³¹⁰ or he leaves things as they are, and goes from the first rhythm to another which is related to it and resembles it. This is done by changing from a heavy cycle to the corresponding light one, or from a light cycle to the corresponding heavy one or to a similar one [*mā qāraba dhālik*]. For example, if one wishes to change from heavy *ramal* to *mākhūrī*, one stops at the last two percussions of heavy *ramal*,³¹¹ then continues with a single percussion, makes a brief pause, and then commences *mākhūrī*. The skilful musician will also excel at clothing the poems that

308 Here '*dāmat 'alayhā*' is rendered with 'it dwells on them too long'. The grammar also allows the possibility 'they last too long'.

309 The bald translation of *lahn* as 'rhythm' would be suggested by the main topic to follow, but it is clear from what precedes it that initially no sharp distinction is being made between purely rhythmic and rhythmic/melodic phenomena or, rather, the melodic aspect is briefly discussed first before concentrating on rhythm.

310 In this particular context, which deals only with pitch, 'mode' seems the more appropriate equivalent for *lahn*.

311 The manuscripts have 'heavy *ramal*' (*thaqīl al-ramal*) on the second occasion, but on the first they agree on 'light *ramal*'. That this is mistaken is shown not only by the logic of the passage but also by the source text (whence derives the qualification 'heavy', not otherwise used by the Ikhwān in relation to *ramal*), for this passage is derived from al-Kindi, who speaks specifically of 'heavy *ramal*'; *Mu'allafāt al-Kindi al-mūsīqiyya*, pp. 84 and 98.

arouse pleasure in rhythms that correspond to them, such as *ramal* and *hazaj*; and those that (fol. 57b) eulogize topoi of glory, generosity, and nobility he will clothe in rhythms that correspond to them, [p. 234] such as the first heavy and the second heavy; and those that eulogize topoi of bravery, valour, vigour, and impetuous action he will clothe in rhythms such as *mākhūrī*, the light, and suchlike.³¹²

It is also part of the musician's skill to use the rhythms corresponding to [various] moments [*azmān*] according to the [different] moods [*aḥwāl*] that correspond to them,³¹³ that is, to begin at social invitations, feasts, and drinking parties with rhythms that reinforce the moral qualities of generosity, nobility, and liberality, such as the first heavy and the like, and then afterwards to perform joyful, gay rhythms such as *hazaj* and *ramal*, and when there is dancing [*raqs*] and ensemble-dancing [*dastband*],³¹⁴ *mākhūrī* and the like. At the end of the session, if he is afraid that those who are drunk might be noisy, rowdy, and quarrelsome, he should use slow, calm, and sad rhythms that quieten people down and send them to sleep.

312 That such correspondences should not be taken too literally is suggested by the disjunction between the pairings offered here and those given above in the catalogues for the four seasons. Spring, for example, associates generosity and nobility not with the first and second heavy but with the puzzling '*zīr-bamm*', while autumn associates heavy rhythms with reason, judgement, and virtue. Likewise, winter associates *ramal* and *hazaj* not with pleasure but, variously, with forbearance, nobility, and justice. Only with summer do we have agreement, *mākhūrī* and other light rhythms being associated in both cases with dashing martial qualities.

313 The general idea is clear: as before, and as developed after, the rhythms (and melodies) should be selected to fit the mood of the moment. At this point, however, the text has become somewhat confused in most manuscripts. It is possible that either *azmān* ('times') or *aḥwāl* ('states') is a later addition; † has only the latter, Ʒ only the former. As stages and states are inextricably linked in what follows, either reading would be acceptable. It may be noted that although al-Kindi expresses the notion that certain cycles are appropriate for certain times of day, this is not taken up by the Ikhwān.

314 The generic term for dancing, which could be solo or collective, is *raqs*. The precise sense of *dastband* is not clear. A likely implication is of a group dance involving hand-holding, but as *dastband* also means a bracelet it is possible that it refers more particularly to a circular formation, although line-dancing cannot be excluded.

Chapter 16

On the Wise Sayings of the Philosophers Concerning Music

It is related that one of the Greek kings held a feast, to which he invited a number of learned men, and he instructed that all the wise things they uttered should be recorded.³¹⁵ After the musician had sung a joyful song [*lahn muṭrib*], [the learned men spoke in turn.]

1.³¹⁶ One of them said: Music [*ghinā'*] has a quality that speech cannot render, and words cannot express. The soul manifests it as a rhythmical melody [*lahn mawzūn*],³¹⁷ so that when nature hears it, it takes delight, pleasure, and enjoyment in it. Listen, then, to what the soul relates

315 Several manuscripts have a slightly different version of this introductory paragraph, but the essentials remain the same. Models for the material that follows are provided by al-Kindī and Ḥunayn ibn Ishāq, the latter fully referenced by Shiloah, who notes the presence of four common items. A translation (via a Hebrew intermediary) of Ḥunayn's compilation, which shows generic similarities rather than specific correspondences, may be consulted in E. Werner and I. Sonne, 'The Philosophy and Theory of Music in Judaeo-Arabic Literature' (part 2), *Hebrew Union College Annual*, 17 (1942–1943), pp. 511–573, at pp. 526–532. Al-Kindī's text seems closer but, unfortunately, only exists in truncated form — just six items survive; see *Mu'allafāt al-Kindī al-mūsīqiyya*, pp. 106–108. These do not coincide exactly with the beginning of this chapter, with three of them not present here (the ones that are being 1, 3, and 5). Inevitably, there are also thematic parallels elsewhere; the very beginning, for example, is echoed in the *Iqd al-farīd* by Ibn 'Abd Rabbihi, ed. Aḥmad Amīn, Ibrāhīm al-Anbārī, and 'Abd al-Salām Hārūn, vol. 6, (Cairo: Maṭba'at Lajnat al-Ta'līf wa-'l-Tarjama wa-'l-Nashr, 1949), p. 4. However, given the thematic links that both provide a very clear structure to this section and emphasize some of the main concerns of the *risāla*, it is likely that some of the material, as well as the organization of it, is unique to the Ikhwān.

316 The numbering of the various dicta is an editorial addition.

317 The equivalent text in the *Iqd al-farīd* is as follows: 'The philosophers have asserted that music [*nagham*] is a remainder [*faḍl*] left over after speech [*manṭiq*], which language [*lisān*] cannot bring forth, so nature brings it forth through melodies [*alḥān*].'

A very similar version is given by al-Mas'ūdī in his *Murūj al-dhahab*; *Les prairies d'or*, vol. 2, p. 321. This makes no division between *manṭiq* and *lisān* (the latter does not appear). It continues with the reaction of nature almost exactly as in the Ikhwān text.

and intimates, and do not let nature and reflection upon its beauty deceive you.³¹⁸

2. Another said: When you listen to music [*mūsīqī*], beware its arousal of animal desires in your soul for the beauty of nature, which might seduce you from the practice of right conduct and divert you from the higher Soul's intimations.

3. Another said to the musician [*mūsīqār*]: Inspire the soul towards its noble capacities of forbearance, generosity, bravery, justice, and nobility, [p. 235] and do not let nature arouse its animal desires.

4. Another said: If the musician is skilled in his art, he will inspire souls towards virtuous things and banish base things from them.

5. Another said: It is related that a philosopher heard the sound of a lyre³¹⁹

318 It is not wholly clear whether 'soul' here could imply the universal soul, although, as the following discussion suggests, the individual soul is perhaps more likely. Matters are not helped by the argument, the logic of which is at first sight obscure. It appears reasonable that nature should take delight in something occasioned by the soul, but wherein, then, lies the potential deception? Comparison with the version in the *'Iqd al-farīd* suggests a possible original form lacking the final exhortation: the soul (nature in the *'Iqd al-farīd*) creates melody and nature (soul and spirit in the *'Iqd al-farīd*) takes delight in it. If so, the remainder, absent from the *'Iqd al-farīd* but present in al-Kindī's version, would be a moralizing extrapolation. The soul — that is, the individual soul, viewed as joined to the body (the pairing is clearly stated in statement 11 below) — is a potential prey to the moral danger presented by animal urges, as statement 2 here makes explicit. But it is important to note that nature is not equated with gross carnality; it is, rather, a vehicle of temptation because of its beauty, even if of a lower order than spiritual beauty. In this context, then, 'what the soul relates' (whichever soul is intended) represents the higher, morally elevated message, with nature a beguiling means of seduction that cloaks it.

In al-Kindī's version, the soul creates melody and itself takes delight in it, so that what follows is a much simpler and positive injunction, entirely devoid of any nature/soul opposition: 'so listen to the soul and commune with it [*nājūh*]; and pay heed [*ra'ū*] to communing with nature and contemplating it [*al-ta'ammul lahā*]'.

319 If understood as a lyre, *qithāra* would emphasize the setting in the world of classical Greece, since lyres were not used by 'Abbāsid court musicians. It might, however, designate a form of long-necked lute; al-Khwārizmī defines the *qithāra* (although the reading of this word is conjectural) as a Greek instrument resembling a *ṭunbūr* (*āla lahum* [= *al-yūnān*] *tushbih al-ṭunbūr*). See *Mafātiḥ al-'ulūm*, pp. 236–237. The Beirut edition of the *risāla* has the reading *qaynāt* ('singing slave-girls').

and said to his pupil, 'Let us go towards this musician [*mūsīqār*]; he may be able to inspire us with a noble idea.'³²⁰ But when he approached, he heard that the rhythm [*lahn*] was irregular [*ghayr mawzūn*] and the melody [*naghma*] unpleasant,³²¹ and he said to his pupil, 'The soothsayers claim that the sound of the owl presages someone's death. If what they say is true, the voice of this musician presages the death of the owl.'

6. Another said: Although an instrument is inanimate,³²² it gives clear expression, revealing the secrets of souls and the innermost recesses of the heart, but it is as if what it says is in a foreign tongue that needs an interpreter, for its utterances lie deeper than words.³²³

320 This renders 'yufidunā šūra sharīfa', taking *šūra*, here, in the sense of a Platonic idea, presumably conveyed through the mathematical relationships that the music, if properly crafted, should embody.

321 In the prefatory statement to this chapter, the context evidently requires the sense 'musician' rather than 'instrument' and, accordingly, *mūsīqān* in ϵ is to be rejected in favour of *mūsīqār*, found in all the other manuscripts. But thereafter matters are not so clear-cut, and as the two terms, which for most scribes must have been unfamiliar, are confused or reduced to one, appeal must often be made to the context. In statement 5, it seems clear that we are again dealing with the musician, *mūsīqār*, especially as in two manuscripts we encounter instead *qithāri* ('citharode'). Thereafter, however, attention switches to instruments.

322 It seems incontrovertible that it is an instrument that is being referred to here, although *mūsīqān* appears only in $\mathfrak{B}$, all the others having *mūsīqār*, as does the Beirut edition. (To avoid the absurdity of an inanimate musician, Shiloah emends the text to *mūsīqī*.)

323 The last phrase is difficult to render, and the version offered correspondingly distant. The literal meaning is, 'because its utterances are simple, lacking dotted letters' ('*li'anna alfāzahu baṣīṭa laysa lahā ḥurūf mu'jama'*). Beyond invoking the need for translation, the general idea that the instrument can communicate profound emotion but, lacking human speech, has a surface inarticulateness, is thus conveyed by a reference to script predicated on a profoundly literate analysis of language. Its simple expressions are said to lack dotted or ordered letters, that is, by implication, an alphabet; they lie beyond, or beneath, the scriptable representation with which the semantic realm of words is equated. (It might also be possible, if rather less likely, to construe the metaphor more narrowly, taking 'simple' to refer to letters without dots, so that the utterances of the instrument are defined as rudimentary, not pejoratively but in the sense of lacking the sharper focus and clearer legibility that are provided by the addition of dots to the consonantal ductus, thereby avoiding possible misreading and ambiguity.)

The following Persian verses were then recited, indicating the veracity of what the philosopher had said:³²⁴

The nocturnal lament of the lute string³²⁵
 is sweeter to my ear than [the cry of] ‘God is great!’
 If the plaint of the lute string — and do not think this strange —
 attracts its prey from the wide plains,
 With no arrow it yet from time to time
 pierces its body, the dart transfixing the heart,
 Now weeping, now grief-stricken,
 from break of day through noon till dusk.
 Although bereft of a tongue, its eloquence
 can interpret the lovers’ story,
 Now making the madman sane,
 now casting the sane under its spell.

7. Another said: An instrument is the musician’s³²⁶ interpreter, speaking for him. If he is good at expressing ideas,³²⁷ it will convey the souls’ secrets, and it will sometimes reveal what is deep in the heart. If it does not, though, the deficiency will be in him.³²⁸

324 I am grateful to Abbas Hamdani, who kindly volunteered to send me a paper in which these verses are identified as by Rūdākī (d. 940). The text here differs from that of the published *Dīwān*, in that the first line corresponds to hemistichs 1 and 4 in the published edition which, however, is missing a second hemistich; see *Dīwān*, ed. Jahāngīr Maṣṣūf (Tehran: Intishārāt Nāhid, 1373/1994), pp. 125–126. Some manuscripts contain material (given in the notes to the text) corresponding to hemistich 3 of the edition. Although benefitting greatly from Abbas Hamdani’s translation, I have, with some trepidation, preferred to attempt my own.

325 The *zīr* is properly the top string; here, it could also have the general sense of a soft or high-pitched sound, but in context it is best understood in relation to instrumental sound. The association is reinforced by the reference to lutes in the third hemistich of the *Dīwān* text.

326 The same confusion of terminology continues: *ع* has *mūsīqān* followed by *mūsīqār*, which makes perfect sense, but the others begin with *mūsīqār*, and then grope for a contrasting term, one coming up with the nonsensical *mūsīqāt* (probably a simple misreading of the original *mūsīqār*), while others opt for *mūsīqī*. The Beirut edition follows this reading, as does Shiloah’s translation. The entries *mūsīqān*, *mūsīqār*, and *mūsīqāt* in al-Faruqi, *An Annotated Glossary*, need to be considered in the light of this material.

327 The word *ma’ānī* is probably to be understood here, as in literary theory, as topoi, standard themes.

328 Grammatically, most of the verbs could have either the instrument or the musician as subject, so reliance has to be placed on the sense, assuming human

8. Another said: Even if the sounds [*aṣwāt*] and tones [*naghamāt*] of the instrument are simple, lacking words,³²⁹ the soul is still strongly attracted to them and is (fol. 58a) quickly receptive to them because of the correspondence between the two.³³⁰ This is because souls are also simple, non-composite spiritual substances, and so, too, are the notes of an instrument; and things are most strongly attracted to those that are akin to them.³³¹

9. [p. 236] Another said: The meanings of the notes of an instrument and its subtle expression of the heart's secrets can only be understood by noble souls, unsullied by natural deficiencies, innocent of animal desires.

10. Another said: When the Glorious Creator conjoined individual souls with animal bodies, He combined in their nature love of bodily desires, and enabled them to partake of physical pleasure during youth. But He then deprived them of it in old age and made them abstain from it, in order to direct them towards the delights and joys that exist in their spiritual world and to give them a longing for them. So when

agency utilizing instrumental means, while at the same time taking account of parallel phrases elsewhere.

329 This offers virtually the same definition as that translated much more freely above (and discussed in note 323 above): the notes are simple (*basīt*) because they lack letters (*hurūf* — and nearly all manuscripts add *mu'jam*, implying the letters of an alphabet), that is, when compared to the written word they are inchoate, existing in a pre-linguistic state.

330 The majority of manuscripts have here a dual pronoun, explicitly pointing to the affinity of the soul with the sound-producing instrument.

331 In ξ this sentence is made a separate item, but the sense is so congruent with what goes before that it seems better to regard it as a continuation. Both here and in statement 9 all manuscripts have *mūsīqār*, but the logic of the context requires *mūsīqān*. The sequence of statements from 6 to 12 all pursue the theme of a profound empathy between musical sound and the soul that can transcend, or does not require, the intermediary of verbal expression in order to communicate the deepest emotions. At the same time, it stresses the necessity of resisting the temptations of nature, that is, of not yielding to the baser appetites.

The notion of instrumental sound as spiritual substance is echoed in statement 15 below, and recalls the distinction made at the very beginning of the *risāla* between the reliance of the other arts and crafts on the material, whereas music has to do with the spiritual.

you hear the tones of an instrument, ponder on its intimations of the transcendental.³³²

11. Another said: When rational [*nāṭiq*] souls are free of the filth of bodily desires, abstain from natural pleasures, and are untarnished by materiality, they intone [*tarannam*] sad songs, recalling their exalted and noble spiritual world and yearning for it. But if [their animal] nature hears that [same] melody, it will reveal itself to the soul in the beauty of its forms and the splendour of its colours, in order to draw it back. Therefore, beware the cunning of nature; do not fall into its snares.

12. Another said: Hearing and sight are the best and most noble of the five senses that the Creator — sacred be His name — granted all animals. But, in my opinion, sight is superior because sight is like the day and hearing is like the night.³³³

13. Another said: On the contrary, hearing is better than sight because sight goes forth to seek its percepts, serving them like slaves in order to reach them, whereas the percepts of hearing are brought to it in order to serve it as kings [are served].

14. Another said: Sight only takes cognizance of its percepts in linear fashion, whereas hearing does so in the round.³³⁴

15. Another said: Most of the percepts of sight are physical, but all the percepts of hearing are spiritual.³³⁵

332 The literal translation is 'the world of the souls' (*'ālam al-nufūs*), that is, the spiritual world, the transcendent spiritual domain; on 'soul' (*nafs*), see Chapter 1, note 8).

Again, the emendation *mūsīqān* has been adopted. Retention of *mūsīqār* would yield 'So when you hear the musician's tones, ponder on his intimations of the transcendental', which makes perfectly good sense in its own terms.

333 This begins another theme which continues from statements 12 to 17. As the stress, not unexpectedly, is on the superiority of hearing, 12 is the exception that is speedily brushed aside.

334 The contrast is, literally, between 'in straight lines' (*'alā khuṭūt mustaqīma*) and 'from the circumference of a circle' (*min muḥīṭ al-dā'ira*).

335 One might wish to argue that, in relation to hearing, *rūḥānī* could have (or have as well) the sense 'pneumatic', but, given the tenor of the chapter as a whole, a straightforward physical/spiritual contrast seems more likely, incidentally echoing

16. Another said: Through hearing the soul attains knowledge of those who are distant from it in space and time, but through sight it only attains what is temporally immediate.³³⁶

17. Another said: Hearing makes more acute differentiations than sight, for it can distinguish with sure taste metrically organized [*mawzūn*] speech and proportionately related [*mutanāsib*] tones; it can discriminate what is [metrically] correct from what is aberrant [*munzaḥif*] and deviation [*khurūj*] from the rhythmic cycle and the proper structure [*istiwāʾ*] of the melody.³³⁷ But sight is fallible in most of its perceptions, for it frequently sees what is [p. 237] large as small and what is small as large, what is near as far and what is far as near, what is mobile as immobile and what is immobile as mobile, what is straight as bent and what is bent as straight.

18. Another said: Given the affinity and resemblance between the substance of the Soul and harmonic numbers [*al-aʿdād al-taʿlīfiyya*], (fol. 58b) when the tones of the musician's melodies [*alḥān*] are tied to a rhythm [*mawzūn*], and the durations of the attacks and of the pauses separating them³³⁸ are proportionate [*mutanāsib*], [people's] natures [*tabāʾiʿ*] take enjoyment from them, [their] spirits are delighted by them,

the distinction made at the beginning of the *risāla* between music and the other arts, one working on the soul of the listener, the others manipulating matter.

336 Given the distinction drawn in statement 15, the contrast between who and what may not be fortuitous.

337 Another passage in which it is not wholly clear whether properties of pitch as well as duration are being referred to, although the latter clearly predominate. The initial statement might be thought to combine both domains, granting hearing the ability to identify speech that is *mawzūn* and notes that are *mutanāsib*. But although the latter term normally implies harmonious pitch relationships, the proportions it refers to could also be temporal, and are, indeed, explicitly so in statement 18. That such is also the case here is suggested by the fact that the following expansion proceeds from metrical discriminations to the cognate domain of rhythm (the unambiguous term here is *iqāʿ*). The only query concerns whether the following phrase, '*istiwāʾ al-laḥn*', is simply an expansion of *iqāʿ* ('the regularity of the cycle') or implies beyond that (as the translation 'the proper structure of the melody' prefers) more general formal properties, a reading supported by the fact that neither *istiwāʾ* nor the variant *nasāq* appears as a technical term in discussions of rhythm. In any event, as such properties could only be identified through a temporal sequence of events, the distinction is hardly of crucial importance.

338 A literal rendering would offer, 'the durations [*azmān*] of the movements

and [their] souls take pleasure in them because of the resemblance, proportion, and affinity between them. Similar considerations apply to evaluating the beauty of faces and the splendour of natural phenomena because the beauties of things existing in nature result from the harmony [*tanāsub*] of their colours and the judicious ordering [*husn al-ta'lif*] of their constituent parts.³³⁹

19. Another said: The gaze of onlookers only fixes itself on faces that are beautiful because they reveal traces of the world of the Soul, and because most visible things in this world are not beautiful, having been affected by deleterious and distorting defects, either at the original stage of their composition [*tarkīb*] or later. A demonstration of that is the fact that newly born young are more finely structured and elegant in form and appearance because of their proximity in time to the completion of the Creator's work on them; and similarly with the beauty and splendour of plants in the earliest phase of their existence, before they are affected by the ravages of age, decrepitude, and corruption.

20. Another said: The gaze of individual [*juz'ī*] souls only fixes itself longingly upon beautiful things because of the affinity between them resulting from the fact that the beauties of this world contain traces of the perfect [*kullī*] celestial souls.³⁴⁰

21. Another said: The measure [*wazn*] of the musician's strokes [*naqarāt*] and the proportions between them, and the delightful nature of their tones, inform individual souls that the movements of the celestial spheres and the heavenly bodies produce proportionate, harmonious, delightful tones.

22. Another said: When images of beautiful percepts are inscribed [*suwwira*] on individual souls, they become analogous to and correspond to the perfect [*kullī*] Soul and are filled with longing for it and the desire to be conjoined with it. When they depart from the physical shell they

[*harakāt*] of their attacks and the pauses [*sukūnāt*] between them', which amounts to no more than saying 'the durations between the successive attacks'.

339 The terminology here, '*ta'lif ajzā'ihā*', is suggestive of atomism.

340 The soul of an individual human being is defined as 'partial, incomplete' (*juz'ī*), while the celestial (*falakī*) souls, in contrast, are defined as 'complete' (*kullī*) and thus perfect.

ascend to the heavenly realm and are united with the [p. 238] highest host [*al-mala' al-a'lā*], and thereupon they become sure of eternity, are safe from annihilation, and experience the pleasure of existence in [a state of] purity.

23. There ensued the following exchange with another speaker:

‘What is “the highest host”?’

‘Those who dwell in the heavens, and the inhabitants of the celestial spheres.’

‘So how can they see and hear?’

‘If there were no one in the world of the celestial spheres and the expanse of the heavens who could see those regular movements, look at those virtuous beings, and hear those delightful well-measured [*mawzūn*] tones, Divine Wisdom would then have created something pointless, and it is an accepted principle amongst the wise that nature has not created anything that is pointless and has no use.’³⁴¹

24. Another said: If there are no beings and inhabitants in the vast space of the celestial spheres and the expanse of the heavens, they will be desolate and empty, and how could the wisdom of the Creator allow the vast space of these celestial spheres to remain, despite the nobility of their substance, empty, void, and desolate, without any beings there, when he did not leave the dark, bitter, salty bottom of the seas empty, but, rather, created in their depths a variety of creatures, so many kinds of fish, whales, (fol. 59a) and others that only God, exalted be His name, who created, formed, and shaped them could count the number of their species and kinds; and when He did not leave the delicate air empty, but, rather, created for it various kinds of birds that ‘swim’ in it just as the fish and whales swim in the waters; and when He did not leave the dry land, the desolate places and the towering mountains [empty], but, rather, created in them various animals and wild beasts; and when He did not leave the dark earth and the bodies

341 As with soul, nature appears in different contexts: one is that of the individual, where it co-exists with the soul, and one, that of the world or creation. Whereas earlier nature is often viewed as in opposition to the spiritual, as a site of seduction, here it is seen as a creative force, aligned syntactically in parallel with Divine Wisdom, and it might almost be seen, fancifully, as a precursor of Spinoza’s *natura naturans*.

of plants, [their] grain and fruit [empty], but, rather, created in them various species of reptiles³⁴² and insects.

25. Another said: The animal species that inhabit this world are only representations [*ashbāh*] and likenesses [*mithālāt*] of those forms [*ṣuwar*] and beings that inhabit the world of the celestial spheres and the expanse of the heavens, just as the pictures and images [*ṣuwar*] on the surface of walls and ceilings are representations and likenesses of the forms of these flesh and blood animals. The relationship of creatures of flesh and blood to those beings whose substance is pure is, in fact, like the relationship of these painted, embellished images to such creatures of flesh and blood.³⁴³

26. Another said: If there are creatures there that are devoid of hearing, sight, [p. 239] intellect, comprehension, speech, and discrimination, they will be *deaf, dumb and blind*.³⁴⁴

27. Another said: If they have hearing and sight, but there are no sounds to be heard and no tones to occasion delight, their hearing and sight are pointless and useless,³⁴⁵ but if they have powers of hearing, these will be of a nobler and better kind than those we have because their substances are purer, more radiant, finer, and more complete and perfect.

28. Another said: The musical rhythms [*alḥān*] that exist here have actually been created by the wise to be analogous [*mumāthil*] to what exists there [in the other world], just as instruments of observation such as the astrolabe, water gauges,³⁴⁶ and annular devices have been constructed to be analogous to what is there.³⁴⁷

342 The term *hawāmm* also encompasses vermin and pests.

343 This is a perfect encapsulation of the Platonic view of mimesis; see *Republic* X.596–598.

344 Qur'an 2:171.

345 To be presumed here is the conjunction of hearing and sight (*sam' wa-baṣar*) as an automatic reflex, rather than any omission from all manuscripts of a reference to the absence of visible things.

346 The term for this is *binkān*, discussed in note 132 above.

347 This is an abbreviated rerun of the argument in Chapter 8 above. There is, evidently, a lack of parallelism in that the instruments mentioned are not analogous to celestial phenomena in the same way that rhythms or melodies are thought to be; there is no hint that human rhythm was conceived as a means of measurement. But the dislocation of a shift from the temporal domain to the

29. Another said: If the sensibilia that are there are not nobler and better than what is here, and souls have no access to them, then the philosophers' encouragement of the yearning to return to the world of the spirits, and the prophets', peace be upon them, arousal of the desire for the blessings of paradise are false, fraudulent deceptions, and God forbid that this should be so. If someone should foolishly imagine, erroneously think, or vainly claim that paradise lies beyond the celestial spheres and outside the expanse of the heavens, ask him how, in that case, he can aspire to reach it if he does not first ascend to the heavenly realm and [then] pass beyond the furthest extent of the celestial spheres?

It is said that when the dawn breezes of paradise blow, its trees sway, their branches tremble, their leaves rustle, their fruit scatters, their flowers shimmer, their scents waft forth, and one can hear from them resonating tones [*rannāt wa-naghamāt*], so that if the people of this world were to hear just one of them, or were to catch just one glimpse and breathe in their scent, they would find no joy in this life, nor would they ever after take any advantage from their existence (fol. 59b) in this world. It is for such ends that people should strive and compete; *let them rejoice: these are better than all they accumulate*.³⁴⁸ The philosophers, dear brother, call paradise the world of the spirits.

visual implied by the phrase 'observational instruments' (*ālāt raṣḍiyya*) is only apparent: the astrolabe can be used as a rough indicator of time; the water gauges were designed to apportion time; and the implement termed 'that of the rings' (*dhāt al-ḥalaq*) is placed by al-Khwārizmī in the class of '*ālāt al-sā'āt*', devices for measuring time — even if again done by observing the sky, for he describes it as having 'overlapping [*mutadākhil*, possibly 'geared'] rings with which the heavenly bodies are observed'; see *Mafātīḥ al-'ulūm*, p. 235. Such instruments thus mimic, and are hence analogous to, the movements of the celestial spheres. Two of the manuscripts add a fourth term, *kura* ('globe'), but none has the wholly eccentric *rabāb* which has found its way into the Beirut edition.

348 Qur'an 10:58.

[p. 240]

Chapter 17

You should know, dear brother, may God aid you and us with a spirit of His, that the effects of the musician's³⁴⁹ tones [*naghamāt*] on the listeners' souls are of various kinds. The joy and pleasure the souls take in them provide manifold differing delights. This is all on account of their [varying] degrees of enlightenment³⁵⁰ and the kinds of beauty familiar to them that they love; when each soul hears sounds corresponding to what it loves, and notes consonant [*yulā'im*] with what is dear to it, it experiences joy, delight, pleasure, and ecstasy³⁵¹ commensurate with the images [*rusūm*] it has formed [*taṣawwar*] of what it loves, and with what it believes concerning what is dear to it, to the extent that the disapproval of others may sometimes be aroused when they are unfamiliar with both the [spiritual] direction and the ultimate goal.

An example of this is what is related about a certain Sufi who heard someone recite *You, soul at peace: return to your Lord well pleased and well pleasing*.³⁵² He asked the reciter to repeat the passage over and over, and began to say 'How often do I tell it to return, but it doesn't'. He then passed into a state of ecstasy [*tawājad*], shouted out, collapsed, and his soul left him.³⁵³

Another one heard someone recite '*And if we find that you are lying, what penalty shall we apply to you?*' and they answered, '*The penalty will be [the enslavement of] the person in whose bag the cup is found.*'³⁵⁴

349 Given the previous material, it might be suspected that here, too, instrument (*mūsīqān*) rather than musician (*mūsīqār*) was intended. But the specific references to recitation that follow make this unlikely.

350 The word *ma'ārif* implies here, as the following passages make clear, degrees of knowledge on the Sufi path.

351 To the standard three verbs the Ikhwān here add *ṭarība*, which in this context points to the ecstasy of the Sufi which figures in the following narrative.

352 Qur'an 89:27–28.

353 This example is repeated by al-Ghazālī; see *Ihyā' 'ulūm al-dīn*, vol. 2 (Beirut: Dār al-Qalam, n.d.), p. 273), tr. in D. B. Macdonald, 'Emotional Religion in Islam as Affected by Music and Singing. Being a translation of a book of the *Ihyā' 'ulūm al-dīn* of al-Ghazzālī, with analysis, annotation and appendices', *Journal of the Royal Asiatic Society*, 22 (1901), p. 736.

354 Qur'an 12:74–75. This passage is from the story of Joseph, who devises the following stratagem in order to separate Benjamin from his other brothers: *Once he had given them their provisions, he placed the drinking-cup in his brother's*

He asked for it to be repeated over and over, collapsed, and his soul left him. Those who experience states of ecstasy said that he took the meaning of His words *The penalty will be the person in whose bag it is found* to be that the beloved was the requital of the lover because it is he who is present in his bag, meaning that the image [šūra] of the beloved is depicted [muṣawwara] in the soul of the lover, and representations of his form are inscribed upon his heart, and that is his recompense.³⁵⁵ Can you not see, dear brother, how he fitted the text to his spiritual path and his goal, despite the well-known surface meaning of the verse?

Another one heard a reciter singing this verse:

The messenger said, 'He will visit tomorrow'
I said 'Do you know what you are saying?'

and was carried away by both the words and the music [lahn]. He experienced a state of ecstasy, and began to repeat the line, substituting 'w' for [the initial] 'h', so that he kept on reciting, 'We will visit tomorrow', until he lost consciousness, so intense was his joy, pleasure, and delight. When [p. 241] he recovered consciousness, he was asked about the cause of his ecstasy and replied that he remembered the saying of the Prophet, prayer and peace be upon him, 'The inhabitants of paradise will visit their Lord once every Friday'.³⁵⁶ In this report it is related that the most delightful tone [naghma] experienced by the

pack. A man called out, 'People of the caravan! You are thieves!' and they turned and said, 'What have you lost?' They replied, 'The king's drinking-cup is missing,' and, 'Whoever returns it will get a camel-load [of grain],' and, 'I give you my word.' They said, 'By God! You must know that we did not come to make mischief in your land: we are no thieves.' They asked them, 'And if we find that you are lying, what penalty shall we apply to you?' And they answered, 'The penalty will be [the enslavement of] the person in whose bag the cup is found: this is how we punish wrongdoers.' [Joseph] began by searching their bags, then his brother's, and he pulled it out from his brother's bag.

355 The key term is *jazā'*, which can be either positive or negative: it is obviously negative in the Qur'anic account of Joseph and his brothers, where it refers to a punishment, but it is given a positive interpretation by the Sufi, for whom it has the sense of 'recompense, reward'.

356 This example is also repeated by al-Ghazālī in *Ihyā' 'ulūm al-dīn*, vol. 2 (Beirut: Dār al-Qalam, n.d.), pp. 263–264. In this edition, the reading 'tazūr' (and hence 'makān al-tā') is preferred. MacDonald translates as here, with 'he'; see 'Emotional Religion in Islam as Affected by Music and Singing', p. 707.

inhabitants of paradise and the sweetest tone they hear is their intimate communication with the Creator, majestic is His bounty, according to His statement: *their greeting* on the day they encounter Him *will be 'Peace'* and *the last part of their prayer* [will be] *'Praise be to God, Lord of the Worlds'*.³⁵⁷

It is said that when Moses, peace be upon him, heard his Lord speak to him, he was affected by such delight, pleasure, and joy that he could not contain himself, (fol. 60a) and he sang³⁵⁸ in ecstasy. After that, he found all notes [*naghamāt*], rhythms [*alḥān*], and melodies [*aṣwāt*] trivial.

May God enable you, O dear virtuous and compassionate brother, to understand the meaning of these subtle allusions and hidden secrets, and may He convey their import to you, to us, and to all our brethren, wherever they may be; He is generous and open-handed. Here ends the epistle on music.

357 Qur'an 10:10.

358 The verb used here is *tarannam*, which has a general implication of vibration (it would be used, for example, of the twanging of a bowstring), as if not just his voice but his whole being was set in sympathetic motion, the intensity of the experience accounting for his later, negative reactions.

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Subject Index

- 'Abbāsīd period, 25, 27, 29
 aerophones, 25–8, 34–5. *See also* flutes,
 reed instruments
 angels, 119–20, 121, 127–8
 animals, 80, 84, 86, 89, 90, 91, 97,
 126–7, 147, 167, 170, 171
 astrolabes, 39, 109, 110, 171, 172
 astrology, 82, 134, 145, 147, 155, 159

 Barṣawmā, *nay*-player, 27
 bile. *See under* humours
 blood. *See under* humours
 Byzantine *octoechos*, 44

 calligraphy, 21, 139
 derivation of letters, 140–1
 following norms, 143–4
 proportions of letters, 141–4
 cardinal points, 17, 155, 156, 157, 158.
 See also fourfold phenomena
 celestial spheres, 150
 emitting sounds and notes, 117–18,
 120, 148
 inhabitants of, 170–1
 musical proportions, 20, 132–3,
 147
 relation to each other, 19–20,
 114–5
 relation to the elements, 130
 reminder of world of spirits, 120
 chordophones, 23, 28–33, 36–7

 Christians, 81, 136
 composition, harmonious, 75, 76,
 84–5
 cosmology, 15–16
 Creator, 105, 106, 113, 130, 147, 166,
 167, 170, 174. *See also* God
 critical apparatus, 9–11
 cube, supreme hexahedron, 132
 cymbals (*ṣunūj*), 25, 36, 112. *See also*
 idiophones

 David, prophet, 81, 119
 drums,
 beater for (*quḍbān*), 25
 double-headed with beaters (*tubūl*),
 24
 frame drums (*dufūf*), 24, 35, 91,
 112
 large kettledrums (*kūs*), 24, 93
 small kettledrums (*dabādīb*), 24–5,
 91
 waisted *kūba*, 25, 28, 93
 See also membranophones

 editing,
 additions and omissions, 12
 chapter divisions, 10
 concord, 11–12
 decisions, 7–9
 evident omissions, 9
 formulaic expressions 9–10

- honorifics, 9–10
- interference, 10–12
- syntax, 12. *See also* manuscripts
- eightfold properties, 131–2, 134–5
 - of Arab song, 150–4
 - See also* number
- elements, 17, 18–20, 128, 130–1, 134. *See also* fourfold phenomena, seasons
- Euclid, 121, 132

- al-Fārābī, Abū Naṣr Muḥammad, 24, 29, 33, 43, 44, 48–52, 54–60, 71
- Kitāb al-Mūsīqī al-kabīr*, 27
- Farmer, Henry George, 31, 33
- fiddle (*rabāb*), 28, 31, 32, 112
 - spike-fiddle, 31–2
 - See also* chordophones
- float timers, 110
- flutes,
 - duct flutes (*shabbāba*), 26
 - end-blown flutes (*nāyāt*), 25–6
 - See also* aerophones
- fourfold phenomena, 15–16, 17–18, 46, 128–9, 154
- four fundamentals, 104–6
- four seasons. *See under* seasons

- generic terms for instruments, 23
- God, 122, 123, 126, 139, 145, 148, 149, 158–9, 170. *See also* Creator
- Greater Perfect System, 19

- harmonious melodies, 91–2, 116–17
 - correspondence to celestial spheres, 117–18
 - lack of, 97
 - yardstick for time, 117
 - See also* rhythmic cycles
- harp (*jank*),
 - angled, 28, 30, 31, 112
 - arched, 30

- See also* chordophones
- hearing, 87, 119, 126, 167, 168
- heavenly bodies. *See* celestial spheres
- Hermes Trismegistus, 148
- al-Ḥasan al-Kātib, 33, 48
- Hindus, 136
- horns. *See* trumpets and horns
- humours, 15–16, 17, 96–7, 98, 145, 147
 - black bile, 129, 157
 - blood, 129, 155
 - phlegm, 129, 158
 - yellow bile, 128–9, 156
 - See also* seasons, temperaments

- Ibn al-Munajjim, 33, 34
- Ibn al-Ṣūfī, 30
- Ibn al-Ṭaḥḥān al-Mūsīqī, 17–18
- Ibn Khurradādhbih, 30–1, 48, 49
- Ibn Sīnā (Avicenna), 33, 48
- Ibn Zaylā, 48, 51
- idiophones, 25
- Idris the prophet, 148
- Ikhwān al-Ṣafā', 31, 32, 33, 37, 40, 42, 44, 52, 52–3, 53, 55, 57–62, 64, 69, 70, 71
- instrument names, 23, 24–5, 28–31, 35, 91, 112
- Ishāq al-Mawṣili, 33, 53, 58, 59, 60

- Jesus, 149
- Jumal al-falsafa* (al-Hindī), 2

- Kayyālīyya, 136
- Khurramīyya, 136
- al-Khwārizmī, Muḥammad ibn Mūsā, 24, 26, 28, 30, 31, 36, 44, 48–51, 60
- al-Kindī, Abū Yūsuf Ya'qūb ibn Ishāq, 16, 23, 32–4, 37, 42, 43, 48, 49, 51, 52, 53, 55–63, 69
- Kitāb al-Aghānī* (Abū'l-Faraj al-Iṣbahānī), 27, 28, 32, 35

- lapsus calami*, 9
- Leonardo da Vinci, 22
- letters. *See under* calligraphy
- lutes,
 dimensions of, 32–3, 113, 136
 four strings of, 15–16, 113–16,
 128–9.
 See also fourfold phenomena
- long-necked (*tunbūr*), 28–9, 47
- ratios and tuning, 33–4, 114–16
- cosmological inferences, 34
- short-necked (*ʿidān*), 28, 91, 112
- types, 28–9, 35, 91, 112
- See also* chordophones
- lyre (*shulyāq*), 29–31, 163. *See also*
 chordophones
- al-Maʿarrī, 48
- manuscripts,
 Group A, 3–7
 Group B, 4–7
 chronological distribution of, 6
 coincidence, 3
 relationships, 2–3
 See also editorial
- medicines and antidotes, 159
- melodies,
 alleviating exhaustion of body, 83
 alleviating pain, 83, 129
 alleviating suffering 83, 129
 calming, 79, 122
 for dealing with animals, 84
 emboldening, 83
 in places of worship, 81–2, 122,
 123–4
 for rejoicing, 84
 proscribed as idle and worldly,
 124–5
 sorrowful, 83
 stirring in battle, 77–8, 122–3
 to stop children crying, 84
 transforming, 80
 See also metrical verse
- membranophones, 24–5, 36
- Mercury, 19, 20, 118
- metre. *See under* prosody
- metrical verse,
 describing the world of spirits, 122
 enticing to the spiritual world,
 123–4
 idle and worldly, 125
 patterns without prosodic variations,
 137–9
 stirring anger, 77–9, 122–3
 See also melodies
- metrically regulated notes, 92
 attacks and pauses, 92, 106–8,
 109–11
- moon, 19, 20, 118
- Moses, 175
- motion and rest, 92–3
- al-Mufaḍḍal ibn Salama, 29
- mukhannathun* (effeminate
 musicians), 25
- music,
 creation of by the sages, 81–2
 defined, 84–5
 nature of, 91–2, 99
 reminder of the celestial spheres,
 120
 universal appeal of, 80–1
 wise sayings of the philosophers,
 162–72
 therapy, 16, 129
- Muslims, 81
- Neoplatonic numerology, 34, 114
- neutral intervals, 33, 34
- notes, 16, 34, 77, 85, 92, 94, 95, 99,
 102, 105, 107, 108, 112, 115, 116,
 117, 118, 124, 128, 129, 131, 166,
 173, 175
- Nicomachus, 121
- numbers, 15, 18–20, 21, 41, 103,
 104, 105, 132–6, 160, 168. *See also*
 proportional relationships
- numerical expression, 18–20

- organ (*urghun*), 27, 37, 97, 112
 - mouth, 28
- organological classification, 23, 26, 34–7
- orthography, 10–11
- owl, voice of presages death, 164

- panpipes (*armūnīqī*), 27, 37, 112
- percussion instruments, 35–6
- phenomena, higher,
 - as primary cause of secondary, 120
 - imitation of, 120–1
 - tones produce yearning for, 121
 - world of spirits above the world of bodies, 120, 121
- physiology, 21–2
 - proportions of the body, 21, 144–5
 - proportions of the parts of the body, 145–7
- poetic,
 - metres, 40, 41, 42, 45
 - themes, 46
- proportional relationships (*nisab*), 75, 76, 134, 140, 143, 168, 169. *See also* under calligraphy, celestial spheres, physiology
- prosody,
 - prosodic circle, 39, 45, 111, 139
 - definitions of, 64–70, 100–1
 - elements, 40
 - feet, 40–1, 42, 99
 - long syllable, 40
 - short syllable, 39,
 - sabab*, *fāṣila*, *watid* 99, 101, 105, 135, 137, 138
- psaltery (*ma'āzif*), 28, 29
- Ptolemy, 121
- Pythagoras, 121, 131, 148

- reed instruments, 26, 35, 91, 112. *See also* aerophones
- rhythm, 18
 - beaters (*quḍbān*), 24, 25
 - perception of, 37–8
 - time units, 38–9, 40
- rhythmic cycles, 39, 41–5
 - associations of, 45–6
 - cell combinations, 40–1 101–3
 - changes of cycle, 69
 - the first heavy, 55–6, 65–6, 150–1
 - hazaj*, 60–3, 67, 150, 153–4
 - individual cycles, 48–9
 - light counterpart of the first heavy (*mākhūrī*), 52–5, 67–9, 150, 152
 - light counterpart of the light, 1, 49, 66, 150
 - light counterpart of *ramal*, 50–2, 66–7, 150, 153
 - light counterpart of the second heavy, 49–50, 66, 150, 152
 - ramal*, 57–60, 65, 68–9, 150, 152–3
 - the second heavy, 56–7, 66, 150, 151
 - variants, 70–1
 - zīr-bamm*, 46–7
 - See also* harmonious melodies
- rhythms and melodies, 77, 79, 80
 - changing to fit the mood, 160–1
 - corresponding natures and temperaments, 97–8

- Sa'adya Gaon, 48
- Sāsānians, 29
- seasons,
 - autumn, 157–8
 - spring, 155–6
 - summer, 156–7
 - winter, 158.
 - See also* fourfold phenomena
- Shiloah, Amnon, 13–14, 62
- sight, 109, 167–8
- souls, 76–7, 80, 81, 83, 84, 96, 97, 98, 106, 107, 118, 120, 121, 122, 123,

- 128, 149, 161, 163–4, 165, 166, 167, 168–9, 172, 173, 174
 angelic form 127
 departing the body, 126, 127, 150
 purification of, 149
 sound divisions,
 combination of humours, 96–7
 sounds,
 animal, 89, 90–1
 artificial, 86, 91–2
 consonant and dissonant, 96
 continuous and discontinuous, 94–5
 fast and slow, 93–4
 from impact, 85, 86, 88–9
 great and small, 93
 high and low, 94
 loud and soft, 88, 94
 of instruments, 91
 stringed instruments, 95–6
 wind instruments, 95
 natural, 86, 91
 made by waters, 90
 made by winds, 90
 thunder, 86, 89–90
 resonating, 8–9
 wave-like motion, 86–7
 spirits, world of,
 above celestial realm, 120
 messages of the sages, 125
 yearning to return to, 172
 strings, correspondences of, 15–16,
 17–18, 18–19, 130–1, 155–8
 See also fourfold phenomena
 talismans, 160
 temperaments (*mizāj*), 96–8, 128, 145,
 147. *See also* humours
 tones, 19, 77, 84, 85, 90, 92, 96, 109,
 115–6, 120, 121, 124, 131, 133, 149,
 167, 168, 169, 170
 trumpets and horns (*būqāt*), 27, 35,
 89, 91. *See also* aerophones
 Umayyad period, 29
 Vitruvian man, 22, 147
 water-clocks, 39, 110, 171
 wind instruments. *See* aerophones
 winds, 17, 155, 156, 157, 158. *See also*
 fourfold phenomena
 women, 81, 84

الفلسفة: ١٣٧

- ن -

النَّسَب: ٦

النصارى: ١٤، ١١١

النغمات: ٣٤، ٥٧، ٥٩، ٦٠،

٦٢، ٧٠-٧٢، ٧٥، ٧٨، ٨١-

٨٣، ٩٢، ٩٨، ٩٩، ١٣٨،

١٣٩

النفوس الروحانية: ٢١

النقرات: ٦٢

النواميس الإلاهية: ١٤-١٦، ٨٣،

٩٤، ٩١

- ه -

الهنزج: ١٤٩

الهندسة: ٦١، ١٢٧، ١٢٨

الهيولى: ٦، ٧، ١٢، ١٤٠

- و -

الوتد: ٤٨، ٤٩، ٥٤

- ق -

القمر: ١٠١، ١٠٥، ١٠٩

قوانين الغناء: ٤٨

قوانين الموسيقى: ٤٧

- ك -

الكتابة العربية: ١١٩، ١٢٩

الكلمات: ٤٦

الكواكب: ٥٤، ٧٥، ٧٨، ٧٩،

١٠٧، ١٠٩، ١٣٨، ١٥٢

الكون: ٨٠، ٨١، ٨٧، ٩٥، ١٥٠

الكي موس: ٤١

- ل -

اللغة الرومية: ١١٧، ١٤٩

اللغة السريانية: ١١٧

اللغة العبرانية: ١١٧

اللغة العربية: ١١٧، ١٢٢، ١٤٩

اللغة الفارسية: ١١٧، ١٤٩

اللغة الهندية: ١١٧

اللغة اليونانية: ١١٧

- م -

المرثيات: ٦٠

المسلمون: ١٤

المصاريع: ٤٦، ١١٤

الموسيقى: ٦، ١٣، ١٧، ٢١،

٣٤، ٦٣، ٨٢، ٨٦، ٨٩،

١٦٧، ١٦٨، ١٧٢، ١٩١

البكاء: ٢٣	- ص -
البنائين: ٦١	الصلاة: ١٤، ١٦، ١٧
البُوقات: ٢٨	صناعة الرياضيات: ٥٣
	صناعة العدد: ٥٣
- ت -	صناعة الكتابة: ١١٧، ١٢١
التوبة: ١٦	صناعة الموسيقى: ١٢، ١٣، ١٧
- ح -	صناعة الهندسة: ٥٣، ١١٩
حاسة السمع: ٢١	صناعة الأقاويل: ١١٣
الحركة: ٣٥	صناعة الكلام: ١١٣
- د -	الصوت: ٢٢
الدوايق: ٦١	الصوم: ١٦
- ر -	- ض -
«رسالة الآثار العلوية»: ٢٩	الضحك: ٢٣
«رسالة الأرثماطقي»: ٥٣، ٩٧	- ط -
«رسالة الأسطرنوميا»: ٥٤، ١٠٤	الطاقة الإنسانية: ٨٢، ١٣٧
«رسالة البعث والقيامة»: ١١٠	الطرجهارات: ٦١
«رسالة الجومطريا»: ٥٣، ٦١، ١١٩	- ع -
«رسالة الحاس والمحسوس»: ٢٢	العروض: ٤٧، ١٤٤
«رسالة حكمة الموت»: ٩٥	علم النسب: ٥٤
«رسالة المبادئ»: ٥٥، ٨١	العلوم الرياضية: ٥
«رسالة المنطق»: ٥٤	- غ -
«رسالة النسب العددية»: ٥٤	الغناء: ٤٥، ٧٢
رسالة الهولي: ٥٥، ٨١	- ف -
الرياح: ٣٠	الفاصلة: ٤٨، ٤٩، ٥٤
- ش -	الفساد: ٨٠، ٨٧، ٩٥، ١٣٢، ١٥٠
الشهوات الجسمانية: ١٧٤	

فهرس المصطلحات

- أ -

- آلات الرصد: ٦١
الأبدان: ٤٣
الأجساد: ٩٣، ٩٤، ٩٦، ١٧٣
الأجسام: ٢٦، ٢٧، ٧٥، ٨٧
الأجسام الخشنة: ٢٧
الأجسام الصلبة: ٢٧
الأجناس: ١٤٣، ١٤٤، ١٤٩، ١٨١
أحكام النجوم: ١٦
الأرض: ١٠١، ١٠٣، ١٠٥
الأرواح الالهية: ٨٣، ٩١
أزمان الحركات: ٦١، ٦٣
أزمان السكونات: ٥٧، ٥٨، ٦٠، ٦٣، ٦١
الأسطرباب: ٦١، ١٨٣
الأسقام: ١٨
الأصوات: ٢٢، ٢٤، ٢٦، ٢٨، ٣١، ٣٣، ٣٧-٤١، ٥٩
الأصوات الطبيعية: ٢٢
الأصوات المنطقية: ٢٣
الأصوات الغليظة: ٤١
الأصوات غير الحيوانية: ٢٢
الأصوات غير المنطقية: ٢٣
أصوات المزامير: ٣٩
الأصوات المعتدلة: ٤٢
الأفاعيل: ٤٦
الأفكار الروحانية: ١٤٠
الأفلاك: ٧٣، ٧٤، ٧٦-٧٩، ٨١
١٠٥، ١٣٨، ١٤١، ١٧٩
١٨٢، ١٨٠
الألحان: ٩، ١١، ٢٠، ٤٥، ٤٨، ٤٩، ٥٣، ٥٤، ٦٣، ٧٢، ٧٣، ٧٨، ٨٢، ٨٣، ٩٢، ٩٩، ١٤٩، ١٥٥، ١٥٧، ١٦٦، ١٨٣، ١٧٤
الأمراض: ١٨، ١٠٠، ١٦١
الإيقاع: ٥٢، ٥٨، ١٤٦
البخار: ٢٩، ٣٠

- ب -

الأصوات الحيوانية: ٢٢

تَمَّت الرسالة الخامسة في الموسيقي. (٢٦٢٥)

(٢٦٢٥) الخامسة في الموسيقي: الملقبة بالموسيقي [ع] الخامسة من القسم الأول من الرياضيات الموسومة برسالة الموسيقي [أ، ف] السابعة [ل] ثم: زيادة في ع: ولواهب العقل الحمد والمنة والشكر بلا نهاية (ثم في خط آخر: والسلم ع). زيادة في أ: من رسائل إخوان الصفاء وخلان الوفاء في تهذيب النفس وإصلاح الأخلاق وتتلوه الرسالة السادسة الموسومة بجغرافيا إن شاء الله. زيادة في ف: [-] أ؟ تهذيب النفس وإصلاح الأخلاق وتتلوها الرسالة الموسومة بجغرافيا ومعناها صورة الأرض إن شاء الله تعالى. زيادة في د: من رسائل إخوان الصفاء والحمد لله رب العالمين وصلواته على محمد وآله وصحبه أجمعين. زيادة في ط: من رسائل إخوان السعادة والحمد لله رب العالمين وصلواته على رسوله محمد وآله أجمعين وحسبنا الله وهو نعم الوكيل. زيادة في ك: من رسائل إخوان الصفاء والحمد لله رب العالمين والصلاة على نبيه وآله وصحبه أجمعين. زيادة في ل: والحمد لله رب العالمين.

قوله ﴿تَحِيَّتُهُمْ﴾ يوم يلقونه ^(٢٦١١) ﴿سَلَّمَ﴾ وقال تعالى ^(٢٦١٢) ﴿وَعَاخِرُ دَعْوَاهُمْ﴾ ^(٢٦١٣) أَنْ الْحَمْدُ لِلَّهِ رَبِّ الْعَالَمِينَ.

ويقال إن موسى عليه السلام لما سمع مُناجاة ربه ^(٢٦١٤) داخله من الفرح والسرور واللذة ^(٢٦١٥) ما لم يتمالك نفسه حتى (٦٠ أ) طرب وترنم، وصغر عنده بعد ذلك جميع ^(٢٦١٦) النعمات والألحان والأصوات ^(٢٦١٧).

وقفك ^(٢٦١٨) الله أيها الأخ البار الرحيم ^(٢٦١٩) لفهم معاني هذه الإشارات اللطيفة والأسرار الخفية وبلغك بلاغها ^(٢٦٢٠) وإيانا وجميع ^(٢٦٢١) إخواننا حيث كانوا في ^(٢٦٢٢) البلاد ^(٢٦٢٣)، إنه كريم جواد ^(٢٦٢٤).

(٢٦١١) يوم يلقونه: فيها [ط].

(٢٦١٢) وقال تعالى: وقوله عز وعلا [د، ك، ل] سقط من ط، ع: وقال تعالى.

(٢٦١٣) دعواهم: دعوتهم [ع، ك].

(٢٦١٤) ربه: الرحمن عز وجل [ع].

(٢٦١٥) سقط من أ، ف: واللذة.

(٢٦١٦) جميع: كل [أ، ك، ل] سقط من ف: جميع.

(٢٦١٧) سقط من ط: وترنم وصغر عنده... والأصوات (وفي هامش د نص غير

مقروء يوازي هذا).

(٢٦١٨) وقفك: وقفك [د].

(٢٦١٩) سقط من د، ط، ك، ل: البار الرحيم.

(٢٦٢٠) بلاغها: بلاغاً [ل] سقط من أ، ف: لفهم معاني هذه الإشارات... بلاغها.

(٢٦٢١) وإيانا وجميع: وإيانا للرشاد ولجميع [أ، ف].

(٢٦٢٢) في: وأين كانوا من [ل].

(٢٦٢٣) حيث كانوا في البلاد: في البلاد حيث كانوا وأين كانوا [د].

(٢٦٢٤) إنه كريم جواد: إنه الكريم الجواد [ف] إنه هو الكريم الجواد [أ] وأين

كانوا [ط، ك] سقط من د: إنه كريم جواد.

قَالَ الرَّسُولُ: غَدًا يَزُورُ^(٢٥٩٥) فَقُلْتُ: تَذَرِي مَا تَقُول

فَاسْتَفْزَهُ^(٢٥٩٦) الْقَوْلُ وَاللَّحْنُ^(٢٥٩٧) وَطَرِبَ^(٢٥٩٨) وَتَوَاجَدَ وَجَعَلَ
يُكْرِرُهُ^(٢٥٩٩) وَجَعَلَ^(٢٦٠٠) مَكَانَ الْيَاءِ^(٢٦٠١) نُونًا فَيَقُولُ^(٢٦٠٢)
غَدًا^(٢٦٠٣) نَزُورُ حَتَّى غُشِيَ عَلَيْهِ مِنْ شِدَّةِ الْفَرَحِ وَاللَّذَّةِ
وَالسُرُورِ^(٢٦٠٤)، فَلَمَّا [٢٤١] أَفَاقَ سُئِلَ عَنْ وَجْدِهِ مِمَّا كَانَ
فَقَالَ: ذَكَرْتُ قَوْلَ الرَّسُولِ^(٢٦٠٥) صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ إِنَّ أَهْلَ
الْجَنَّةِ^(٢٦٠٦) يَزُورُونَ رَبَّهُمْ فِي كُلِّ يَوْمٍ جُمُعَةً مَرَّةً وَاحِدَةً^(٢٦٠٧)،
وَيُرَوَّى^(٢٦٠٨) فِي الْخَبَرِ أَنَّ أَلَذَّ نِعْمَةٍ يَجِدُهَا أَهْلُ الْجَنَّةِ
وَأَطْيَبُ^(٢٦٠٩) نِعْمَةٍ يَسْمَعُونَ^(٢٦١٠) مُنَاجَاةَ الْبَارِئِ جَلَّ ثَنَاؤُهُ وَذَلِكَ

(٢٥٩٥) يزور: تزور [ك].

(٢٥٩٦) فاستفزه: فاستفراه / فاستفراه [د].

(٢٥٩٧) القول واللحن: اللحن والقول [أ، ف].

(٢٥٩٨) سقط من أ، د، ط، ف، ك، ل: وطرب.

(٢٥٩٩) جعل يكرره: جعلت تكرره [ف].

(٢٦٠٠) جعل: يجعل [أ، ك، ل] نجعل [ط] تجعل [ف].

(٢٦٠١) مكان الياء: [ف] كان الناء [ف].

(٢٦٠٢) فيقول: فنقول [ط] ويقول [ل] زيادة في ع: قال الرسول.

(٢٦٠٣) سقط من د، ط: غداً.

(٢٦٠٤) اللذة والسرور: السرور واللذة [ع].

(٢٦٠٥) الرسول: الرسول محمد [ط، ل] رسول الله [أ، ف].

(٢٦٠٦) الجنة: الجنان [د].

(٢٦٠٧) سقط من أ، ف، ك، ل: واحدة. سقط من د، ط: مرة واحدة.

(٢٦٠٨) يُرَوَّى: رُوي [أ، د، ف].

(٢٦٠٩) أطيّب: ألد [ع].

(٢٦١٠) يسمعون: تسمعون [أ] يسمعونها [ل].

وَسَمِعَ آخَرُ رَجُلًا^(٢٥٨٠) يَقْرَأُ^(٢٥٨١) ﴿فَمَا جَزَاؤُهُ إِنْ كُنْتُمْ
كَذِبِينَ قَالُوا جَزَاؤُهُ مَنْ وُجِدَ فِي رَحْلِهِ فَهُوَ جَزَاؤُهُ﴾ فاستعادها
مراراً^(٢٥٨٢) وصَعِقَ^(٢٥٨٣) فخرجت روحه، فقال أهل^(٢٥٨٤) الوجد
إِنَّمَا حُمِلَ مَعْنَى^(٢٥٨٥) قَوْلِهِ ﴿جَزَاؤُهُ﴾^(٢٥٨٦) مَنْ وُجِدَ فِي
رَحْلِهِ^(٢٥٨٧) ﴿أَنْ الْمَحْبُوبُ هُوَ جَزَاءُ الْحَبِيبِ لِأَنَّهُ هُوَ الْمَوْجُودُ
فِي رَحْلِهِ، يَعْنُونَ أَنَّ صُورَةَ الْمَحْبُوبِ مُصَوَّرَةٌ^(٢٥٨٨) فِي نَفْسِ
الْحَبِيبِ^(٢٥٨٩) وَرُسُومُ شَكْلِهِ مَنْقُوشَةٌ فِي قَلْبِهِ فَذَلِكَ جَزَاؤُهُ.
أَلَا تَرَى يَا أَخِي كَيْفَ حُمِلَ الْقَوْلُ^(٢٥٩٠) عَلَى مَذْهَبِهِ
وَمَقْصَدِهِ^(٢٥٩١) مَعَ^(٢٥٩٢) شَهْرَةِ مَعْنَى الْآيَةِ فِي الظَّاهِرِ.
وَأَخَرُ سَمِعَ قَوْلَ الْقَائِلِ^(٢٥٩٣) وَهُوَ يَغْنَى^(٢٥٩٤)

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- (٢٥٨٠) رجلاً: قارئاً [د، ط، ك].
 (٢٥٨١) يقرأ: يقول [ع].
 (٢٥٨٢) مراراً: وزعق [د، ط، ك] سقط من ع: مراراً.
 (٢٥٨٣) وصعق: وزعق زعقة [أ، ف، ل].
 (٢٥٨٤) زيادة في ك: رحلاً.
 (٢٥٨٥) حُمِلَ مَعْنَى: من حمل [ط] سقط من د: معنى.
 (٢٥٨٦) جزاؤه: فجزاؤه [ف] فهو جزاؤه [د].
 (٢٥٨٧) سقط من د: مَنْ وُجِدَ فِي رَحْلِهِ. زيادة في ط: فهو جزاؤه.
 (٢٥٨٨) مصوَّرة: متصوَّرة [ف] صورة [ك].
 (٢٥٨٩) الحبيب: المحب [أ، ف، ل (وفي الهامش: الحبيب)].
 (٢٥٩٠) القول: هذا المعنى [أ، ف] معنى القول [د، ط، ك].
 (٢٥٩١) مذهبه ومقصده: مذهبه ومعتقده [أ، ف، وفي هامش ل] مقصده [د].
 (٢٥٩٢) مع: على [ف].
 (٢٥٩٣) قول القائل: قائلاً يقول يقول [أ] قائلاً يقول [ف].
 (٢٥٩٤) يغني: يتغنى [ف].

تصوّرت^(٢٥٦٦) من رسوم معشوقاتها^(٢٥٦٧) واعتقدت في محبوبها^(٢٥٦٨)، حتى إنه^(٢٥٦٩) ربّما وقع النكير من الآخرين إذا لم يعرفوا مذهبه ولا ما قصده^(٢٥٧٠) نحوه.

والمِثَالُ في ذلك ما يُحكى أن رجلاً من^(٢٥٧١) الْمُتصَوِّفَةِ^(٢٥٧٢) سمع قارئاً يقرأ ﴿يَتَأَيَّنُهَا النَّفْسُ الْمُطْمَئِنَّةُ أَرْجِعْ إِلَىٰ رَبِّكَ رَاضِيَةً مَّرْضِيَةً﴾ فاستعادها من القارئ مراراً^(٢٥٧٣) وجعل يقول كم أقول^(٢٥٧٤) لها ارجعي فليست^(٢٥٧٥) ترجع فتواجد^(٢٥٧٦) فزَعَقَ^(٢٥٧٧) وصَعِقَ صَعَقَةً^(٢٥٧٨) فخرجت روحه^(٢٥٧٩).

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- (٢٥٦٦) تصوّرت: تصوّرت [أ، ف].
 (٢٥٦٧) معشوقاتها: معشوقها [د، ط].
 (٢٥٦٨) محبوبها: محبوباتها [أ، ف].
 (٢٥٦٩) سقط من أ، د، ط، ف، ل: إنه.
 (٢٥٧٠) قصده: قصد [أ، د، ط، ف، ل].
 (٢٥٧١) زيادة في أ، ف: أهل الوجد من. زيادة في ط: من أهل الوجد من.
 (٢٥٧٢) المتصوفة: المتشوقة [ف] زيادة في د، ك: من أهل الوجد.
 (٢٥٧٣) سقط من ع: مراراً.
 (٢٥٧٤) أقول: [ي]أقول [ك] تقول [ل] سقط من ط: كم أقول.
 (٢٥٧٥) فليست: فليس [د، ط، ك] وليس [أ، ل] لهس ؟ [ف].
 (٢٥٧٦) فتواجد: وتواجد [د، ف، ك، ل].
 (٢٥٧٧) فزَعَق: وزَعَق [د، ط] وزَعَقَ زَعَقَةً [أ، ك، ل] فزَعَقَ زَعَقَةً [ف].
 (٢٥٧٨) سقط من د، ط: صَعَقَةً.
 (٢٥٧٩) فخرجت روحه: حتى خرجت روحه [د، ط] خرجت روحه [ك] ففاضت نفسه [ع].

والفلاسفة^(٢٥٥٣) يا أخي يسمّون^(٢٥٥٤) الجنّة عالم الأرواح.

[٢٤٠] فصل^(٢٥٥٥) [١٧]

اعلم يا أخي أيّدك الله وإيانا بروحٍ منه أن تأثيرات نغمات
الموسيقار^(٢٥٥٦) في نفوس المستمعين مختلفة الأنواع^(٢٥٥٧)،
ولذة النفوس منها وسرورها بها متفنّة^(٢٥٥٨) متباينة. كل ذلك
بحسب مراتبها^(٢٥٥٩) في المعارف^(٢٥٦٠) وبحسب معشوقاتها
المألوفة^(٢٥٦١) من^(٢٥٦٢) المحاسن فكل نفس إذا سمعت من
الأصوات^(٢٥٦٣) ما يشاكل معشوقها^(٢٥٦٤)، ومن النغمات ما
يلائم محبوبها^(٢٥٦٥) طربت وفرحت وسرت والتذت بحسب ما

(٢٥٥٣) هو خير مما يجمعون والفلاسفة: ولهذا الفلاسفة [ف].

(٢٥٥٤) يسمّون: تسمّى [د، ع، ط، ف، ك، ل].

(٢٥٥٥) سقط من أ: فصل.

(٢٥٥٦) الموسيقار: الموسيقي [د].

(٢٥٥٧) الأنواع: الألوان [ع].

(٢٥٥٨) متفنّة: مفتنة [ل] مفتنة [ط] متعة [ع، وفي الهامش في خط آخر: لعله متغايرة].

(٢٥٥٩) مراتبها: المراتب [ك].

(٢٥٦٠) سقط من ع: في المعارف.

(٢٥٦١) زيادة في ع: عندها.

(٢٥٦٢) من: في [ف].

(٢٥٦٣) الأصوات: الأوصاف [د، ط، ع، ل].

(٢٥٦٤) يشاكل معشوقها: شاكل معشوقاتها ومحبوباتها [أ، ف] يشاكل معشوقاتها [د، ط، ك].

(٢٥٦٥) يلائم محبوبها: يلائمها [أ، ف] يلائم محبوباتها [د، ك، ل].

ويقال إنه^(٢٥٤٠) إذا^(٢٥٤١) هبَّ نسيِّمُ الجِنانِ بالأسحار
 تحرَّكت أشجارُها واهتزَّت أغصانُها وتخشَّشت^(٢٥٤٢) أوراقها
 وتناثرت ثمارها^(٢٥٤٣) وتلاَّأت زهراتها^(٢٥٤٤) وفاحت روائحها
 وسمعت لها رنات^(٢٥٤٥) ونغمات لو سمع أهلُ الدنيا نغمةً واحدةً
 منها^(٢٥٤٦) أو عاينوا^(٢٥٤٧) نظرةً واحدةً وتنسموا منها رائحةً^(٢٥٤٨)
 لما تلذَّذوا^(٢٥٤٩) بالحياة ولا انتفعوا بالعيش^(٢٥٥٠) (٥٩ ب) في
 الدُّنيا^(٢٥٥١) بعدها^(٢٥٥٢) أبداً. فلمثل هذا فليعمل العاملون وفي
 ذلك فليتنافس المتنافسون وبذلك ﴿فَلْيَفْرَحُوا هُوَ خَيْرٌ مِّمَّا
 يَجْمَعُونَ﴾.

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- (٢٥٤٠) ويقال إنه: وذلك أنَّ الأنبياء عليهم السلام قالوا [د].
 (٢٥٤١) إذا: قد [ف].
 (٢٥٤٢) سقط من د: أغصانها وتخشَّشت. سقط من ط: ويقال إنه إذا...
 وتخشَّشت (ولعل هذا النصُّ كُتب في الهامش ثم قُقد/شطب).
 (٢٥٤٣) ثمارها: ثمراتها [أ، د، ط، ف، ك].
 (٢٥٤٤) زهراتها: أزهارها [ل].
 (٢٥٤٥) سمعت لها رنات: سمع لها ألحان [ك، ل].
 (٢٥٤٦) سقط من أ، د، ط، ف: وسمعت لها رنات... واحدة منها. سقط من
 ك، ل: لو سمع أهل الدنيا نغمة واحدة منها.
 (٢٥٤٧) أو عاينوا: فلو عاين أهل الدنيا منها [أ، د، ط، ف، ك، ل].
 (٢٥٤٨) سقط من أ، د، ط، ف، ك، ل: وتنسموا منها رائحة.
 (٢٥٤٩) تلذَّذوا: التذَّوا [أ، ف، ل] زيادة في د، ك: في الدنيا.
 (٢٥٥٠) سقط من أ، د، ط، ف، ك، ل: ولا انتفعوا بالعيش.
 (٢٥٥١) سقط من د، ك: في الدنيا.
 (٢٥٥٢) بعدها: بعد ذلك [أ، د، ط، ف، ك، ل].

وتشويقُ الأنبياء عليهم السلام^(٢٥٢٦) إلى نعيم الجنان^(٢٥٢٧) إذّا
باطلٌ وزورٌ وبُهتانٌ ومعاذُ الله من^(٢٥٢٨) ذلك، فإن توهّم متوهّمٌ أو
ظنَّ ظانٌّ أو قال قائل^(٢٥٢٩) إن الجنان هي من^(٢٥٣٠) وراء الأفلاك
وخارجة من^(٢٥٣١) فسحة السموات، فقل^(٢٥٣٢) له فكيف^(٢٥٣٣)
تطمع^(٢٥٣٤) في الوصول إليها^(٢٥٣٥) إن لم تصعد^(٢٥٣٦) أولاً^(٢٥٣٧)
إلى ملكوت السموات^(٢٥٣٨) وتُجاوزَ سعة^(٢٥٣٩) الأفلاك ؟

(٢٥٢٦) تشويق الأنبياء عليهم السلام: ترغيب الأنبياء صلوات الله [أ، ف] ترغيب
الأنبياء عليهم السلام وتشويقهم [ط، ك] رغبت الأنبياء عليهم السلام
وتشويقهم [د].

(٢٥٢٧) السلام إلى نعيم الجنان: أجمعين وتشويقهم إلى الجنة ونعيمها ودار السلك
[أ] وتشويقهم إلى الجنة ونعيمها ودار القرار السلام [ف].

(٢٥٢٨) من: في [ف].

(٢٥٢٩) قائل: مجادل [أ، ف، ل (من تحت، وفي النص: قائل)] مخالف [د، ط]
مجادل مخالف [ك].

(٢٥٣٠) سقط من ف: من.

(٢٥٣١) سقط من ع: من.

(٢٥٣٢) فقل: قيل [أ، د، ط، ك، ل] فقل [ف].

(٢٥٣٣) فكيف: كيف [أ] وكيف [د، ط].

(٢٥٣٤) تطمع: يُطمع [ل] [يُ]طمع [ط].

(٢٥٣٥) سقط من د: إليها.

(٢٥٣٦) إن لم تصعد: إن لم يصعد [ط] قبل أن [ت]صعد [ل].

(٢٥٣٧) سقط من ع، ل: أولاً.

(٢٥٣٨) زيادة في ط: قيل له وكيف يُطمع في الوصول إليها إن لم يصعد أولاً إلى
ملكوت السموات.

(٢٥٣٩) تجاوز سعة: [ت]تجاوز السبعة [أ] تجاوز السبعة [ف] [ت]تجاوز من سعة
[ط، ك] تجاوز من سعة [د، ل].

أَسْمَاعٌ فِيهِ^(٢٥١١) إِذْنٌ^(٢٥١٢) بِنُوعٍ^(٢٥١٣) أَشْرَفَ وَأَفْضَلَ مِمَّا هَاهُنَا
لَأَنَّ^(٢٥١٤) تِلْكَ الْجَوَاهِرَ^(٢٥١٥) أَصْفَى وَأَنُورُ وَأَشْفُ وَأَتَمُّ
وَأَكْمَلُ^(٢٥١٦).

[٢٨] وَقَالَ آخِرُ: إِنَّمَا اسْتَخْرَجْتَ الْحُكَمَاءَ^(٢٥١٧) هَذِهِ
الْأَلْحَانَ الْمَوْسِيقِيَّةَ الَّتِي هَاهُنَا^(٢٥١٨) مِمَّا ثَلَّةٌ لَمَّا هُنَاكَ كَمَا
عُمِلَتْ^(٢٥١٩) الْآلَاتُ^(٢٥٢٠) الرِّصْدِيَّةُ مِثْلَ الْأَصْطِرْلَابِ وَالْبَنْكَانِ
وَذَاتِ^(٢٥٢١) الْحَلْقِ^(٢٥٢٢) مِمَّا ثَلَّةٌ لَمَّا هُنَاكَ.

[٢٩] وَقَالَ آخِرُ: إِنْ لَمْ تَكُنْ تِلْكَ^(٢٥٢٣) الْمَحْسُوسَاتِ الَّتِي
هُنَاكَ أَشْرَفَ وَأَفْضَلَ مِمَّا هَاهُنَا^(٢٥٢٤) وَلَمْ يَكُنْ لِلنَّفُوسِ إِلَيْهَا
وَصُولٌ فَتَرْغِيبُ الْفَلَّاسِفَةِ فِي الرَّجُوعِ^(٢٥٢٥) إِلَى عَالَمِ الْأَرْوَاحِ

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- (٢٥١١) أَسْمَاعٌ فِيهِ: سَمِعَ وَبَصَرَ فَهَمَ [أ، ط، ف] أَسْمَاعٌ وَأَبْصَارُ فَهَمَ [ل].
(٢٥١٢) أَسْمَاعٌ فِيهِ إِذْنٌ: سَمِعَ وَبَصَرَ وَهَمَ يَسْمَعُونَ وَبَصُرُونَ فَهَمَ إِذْنٌ [د، ك].
(٢٥١٣) بِنُوعٍ: نَوْعٌ [أ، ف] نَفَرٍ اعْزَوْ [د] سَقَطَ مِنْ ك، ل: بِنُوعٍ.
(٢٥١٤) لَأَنَّ: لِأَجْلِ أَنْ [د].
(٢٥١٥) زِيَادَةٌ فِي أ، د، ط، ف، ك: هِيَ.
(٢٥١٦) أَشْفُ وَأَتَمُّ وَأَكْمَلُ: أَشْفُ وَأَكْمَلُ وَأَتَمُّ [ك، ل] أَشْرَفَ وَأَكْمَلُ وَأَتَمُّ [د].
(٢٥١٧) سَقَطَ مِنْ أ، د، ط، ف، ك، ل: الْحُكَمَاءُ.
(٢٥١٨) سَقَطَ مِنْ ل: الَّتِي هَاهُنَا.
(٢٥١٩) عُمِلَتْ: عَلِمَتْ [ك].
(٢٥٢٠) الْآلَاتُ: آلَاتُ [ف].
(٢٥٢١) ذَاتُ: ذَوَاتُ [أ].
(٢٥٢٢) الْبَنْكَانِ وَذَاتُ الْحَلْقِ: الْكَرَّةُ وَذَوَاتُ الْحَلْقِ وَالْبَنْكَانِ [أ، ف].
(٢٥٢٣) سَقَطَ مِنْ أ، د، ط، ك: تِلْكَ.
(٢٥٢٤) سَقَطَ مِنْ ف: وَقَالَ آخِرُ... وَأَفْضَلَ مِمَّا هَاهُنَا.
(٢٥٢٥) سَقَطَ مِنْ ع: فِي الرَّجُوعِ.

التي في عالم الأفلاك وسعة السموات كما أن النقوش^(٢٤٩٨)
والصُّور التي على وجوه الحيطان والسُّقوف أشباح ومثالات
لصُّور هذه الحيوانات اللحيمة، وإنما^(٢٤٩٩) نسبة الخلائق اللحمية
إلى تلك الخلائق التي جواهرها^(٢٥٠٠) صافية^(٢٥٠١) كنسبة هذه
الصُّور المنقوشة^(٢٥٠٢) المُزخرفة إلى هذه الحيوانية
اللحمية^(٢٥٠٣).

[٢٦] وقال آخر: إن كان هناك خلائق وليس لهم سمع ولا
بصر ولا [٢٣٩] عقل ولا فهم^(٢٥٠٤) ولا نطق ولا تمييز^(٢٥٠٥)
فهم إذاً ﴿صُمُّ بَكْمٌ عُمٌّ﴾.

[٢٧] وقال آخر: فإن كان لهم سمع وبصر وليس هناك
أصوات تُسمع^(٢٥٠٦) ولا نغمات تُلدُّ^(٢٥٠٧) فسمعهم
وبصرهم^(٢٥٠٨) إذاً باطل لا فائدة فيه^(٢٥٠٩)، فإن كان^(٢٥١٠) لهم

(٢٤٩٨) النقوش: النفوس [أ، د، ل].

(٢٤٩٩) وإنما: فإن [أ] وإن [د، ط، ف، ل].

(٢٥٠٠) جواهرها: جواهرها [د، ط].

(٢٥٠١) سقط من ك: والسقوف أشباح ومثالات... صافية.

(٢٥٠٢) المنقوشة: المنقشة [أ، ف].

(٢٥٠٣) زيادة في د، ط، ك، ل: الدموية.

(٢٥٠٤) ولا عقل ولا فهم: ولا فهم ولا عقل [ل].

(٢٥٠٥) نطق ولا تمييز: تمييز ولا نطق [ف] سقط من د: ولا تمييز. سقط من ك:

فهم ولا نطق ولا تمييز.

(٢٥٠٦) سقط من د: تُسمع.

(٢٥٠٧) تُلدُّ: [ت]سُلد [ل].

(٢٥٠٨) فسمعهم وبصرهم: سمعهم وبصرهم [د]. سقط من ك: وبصرهم.

(٢٥٠٩) زائدة في هامش ل: وإن لم يكن لهم سمع وبصر وهم يسمعون ويبصرون.

(٢٥١٠) فإن كان: فإن يكن [د] وإن يكن [أ، ط] فإن لم يكن [ك] وإن لم يكن [ف].

السُّمُوكُ وَالْحَيْتَانِ (٥٩ أ) وَغَيْرَهَا مَا لَا يُحْصِي عَدَدَ أَجْنَاسِهَا وَأَنْوَاعِهَا إِلَّا اللَّهُ عَزَّ اسْمُهُ الَّذِي خَلَقَهَا وَصَوَّرَهَا وَأَبْدَعَهَا^(٢٤٨٤)، وَلَمْ يَتْرُكْ هَذَا^(٢٤٨٥) الْهَوَاءَ الرَّقِيقَ فَارِغاً^(٢٤٨٦) حَتَّى خَلَقَ لَهَا^(٢٤٨٧) أَجْنَاسَ الطَّيُورِ تَسْبِحُ^(٢٤٨٨) فِيهِ^(٢٤٨٩) كَمَا تَسْبِحُ^(٢٤٩٠) السُّمُوكُ وَالْحَيْتَانُ فِي الْمِيَاهِ، وَلَمْ يَتْرُكِ الْبَرَارِي^(٢٤٩١) الْيَابِسَةَ وَالْآجَامَ^(٢٤٩٢) الْوَحِلَّةَ وَالْجِبَالَ الرَّاسِيَّةَ حَتَّى خَلَقَ فِيهَا أَجْنَاسَ السَّبَّاعِ وَالْوَحُوشِ، وَلَمْ يَتْرُكْ ظُلُمَاتِ الثَّرَابِ^(٢٤٩٣) وَأَجْسَامَ^(٢٤٩٤) النَّبَاتِ وَالْحَبِّ وَالثَّمَرِ^(٢٤٩٥) حَتَّى خَلَقَ فِيهَا^(٢٤٩٦) أَجْنَاسَ الْهَوَامِّ وَالْحَشْرَاتِ.

[٢٥] وَقَالَ آخَرُ: إِنْ أَجْنَاسَ هَذِهِ الْحَيَوَانَاتِ الَّتِي فِي هَذَا^(٢٤٩٧) الْعَالَمِ إِنَّمَا هِيَ أَشْبَاحٌ وَمِثَالَاتٌ لَتِلْكَ الصُّوَرِ وَالْخَلَائِقِ

(٢٤٨٤) سقط من أ، د، ط، ف، ك، ل: ما لا يُحْصِي عَدَدَ أَجْنَاسِهَا... وَأَبْدَعَهَا.

(٢٤٨٥) هذا: جو لهذا [أ] جو هذا [ف] جوهر [د، ك] جو [ل].

(٢٤٨٦) سقط من د، ط، ع، ك، ل: فارغاً.

(٢٤٨٧) لها: له [ط، ك] فيها [د].

(٢٤٨٨) تسبح: تسبِّح [ع، ل].

(٢٤٨٩) فيه: فيها [ل] له [ك].

(٢٤٩٠) تسبح: تسبِّح [ع، ل].

(٢٤٩١) البراري: الآكام والبراري [د، ك]. في هامش ل: البوادي.

(٢٤٩٢) زيادة في ل (من تحت): الآكام.

(٢٤٩٣) التراب: البر [ف].

(٢٤٩٤) وأجسام: أجناس [ط، ك، ل].

(٢٤٩٥) والحب والثمر: والثمر والحب [أ] والثمار والحب [ف] والحب واليم [د].

(٢٤٩٦) فيها: منها [ع].

(٢٤٩٧) سقط من أ، ف: هذا.

الموزونة فقد فعلت الحكمة الإلهية^(٢٤٧١) إذا شيئاً باطلاً^(٢٤٧٢)،
ومن المقدمات المتفق عليها بين الحكماء أن الطبيعة لم تفعل
شيئاً باطلاً لا فائدة فيه .

[٢٤] وقال آخر: إن^(٢٤٧٣) لم يكن في فضاء الأفلاك وسعة
السموات خلائق وسكان فهي إذاً قفر^(٢٤٧٤) خاوية^(٢٤٧٥)، وكيف
يجوز في حكمة البارئ^(٢٤٧٦) أن يترك فضاء تلك الأفلاك^(٢٤٧٧)
مع شرف جوهرها^(٢٤٧٨) فارغاً خاوياً^(٢٤٧٩) قفراً بلا خلائق هناك
وهو^(٢٤٨٠) لم يترك قعر^(٢٤٨١) البحار المالحة المرة المظلمة^(٢٤٨٢)
فارغاً حتى خلق في عمقها^(٢٤٨٣) أجناس الحيوانات من أنواع

(٢٤٧١) الحكمة الإلهية: الحكمة (وفي الهامش: الحكماء) أيضاً إذن [ل] الحكماء
[د] سقط من ط، ع، ك: الإلهية.
(٢٤٧٢) زيادة في د، ك، ل: لا فائدة فيه.
(٢٤٧٣) إن: إذا [ل].
(٢٤٧٤) قفر: قفرة [د].
(٢٤٧٥) خاوية: في هامش ع في خط آخر.
(٢٤٧٦) حكمة البارئ: الحكمة الإلهية [أ] زيادة في د: جل جلاله. زيادة في ط،
ك: جل ثناؤه. زيادة في ل: جلت عظمته.
(٢٤٧٧) سقط من ف: وسعة السموات... فضاء تلك الأفلاك.
(٢٤٧٨) جوهرها: جواهرها [ط، ف، ل].
(٢٤٧٩) فارغاً خاوياً: خاوياً فارغاً [د، ط، ك] فارغاً حافياً [ف].
(٢٤٨٠) وهو: هذا و [د، ط] هو ان [ك] زيادة في أ، ف: تعالى.
(٢٤٨١) قعر: قعور [أ، ف، ك].
(٢٤٨٢) المرة المظلمة: المظلمة المرة [أ، ك] المظلمة والمرة [ف] المظلمة [د،
ط].

(٢٤٨٣) عمقها: قعرها [أ، د، ط، ف، ك، وفي هامش ل].

الجِسَان في الأنفس الجزئية صارت هي^(٢٤٥٦) مُشَاكِلةً ومُنَاسِبَةً
للنفس^(٢٤٥٧) الكلّية ومشتاقَةً نحوها ومتمنّيةً للحوق^(٢٤٥٨) بها،
فإذا فارقت الهيكلَ الجِسْماني^(٢٤٥٩) ارتفعت^(٢٤٦٠) إلى ملكوت
السموات^(٢٤٦١) ولِحِقَّت [٢٣٨] بالملاء^(٢٤٦٢) الأعلى وعند ذلك
أيقنت بالبقاء وأمِنَت^(٢٤٦٣) الفناء ووجدت لذة العيش صفوًّا.
[٢٣] فقال^(٢٤٦٤) قائل منهم: وما^(٢٤٦٥) الملاء الأعلى؟ قال:
أهل السموات وسكّان الأفلاك، قال: وأنتى لهم^(٢٤٦٦)
السمع^(٢٤٦٧) والبصر؟ قال: إن^(٢٤٦٨) لم يكن في عالم^(٢٤٦٩)
الأفلاك وسعة السموات مَنْ يرى^(٢٤٧٠) تلك الحركات المنتظمة
وينظرُ إلى تلك الأشخاص الفاضلة ويسمعُ تلك النغمات اللذيذة

(٢٤٥٦) هي: هذه [د، ط، ك، ل: ومن فوق: هي].

(٢٤٥٧) للنفس: النفس [ف] للأنفس [د].

(٢٤٥٨) للحوق: اللحوق [د، ك].

(٢٤٥٩) الجِسْماني: الجسداني [د، ل].

(٢٤٦٠) ارتفعت: ارتقت [أ، د، ط، ك، ل].

(٢٤٦١) السموات: السماء [أ، د، ط، ف، ك].

(٢٤٦٢) بالملاء: بالعالم [ف].

(٢٤٦٣) زيادة في أ، د، ط، ف، ك، ل: من.

(٢٤٦٤) فقال: قال [ع].

(٢٤٦٥) وما: ومن [أ، ط، ف] ما [ك].

(٢٤٦٦) وأنتى لهم: أولهم [أ] أنتى لهم [د، ط، ف، ك].

(٢٤٦٧) السمع: بالسمع [ل].

(٢٤٦٨) إن: فإن [د، ط، ك، ل].

(٢٤٦٩) زيادة في ف: الأرواح.

(٢٤٧٠) من يرى: وان [ي]... ي [د].

وصورة^(٢٤٤٤) لِقُرْبِ عَهْدِهَا^(٢٤٤٥) من فراغ^(٢٤٤٦) الصانع منها،
وهكذا حُسْنُ النباتِ^(٢٤٤٧) وروْنَقُها^(٢٤٤٨) في مبدأ كونها^(٢٤٤٩)
قبل الآفات العارضة لها^(٢٤٥٠) من الهرم والبلى والفساد.

[٢٠] وقال آخر: إنما تشخَّصُ أبصارُ النفوس الجزئية نحو
المحاسن اشتياقاً إليها لما بينها من المُجانسة لأن محاسن هذا
العالم من آثار النفوس^(٢٤٥١) الكلية الفلكية^(٢٤٥٢).

[٢١] وقال آخر: إن وزنَ نقراتِ الموسيقىار وتناسُبَ ما بينها
ولذيذَ نغماتها يُنبئُ النفوسَ الجزئية بأن لحركات^(٢٤٥٣) الأفلاك
والكواكب نغماتٍ متناسبةً مؤتلفةً لذيدة^(٢٤٥٤).

[٢٢] وقال آخر: إذا صُوِّرت^(٢٤٥٥) رسومُ المحسوساتِ

(٢٤٤٤) ألطف بنية وأظرف شكلاً وصورة: أظرف شكلاً وصورة وألطف بنية [د]،
ط، ك] أظرف صورة وشكلاً وألطف بنية [ل].
(٢٤٤٥) لقرب عهدها: وأقرب عهداً [أ، ف].
(٢٤٤٦) من فراغ: بفراغ [أ، د، ط، ف].
(٢٤٤٧) حسن النبات: ترى النباتات [أ، ف] حكم ما يرى من حسن النبات [د]،
ط، ك، ل].

(٢٤٤٨) رونغها: رونقه [د، ط].
(٢٤٤٩) كونها: كونه [د، ط] زيادة في ع: من.
(٢٤٥٠) لها: له [د، ط، ك، ل] سقط من ع: لها.
(٢٤٥١) النفوس: النفس [د، ع، ك].
(٢٤٥٢) سقط من ل: الفلكية.
(٢٤٥٣) لحركات: حركات [ع، ف].
(٢٤٥٤) مؤتلفة لذيدة: لذيدة مؤتلفة [أ، ف].
(٢٤٥٥) صُوِّرت: تصوِّرت [أ، د، ط، ف، ك، ل: ومن تحت: صُوِّرت].

وفرحت بها الأرواح^(٢٤٣١) وسُرَّت بها النفوس^(٢٤٣٢) لما بينها من
المشاكلَة والتَّناسُب^(٢٤٣٣) والمُجانسة^(٢٤٣٤)، وهكذا حُكمها
في^(٢٤٣٥) استحسان الوجوه^(٢٤٣٦) وزينة الطبيعيات^(٢٤٣٧) لأن
محاسن الموجودات الطبيعية هي من أجل^(٢٤٣٨) تناسُب أصباغها
وحُسْن تأليف أجزائها^(٢٤٣٩).

[١٩] وقال آخر: إنما تشخَّصُ أبصارُ الناظرين إلى الوجوه
الحِسان لأنها أثر^(٢٤٤٠) من عالم النفس ولأن عامَّة المرثيات في
هذا العالم^(٢٤٤١) غيرُ حِسانٍ لما يَعْرِضُ لها من الآفات المُسيئة
المشوّهة^(٢٤٤٢) إمَّا في أصل التركيب أو^(٢٤٤٣) بعده. وبيان ذلك
أن الصغار من المواليد يكونون ألطفَ بنيةً وأظرفَ شكلاً

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- (٢٤٣١) الأرواح: النفوس [ل].
(٢٤٣٢) النفوس: الأرواح [ل].
(٢٤٣٣) التناسب: المناسبة [أ، ف].
(٢٤٣٤) التناسب والمجانسة: المجانسة والتناسب [ل] سقط من د: وسُرَّت بها
النفوس... والمجانسة.
(٢٤٣٥) في: من [ع].
(٢٤٣٦) سقط من ع: الوجوه.
(٢٤٣٧) الطبيعيات: الطباع [ل].
(٢٤٣٨) هي من أجل: هل أجل من [أ، ف].
(٢٤٣٩) زيادة في ك وفي هامش ل: الحسنة. زيادة في د: حسنة.
(٢٤٤٠) أثر: أمر [ك، ل].
(٢٤٤١) زيادة في ع: إنما صارت.
(٢٤٤٢) المُسيئة المشوّهة: المشينة المشوّهة [د، ط] المشوّهة المسيئة [ع].
(٢٤٤٣) أو: وإما [إ].

يَعْرِفُ بِجُودَةِ الذَّوْقِ الْكَلَامَ الْمَوْزُونَ وَالنِّغْمَاتِ الْمُنَاسِبَةَ وَالْفَرْقَ
بَيْنَ الصَّحِيحِ وَالْمُنْزَجِفِ^(٢٤١٧) وَالْخُرُوجَ مِنَ الْإِيقَاعِ
وَاسْتَوَاءِ^(٢٤١٨) اللَّحْنِ، وَالْبَصْرُ يُخْطِئُ فِي أَكْثَرِ مُدْرَكَاتِهِ، فَإِنَّهُ رَبَّمَا
رَأَى^(٢٤١٩) [٢٣٧] الْكَبِيرَ صَغِيرًا وَالصَّغِيرَ كَبِيرًا^(٢٤٢٠) وَالْقَرِيبَ
بَعِيدًا وَالْبَعِيدَ قَرِيبًا^(٢٤٢١) وَالْمُتَحَرِّكَ سَاكِنًا وَالسَّاكِنَ مُتَحَرِّكًا^(٢٤٢٢)
وَالْمُسْتَوِيَّ مُعَوَّجًا وَالْمُعَوَّجَ مُسْتَوِيًا^(٢٤٢٣).

[١٨] وَقَالَ آخَرُ: إِنَّ جَوْهَرَ النَّفْسِ لَمَّا كَانَ^(٢٤٢٤) مُجَانِسًا
وَمَشَاكِلاً لِلْأَعْدَادِ التَّأْلِيفِيَّةِ^(٢٤٢٥) (٥٨ ب) وَكَانَتْ نِغْمَاتُ
الْحَانِ^(٢٤٢٦) الْمَوْسِيقَارِ مَوْزُونَةً وَأَزْمَانُ^(٢٤٢٧) حَرَكَاتِ نِقْرَاتِهَا
وَسُكُونَاتِهَا بَيْنَهَا^(٢٤٢٨) مُنَاسِبَةً^(٢٤٢٩) اسْتَلْذَّتْهَا الطَّبَاعُ^(٢٤٣٠)

(٢٤١٧) المنزحف: المزحف [د].

(٢٤١٨) استواء: نسق [ع].

(٢٤١٩) رأى: يرى [د، ط، ك، ل].

(٢٤٢٠) الكبير صغيراً والصغير كبيراً: الصغير كبيراً والكبير صغيراً [ف].

(٢٤٢١) سقط من ف: والقريب بعيداً والبعيد قريباً. سقط من أ: والبعيد قريباً.

(٢٤٢٢) سقط من ف: والمتحرك ساكناً والساكين متحركاً. زيادة في أ، ف: والمربع مستديراً.

(٢٤٢٣) والمستوي معوجاً والمعوج مستوياً: والمعوج مستوياً والمستوي معوجاً [أ، ف].

(٢٤٢٤) زيادة في د، ط: فيها.

(٢٤٢٥) التأليفية: تأليفية [أ].

(٢٤٢٦) ألحان: الألحان [أ].

(٢٤٢٧) أزمان: زمان [د].

(٢٤٢٨) حركات نقراتها وسكوناتها ما بينها: حركاتها وسكوناتها عند نقراتها [أ، ف].

(٢٤٢٩) متناسبة: مناسبة [أ].

(٢٤٣٠) استلذتها الطباع: استلذتها الطباع [د، ط] واستلذتها الطباع [أ، ف] استلذ بها الطباع [ك].

أفضل^(٢٤٠٥)، لأن البصر^(٢٤٠٦) كالنهار والسمع كالليل^(٢٤٠٧).

[١٣] وقال آخر: لا بل السمعُ أفضلُ من البصر^(٢٤٠٨) لأن البصر يذهب في طلب محسوساته ويخدمها حتى يُدركها مثل العبيد، والسمعُ تُحمَلُ إليه محسوساته^(٢٤٠٩) حتى تخدمه مثل الملوك.

[١٤] وقال آخر: البصر لا يُدرك^(٢٤١٠) محسوساته^(٢٤١١) إلا على خطوط مستقيمة والسمع يُدركها من محيط الدائرة.

[١٥] وقال آخر: محسوساتُ البصر أكثرها^(٢٤١٢) جسمانية ومحسوساتُ السمع كلها^(٢٤١٣) روحانية.

[١٦] وقال آخر: النفسُ بطريق السمع تنال^(٢٤١٤) خبر^(٢٤١٥) من هو غائب عنها بالمكان والزمان، وبطريق البصر لا تنال إلا ما كان حاضراً في الوقت.

[١٧] وقال آخر: السمعُ أدقُّ تمييزاً من البصر إذ^(٢٤١٦) كان

(٢٤٠٥) أفضل: أشرف وأفضل من السمع [ل] أشرف من السمع [ع].

(٢٤٠٦) لأن البصر: لأنه [د، ط] من البصر لأنه [ك].

(٢٤٠٧) في [أ] نجد [١٢] بعد [١٣].

(٢٤٠٨) سقط من د، ط، ك: من البصر.

(٢٤٠٩) سقط من ف: ويخدمها حتى يُدركها... محسوساته.

(٢٤١٠) يُدرك: يحمل إليه [ل].

(٢٤١١) محسوساته: المحسوسات [د، ك].

(٢٤١٢) محسوسات البصر أكثرها: محسوسات البصر أكثر [ف] البصر أكثر محسوساته [ع].

(٢٤١٣) كلها: أكثرها [أ].

(٢٤١٤) زيادة في د: كل. زيادة في هـ: كل خبر وبيان.

(٢٤١٥) سقط من ف: خبر. زيادة في د: تنال خبر.

(٢٤١٦) إذ: إذا [ف، ك].

[١١] وقال آخر: إن النفوس الناطقة إذا صفت من (٢٣٨٩)
 دَرَنِ الشهوات الجِسْمانية وزهدت (٢٣٩٠) في الملاذّ الطبعية
 وأنجلت عنها الأصدئة (٢٣٩١) الهَيُولانيّة ترنّمت بالألحان
 الحزينة (٢٣٩٢) وتذكّرت عالمها الروحانيّ الشريف العالي وتشوّقت
 نحوه، فإذا سمعت الطبعيّة ذلك اللحن تعرّضت (٢٣٩٣)
 للنفس (٢٣٩٤) بزينة أشكالها ورونق أصباغها كيما تردّها (٢٣٩٥) إليها
 فاحذروا من (٢٣٩٦) مكر الطبعية لا (٢٣٩٧) تقعوا في شبكتها (٢٣٩٨).

[١٢] وقال آخر: إن السمع والبصر هما (٢٣٩٩) أفضل
 الحواس الخمس (٢٤٠٠) وأشرفها (٢٤٠١) التي وهبَ الباري
 تقدّس اسمه (٢٤٠٢) للحيوان (٢٤٠٣)، ولكن أرى أن (٢٤٠٤) البصر

(٢٣٨٩) من: عن [أ، د، ط، ف، ك، ل].

(٢٣٩٠) زهدت: هدت [أ، ف].

(٢٣٩١) الأصدئة: الأصداء [د].

(٢٣٩٢) بالألحان الحزينة: باللحان الجزئية [أ] بالألحان الجزئية [ف].

(٢٣٩٣) تعرّضت: فعرضت [د، ل].

(٢٣٩٤) للنفس: النفس [ط] النفوس [ع] سقط من أ: للنفس.

(٢٣٩٥) كيما تردّها: كيما يردّها [ع، ل] كيلا تردّها [ف].

(٢٣٩٦) من: عن [ك] سقط من أ، ف: من.

(٢٣٩٧) لا: أن لا [د، ط، ك].

(٢٣٩٨) شبكتها: شباكها [أ، ف].

(٢٣٩٩) سقط من ل: إن السمع والبصر هما. زيادة في د، ط، ك، ل: من.

(٢٤٠٠) سقط من ل: الخمس.

(٢٤٠١) أشرفها: أصدقها [ك] أشرفها [د].

(٢٤٠٢) وهبَ الباري تقدس اسمه: وهبها الله تعالى [ل].

(٢٤٠٣) إن السمع والبصر... للحيوان: الحواس الخمس التي وهبَ الله للحيوان

قالوا إن أشرفها السمع [ع]. سقط من د، ط، ك: كله. زيادة في ل:

شريفة.

(٢٤٠٤) سقط من د، ط، ك، ل: أن.

القلوب^(٢٣٧٢) إلا النفوس^١ (٢٣٧٣) الشريفة الصافية^٢ من (٢٣٧٤)
شوائب الطبيعة^(٢٣٧٥) المتبرئة^٣ (٢٣٧٦) من (٢٣٧٧) الشهوات^(٢٣٧٨)
البهيمة.

[١٠] وقال آخر: إن البارئ جلّ جلاله لما ربط النفوسَ
الجزئية بالأجساد الحيوانية ركب في حبّلتها حبّ^(٢٣٧٩) الشهوات
الجسمانية ومكّنها من تناول اللذات الجِرمانية في أيام الصبى،
ثم سلب ذلك عنها^(٢٣٨٠) في أيام الشيخوخة وزهّدها فيها
كيما^(٢٣٨١) يدلّها على الملاذ^(٢٣٨٢) والسرور^(٢٣٨٣) الذي في
عالمها الروحاني^(٢٣٨٤) ويرغّبها^(٢٣٨٥) فيها^(٢٣٨٦) فإذا سمِعتم
نغمات الموسيقى^(٢٣٨٧) فتأمّلوا إشارته^(٢٣٨٨) نحو عالم النفوس.

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- (٢٣٧٢) القلوب: الغيوب [د، ط، ع، ك، ل].
(٢٣٧٣) النفوس: النفس [ع].
(٢٣٧٤) من: عن [د، ع].
(٢٣٧٥) شوائب الطبيعة: الشوائب الطبيعية [ك].
(٢٣٧٦) المتبرئة: والبرينة [أ، ف، ك] المتزّهة [ل].
(٢٣٧٧) من: عن [ف، ل، ط (وفوقها: من)].
(٢٣٧٨) زيادة في ع: الجسمانية.
(٢٣٧٩) سقط من أ، د، ط، ف، ك: حب.
(٢٣٨٠) سلب ذلك عنها: سلب عنها [د، ط، ع، ك] سلبها ذلك [أ، ف].
(٢٣٨١) كيما: كما [ع، ك].
(٢٣٨٢) زيادة في أ، ط، ف: والنعيم.
(٢٣٨٣) زيادة في د، ط، ك: والنعيم.
(٢٣٨٤) زيادة في ع: ومجلسها التوراني.
(٢٣٨٥) يرغّبها: رغبها [أ، د، ف].
(٢٣٨٦) فيها: فيه [ك، ل].
(٢٣٨٧) الموسيقى: الموسيقار [في كل المخطوطات].
(٢٣٨٨) إشارته: إشاراته [د، ط، ك، ل] إشارتهم به [ف].

عن (٢٣٥٥) المعاني أفهم (٢٣٥٦) أسرار النفوس وربما (٢٣٥٧) يُخبر
عن ضمائر القلوب وإلا فالتقصير (٢٣٥٨) يكون منه (٢٣٥٩).

[٨] وقال (٢٣٦٠) آخر: إن أصوات (٢٣٦١) الموسيقىان (٢٣٦٢)

ونغماته وإن كانت بسيطة (٢٣٦٣) ليس لها حروفٌ مُعْجَم (٢٣٦٤) فإن
النفس (٢٣٦٥) إليها أشدُّ مَيْلاً ولها (٥٨ أ) أسرع قبولاً لِمُشَاكَلَةِ ما
بينهما (٢٣٦٦). وذلك أن (٢٣٦٧) النفوس أيضاً جواهرٌ بسيطةٌ
روحانية غيرُ مرَّجبة، ونغماتُ الموسيقىان (٢٣٦٨) كذلك والأشياء
إلى أشكالها أُمَيْل.

[٩] [٢٣٦٦] وقال آخر: لا يفهم معاني نغمات (٢٣٦٩)

الموسيقىان (٢٣٧٠) ولطيف عباراته (٢٣٧١) عن أسرار

(٢٣٥٥) عن: في [أ، ف].

(٢٣٥٦) أفهم: فهم [ع] فهمت المعاني فهم [ل] فهمت المعاني فهم [د] فهمت
المعاني فهم فهم [ط].

(٢٣٥٧) ربما: ما [أ، د، ط، ع، ف، ك].

(٢٣٥٨) فالتقصير: فالتقصير [ف].

(٢٣٥٩) يكون منه: منه يكون [د، ل].

(٢٣٦٠) وقال: قال [ط].

(٢٣٦١) أصوات: نغمات [ل].

(٢٣٦٢) الموسيقىان: الموسيقىار [أ، د، ع، ف، ك، ل].

(٢٣٦٣) زيادة في ع: روحانية.

(٢٣٦٤) سقط من ع: معجم.

(٢٣٦٥) النفس: النفوس [ط، ك].

(٢٣٦٦) بينهما: بينها [أ، ف].

(٢٣٦٧) وذلك أن: وقال آخر إن: [ع].

(٢٣٦٨) الموسيقىان: الموسيقىار [في كل المخطوطات] زيادة في ع: أيضاً.

(٢٣٦٩) سقط من أ، ف، ك: نغمات.

(٢٣٧٠) الموسيقىان: الموسيقىار [في كل المخطوطات].

(٢٣٧١) عباراته: عبارته [أ، ف، ك].

- زاري زیر واین مدار شگفت
 گر زدشت اندر^(۲۳۴۴) آورد نخجیر
 تن^(۲۳۴۵) او تیر نه زمان به زمان
 به دل اندر همی گذارد تیر
 گاه گریان^(۲۳۴۶) وگه بنالد زار
 بامدادان وروز^(۲۳۴۷) تا شبگیر
 آن زبان آوری زبانش^(۲۳۴۸) نه
 خبر عاشقان کند تفسیر
 گاه دیوانه را کند هشیار
 گاه هشیار^(۲۳۴۹) بر نهد زنجیر^(۲۳۵۰)
 [۷]^(۲۳۵۱) وقال آخر^(۲۳۵۲): إن الموسيقىان^(۲۳۵۳) هو
 الترجمان عن الموسيقىار^(۲۳۵۴) والمُعبر عنه، فإن كان جيد العبارة
-
- (۲۳۴۴) زدشت اندر: بهشت اید را [ط].
 (۲۳۴۵) تن: بن [ط].
 (۲۳۴۶) گریان: کر [ك، ل].
 (۲۳۴۷) وروز: روز [ط، ك، ل].
 (۲۳۴۸) زبان آوری زبانش: زوان آوری روانش [ط] زوان آوری زبانش [ك] زوان آوری ز[بلان] [د].
 (۲۳۴۹) هشیار: بهشیار[ط، ك، ل].
 (۲۳۵۰) زنجیر: [ب]زنجیر [ك، ل] سقط من ع: وقد أنشدت أبيات بالفارسية... بر نهد زنجیر. سقط من أ، ف: وقت شبگیر... بر نهد زنجیر.
 (۲۳۵۱) في أ، ف، ك نجد [۷] بعد [۸].
 (۲۳۵۲) سقط من ف: آخر.
 (۲۳۵۳) الموسيقىان: الموسيقىار [أ، د، ف، ك، ل].
 (۲۳۵۴) الموسيقىار: الموسيقىار [ط] الموسيقىات [د] الموسيقى [أ، ف].

بحيوان فإنه^(٢٣٢٩) ناطقٌ فصيحٌ يُخبر بأسرار^(٢٣٣٠) النفوس
وضمائر القلوب، ولكن كأن^(٢٣٣١) كلامه أعجمي^(٢٣٣٢)
يحتاج^(٢٣٣٣) إلى ترجمان^(٢٣٣٤) لأن ألفاظه بسيطةٌ ليس لها
حروفٌ مُعجّمة^(٢٣٣٥).

وقد^(٢٣٣٦) أنشدت أبياتٌ بالفارسية^(٢٣٣٧) تدلُّ^(٢٣٣٨) على
تصديق قول^(٢٣٣٩) الفيلسوف^(٢٣٤٠) وهي^(٢٣٤١) هذه:

وقت شبگیر بانگ ناله زیر^(٢٣٤٢)

خوشر آید^(٢٣٤٣) بگوشم از تکبیر

(٢٣٢٩) فإنه: فهو [أ، د، ط، ف، ك].

(٢٣٣٠) بأسرار: عن أسرار [أ، ط، ف، ك، ل].

(٢٣٣١) كأن: كان [د] إذا كان [أ، ف] كل [ك، ل].

(٢٣٣٢) أعجمي: أعجم [أ، ف] أعجمياً [د].

(٢٣٣٣) يحتاج: محتاج [ط] محتاجاً [د].

(٢٣٣٤) ترجمان: الترجمان [أ، د، ف، ك].

(٢٣٣٥) مُعجّمة: مُعجم [أ، د، ط، ف].

(٢٣٣٦) وقد: وإن [ف].

(٢٣٣٧) أبيات بالفارسية: أبياتاً بالفارسية [د، ط، ل] بالفارسية أبياتاً [أ، ف].

(٢٣٣٨) سقط من د: تدل.

(٢٣٣٩) سقط من ف: قول.

(٢٣٤٠) وقد أنشدت... الفيلسوف: وقد قال يا أخي بعض سفراء الفرس يطابق ما

قاله هذا الفيلسوف [ل، وفي الهامش: وقد أنشدت... الفيلسوف]. زيادة

في ط: فيما قاله.

(٢٣٤١) هي: هو [د].

(٢٣٤٢) وقت شبگیر بانگ ناله زیر: دوست از خوش بانگ بربط تو [ط] دوشل[ت]

ان خوش نانك بربط تو [د].

(٢٣٤٣) آید: امد [د، ط].

حرّك النفوس^(٢٣١٣) نحو الفضائل ونفى^(٢٣١٤) عنها الرذائل^(٢٣١٥).

[٥] وقال آخر: حُكِي^(٢٣١٦) أن فيلسوفاً سَمِعَ^(٢٣١٧) نغمة القيثارة^(٢٣١٨) فقال لتلميذه: امض بنا^(٢٣١٩) نحو هذا الموسيقار^(٢٣٢٠) لعله يُفيدنا^(٢٣٢١) صورةً شريفة، فلما قَرَّبَ منه سَمِعَ لحناً غيرَ موزونٍ ونغمةً غيرَ طيِّبة فقال لتلميذه: زعم^(٢٣٢٢) أهلُ الكهانة أن صوتَ البومِ يدلُّ على موتِ إنسان^(٢٣٢٣)، فإن كان ما قالوه^(٢٣٢٤) حقاً^(٢٣٢٥) فصوتُ هذا الموسيقار^(٢٣٢٦) يدلُّ على موتِ البوم.

[٦] وقال آخر^(٢٣٢٧): إن الموسيقان^(٢٣٢٨) وإن كان ليس

(٢٣١٣) النفوس: النفس [د، ط، ف].

(٢٣١٤) نفى: نقل [ع].

(٢٣١٥) في هامش ع في خط آخر: ونفى عنها الرذائل.

(٢٣١٦) سقط من ل: حُكِي.

(٢٣١٧) أن فيلسوفاً سمع: أنه سمع فيلسوف [أ، ط، ف، ك] عنه سمع فيلسوف [د].

(٢٣١٨) القيثارة: القيثارة [أ] القيثارة [ط] السفارة [ك، ل، وفي هامش ل:

القيثارة] الفارة [د] سقط من ع: القيثارة.

(٢٣١٩) سقط من ل: بنا.

(٢٣٢٠) الموسيقار: الموسيقان [ع] القيثاري [أ، ف].

(٢٣٢١) يفيدنا: أن يفيدنا [أ] تفيدنا [ع] أن يفيدنا [ف].

(٢٣٢٢) زعم: وزعم [ف].

(٢٣٢٣) سقط من ع: إنسان.

(٢٣٢٤) قالوه: قالوا [ل].

(٢٣٢٥) فإن كان ما قالوه حقاً: فإن ما قالوه حق [ع].

(٢٣٢٦) الموسيقار: الموسيقاري [أ، ف] سقط من ع: الموسيقار.

(٢٣٢٧) سقط من د، ط: آخر.

(٢٣٢٨) الموسيقان: الموسيقار [أ، د، ع، ف، ك، ل].

حديثها ومناجاتها ودعوا الطبيعة والتأمل لزيبتها لا (٢٢٩٩) يغرنكم (٢٣٠٠).

[٢] وقال آخر: احذروا عند استماع (٢٣٠١) الموسيقى ألا يثور (٢٣٠٢) بكم شهوات النفس البهيمية نحو زينة الطبيعة (٢٣٠٣) فتميل بكم عن سنن (٢٣٠٤) الهدى وتصدكم عن مُناجاة النفس العليا.

[٣] وقال (٢٣٠٥) آخر للموسيقار (٢٣٠٦): حرّك النفس (٢٣٠٧) نحو قواها الشريفة من الحلم (٢٣٠٨) والجود (٢٣٠٩) والشجاعة والعدل (٢٣١٠) والكرم (٢٣١١) [٢٣٥] ودع الطبيعة لا تحرك شهواتها البهيمية.

[٤] وقال آخر: إن الموسيقار (٢٣١٢) إذا كان حاذقاً بصنعه

(٢٢٩٩) زيادة في ف: للثلا.

(٢٣٠٠) يغرنكم: تغرنكم [د] يغركم [أ، ف].

(٢٣٠١) استماع: سماع [ل].

(٢٣٠٢) ألا يثور: أن ثور [ل] لا مور [د].

(٢٣٠٣) سقط من ع: والتأمل لزيبتها... نحو زينة الطبيعة.

(٢٣٠٤) سقط من أ: سنن.

(٢٣٠٥) وقال: فقال [ع] قال [ط، ف].

(٢٣٠٦) للموسيقار: الموسيقار [ف] سقط من ع، ل: للموسيقار.

(٢٣٠٧) زيادة في ل: أيها الموسيقار.

(٢٣٠٨) الحلم: الحكم [ف].

(٢٣٠٩) الجود: الجور [أ].

(٢٣١٠) زيادة في أ، ف: والرأفة.

(٢٣١١) زيادة في د، ط، ك، ل: والرأفة.

(٢٣١٢) الموسيقار: الموسيقان [ع].

فصل [١٦]

في نوادر الفلاسفة في الموسيقى

يُقال إن ملكاً من ملوك اليونانيين^(٢٢٨٧) صنعَ صَنِيعَةً^(٢٢٨٨) ودعا جماعةً من الحكماء وأمر^(٢٢٨٩) أن يُكتبَ كلُّ ما^(٢٢٩٠) يتكلَّمون فيه^(٢٢٩١) من الحكمة، فلما غنى^(٢٢٩٢) الموسيقار^(٢٢٩٣) لحناً مُطرباً

[١] قال أحدُ الحكماء^(٢٢٩٤): إنَّ للغناء^(٢٢٩٥) فضيلةً تعذَّر على المنطق^(٢٢٩٦) إظهارُها ولم يقدر على إخراجها بالعبارة فأخرجتها النفس^(٢٢٩٧) لحناً موزوناً، فلما سمعَها الطبيعة استلذَّتها وفرحت وسُرَّت بها، فاسمعوا من النفس^(٢٢٩٨)

(٢٢٨٧) اليونانيين: اليونان [ل].

(٢٢٨٨) صَنِيعَةً: صنيعاً [ل].

(٢٢٨٩) إن ملكاً من ملوك... وأمر: إنه اجتمعت {أ، ف: اجتمع} جماعة من الحكماء والفلاسفة {أ، ف: الفلاسفة} في دعوة ملك من الملوك {سقط من ف: من الملوك} فأمر [أ، د، ط، ف، ك].

(٢٢٩٠) كل ما: كلما [أ].

(٢٢٩١) فيه: به [أ، د، ط، ف، ك].

(٢٢٩٢) فلما غنى: فغنى لهم [ع] فغناهم [ل].

(٢٢٩٣) الموسيقار: الموسيقان [ع].

(٢٢٩٤) قال أحد الحكماء: فقال أحدهم [ع، ل].

(٢٢٩٥) للغناء: الغناء [أ، د، ط، ع، ف].

(٢٢٩٦) المنطق: النطق [ل].

(٢٢٩٧) النفس: بالنفس [ل].

(٢٢٩٨) سقط من ع: من النفس، وفي الهامش في خط آخر: [فس]معوا من النفس حديثها ومناجاتها.

المشاكِلَة^(٢٢٧٣) للأزمان في الأحوال المشاكِلَة^(٢٢٧٤) بعضها لبعض، وهو أن يبتدئ في مجالس الدعوات والولائم والشرب^(٢٢٧٥) بالألحان التي تُقَوِّي الأخلاق في^(٢٢٧٦) الجود^(٢٢٧٧) والكرم والسخاء مثل الثقيل^(٢٢٧٨) الأول وما شاكله^(٢٢٧٩) ثم يُتَبِعُهَا بالألحان المفرحة المطربة^(٢٢٨٠) مثل الهَزَج والرَّمَل، وعند الرقص والدَّسْتَبَد^(٢٢٨١) الماخوري وما شاكله، وفي^(٢٢٨٢) آخر المجلس^(٢٢٨٣) إن خاف من الشُّكَّارِي الشَّغْبَ والعَرَبْدَةَ والخصومة أن يستعمل^(٢٢٨٤) الألحان المليئة الثقيلة^(٢٢٨٥) المسكَّنة المنومة الحزينة^(٢٢٨٦).

-
- (٢٢٧٣) سقط من ع: المشاكِلَة.
 (٢٢٧٤) للأزمان في الأحوال المشاكِلَة: للأزمان المشاكِلَة للأحوال والمشاكِلَة [ف] للأحوال المشاكِلَة [أ] للأزمان المشاكِلَة [ع]، للأزمان المشاكِلَة في الأحوال المشاكِلَة [ط].
 (٢٢٧٥) سقط من ع: والشرب.
 (٢٢٧٦) في: و [ع] سقط من ل: في.
 (٢٢٧٧) الأخلاق في الجود: أخلاق الجود [د، ط] الأخلاق الجودية [ك].
 (٢٢٧٨) الثقيل: ثقيل [أ، ط، ف، ك، ل].
 (٢٢٧٩) شاكله: شاكلها [أ، د، ط، ف، ك].
 (٢٢٨٠) المطربة المفرحة: المفرحة المطربة [أ، د، ط، ف، ك، ل].
 (٢٢٨١) والدستبد: الدستبد [أ] الاسل[تد] [ف].
 (٢٢٨٢) وفي: في [ع، ك].
 (٢٢٨٣) المجلس: المجالس [ع].
 (٢٢٨٤) أن يستعمل: فليستعمل [ل].
 (٢٢٨٥) سقط من ك: الثقيلة.
 (٢٢٨٦) المليئة الثقيلة المسكَّنة المنومة الحزينة: المسكَّنة المنومة الحزينة المليئة الثقيلة [أ، ف] سقط من د: الحزينة.

ثَقِيل الرَّمْلُ ثُمَّ يَتْلُوهُمَا بِنَقْرَةٍ (٢٢٥٨) ثُمَّ يَقِفُ (٢٢٥٩) وَقَفَةً خَفِيفَةً ثُمَّ
يَبْتَدِئُ بِالْمَاخُورِيِّ، وَمِنْ حِذْقِ الْمَوْسِيقَارِ (٢٢٦٠) أَيْضاً أَنْ يُحَسِّنَ
أَنْ (٢٢٦١) يَكْسُوَ الْأَشْعَارَ الْمَفْرَحَةَ (٢٢٦٢) الْأَلْحَانَ الْمَشَاكِلَةَ
لَهَا (٢٢٦٣) مِثْلَ الْأَرْمَالِ وَالْأَهْزَاجِ (٢٢٦٤)،

وَمَا كَانَ مِنْهَا (٢٢٦٥) مِنْ (٥٧ ب) الْمَدِيحِ فِي مَعَانِي الْمَجْدِ
وَالْجُودِ وَالْكَرَمِ (٢٢٦٦) أَنْ يَكْسُوَهَا مِنْ (٢٢٦٧) الْأَلْحَانَ الْمَشَاكِلَةَ لَهَا
[٢٣٤] مِثْلَ الثَّقِيلِ الْأَوَّلِ وَالثَّانِي (٢٢٦٨)،

وَمَا كَانَ مِنْهَا (٢٢٦٩) مِنْ (٢٢٧٠) الْمَدِيحِ فِي مَعَانِي (٢٢٧١)
الشَّجَاعَةِ وَالْإِقْدَامِ وَالنَّشَاطِ وَالْحَرَكَةِ أَنْ يَكْسُوَهَا مِنَ الْأَلْحَانَ مِثْلَ
الْمَاخُورِيِّ وَالْخَفِيفِ وَمَا شَاكِلَهَا،

وَمِنْ حِذْقِ الْمَوْسِيقَارِ (٢٢٧٢) أَيْضاً أَنْ يَسْتَعْمَلَ الْأَلْحَانَ

(٢٢٥٨) بنقرة: نقرة [ط، ل، وفي هامش ل: نقرتين].

(٢٢٥٩) يقف: وقف [ع].

(٢٢٦٠) الموسيقار: الموسيقان [ع].

(٢٢٦١) سقط من أ، ف، ل: أن.

(٢٢٦٢) الأشعار المفرحة: الشعر المفرح [أ، ف].

(٢٢٦٣) لها: له [أ، ف].

(٢٢٦٤) الأرمال والأهزاج: الثقل الأول والثاني [ع].

(٢٢٦٥) منها: منهما [ع].

(٢٢٦٦) المجد والجد والكرم: الجود والكرم والمجد [د].

(٢٢٦٧) سقط من أ، ف: من.

(٢٢٦٨) الثقل الأول والثاني: الأرمال والأهزاج [ع].

(٢٢٦٩) منها: منهما [ع] سقط من أ، ف، ك، ل: منها.

(٢٢٧٠) من: في [ك، ل].

(٢٢٧١) معاني: معنى [ع].

(٢٢٧٢) الموسيقار: الموسيقي [أ، ف] الموسيقان [ع].

واعلم يا أخي بأن الخروج من لحن^(٢٢٤٠) والانتقال منه إلى آخر^(٢٢٤١) ليس له طريقٌ إلا^(٢٢٤٢) أحد الوجهين^(٢٢٤٣): إما أن يقطع ويسكن^(٢٢٤٤) ويصلح الدساتين والأوتار بالحزق^(٢٢٤٥) والإرخاء ويبتدئ فيستأنف^(٢٢٤٦) لحناً آخر، أو يترك^(٢٢٤٧) الأمر بحاله ويخرج^(٢٢٤٨) من ذلك اللحن إلى لحنٍ آخر قريبٍ منه مُشاكِلٍ له^(٢٢٤٩)، وهو أن ينتقل من^(٢٢٥٠) الثقيل إلى خفيفه أو من الخفيف^(٢٢٥١) إلى ثقيله أو إلى ما قارب^(٢٢٥٢) ذلك^(٢٢٥٣)، والمِثَالُ في ذلك أنه إذا أراد أن ينتقل من ثقيل^(٢٢٥٤) الرَّمَلِ إلى الماخوريّ أن^(٢٢٥٥) يقف^(٢٢٥٦) عند^(٢٢٥٧) النقرتين الأخيرتين من

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- (٢٢٤٠) زيادة في أ، ف: إلى آخر. زيادة في ك، ل: إلى لحن.
 (٢٢٤١) إلى آخر: إلى لحن آخر [د، ط] سقط من أ، ك: إلى آخر. سقط من ف: منه إلى آخر.
 (٢٢٤٢) زيادة في د، ط، ك: على.
 (٢٢٤٣) الوجهين: وجهين وهو [أ، ف] وجهين [ط].
 (٢٢٤٤) ويسكن: أو يسكن [أ، ف] ويسكت [ط].
 (٢٢٤٥) بالحزق: بالخرق [ع].
 (٢٢٤٦) ويبتدئ فيستأنف: ويستأنف [أ] ثم يبتدئ ويستأنف [ف] ويبتدئ ويستأنف [د، ك، ل].
 (٢٢٤٧) أو يترك: وترك [ع] ويترك [أ، ف].
 (٢٢٤٨) ويخرج: فيخرج [ع، ل].
 (٢٢٤٩) سقط من ع: له.
 (٢٢٥٠) زيادة في أ، ف: لحن.
 (٢٢٥١) الخفيف: خفيفه [أ، ف].
 (٢٢٥٢) قارب: قُرب [ل].
 (٢٢٥٣) ذلك: منه [د، ط، ك، ل] سقط من ع: أو من الخفيف... قارب ذلك.
 (٢٢٥٤) ثقيل: خفيف [في كل المخطوطات].
 (٢٢٥٥) أن: بأن [ع] سقط من د، ط: أن.
 (٢٢٥٦) يقف: وقف [د].
 (٢٢٥٧) عند: بين [ع].

أَنْ (٢٢٢٤) تَسْتَلِذَّ مِنْ إِدْرَاكِهَا (٢٢٢٥) محسوساتها وتتشوّق إليها إذا
فقدتها، ومَلَّتْ (٢٢٢٦) منها إذا (٢٢٢٧) دامت عليها وتَسْتَرْوح (٢٢٢٨)
إلى غيرها من أبناء جنسها (٢٢٢٩)، مثل ما هو معروف بين الناس
في مأكولاتهم ومشروباتهم وملبوساتهم ومشموماتهم (٢٢٣٠)
ومُبَصَّراتهم ومسموعاتهم (٢٢٣١)، فالموسيقارُ (٢٢٣٢) الحاذقُ (٢٢٣٣)
هو (٢٢٣٤) الذي إذا (٢٢٣٥) عَلِمَ بأن المستمعين قد (٢٢٣٦) مَلُّوا من
لحنٍ (٢٢٣٧) غَنَّى لَهُمْ (٢٢٣٨) لحناً آخرَ إمّا مُضادّاً وإمّا
مُشاكلاً (٢٢٣٩).

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- (٢٢٢٤) أَنْ: لكي [د، ط].
(٢٢٢٥) مِنْ إِدْرَاكِهَا: بالإدراك على [د].
(٢٢٢٦) مَلَّتْ: خَلَّتْ [أ].
(٢٢٢٧) إِذَا: إِنْ [د، ط، ل].
(٢٢٢٨) تَسْتَرْوح: تروح [د].
(٢٢٢٩) جِنْسُهَا: جِنْسَتِهَا [أ] تستلذ من إدراكها... من أبناء جنسها: تشوق إلى
محسوساتها ومَلَّتْ إِنْ دَامَتْ عَلَيْهَا [ع].
(٢٢٣٠) مَلْبُوسَاتِهِمْ وَمَشْمُومَاتِهِمْ: معلوماتهم [ع] سقط من أ: ومشموماتهم.
(٢٢٣١) وَمُبَصَّرَاتِهِمْ وَمَسْمُوعَاتِهِمْ: ومسموعاتهم ومبصّراتهم ومسموعاتهم [أ].
(٢٢٣٢) فَالْمُوسِيقَارُ: فالموسيقان [ع].
(٢٢٣٣) زِيَادَةٌ فِي د، ل: الفاره.
(٢٢٣٤) هُوَ: وَهُوَ [ع].
(٢٢٣٥) سَقَطَ مِنْ ع: إِذَا.
(٢٢٣٦) قَدْ: إِذَا [ع].
(٢٢٣٧) مِنْ لَحْنٍ: لَحْنًا [أ، ف].
(٢٢٣٨) غَنَّى لَهُمْ: يُغْنِي عَلَيْهِمْ [د] يُغَرِّ عَلَيْهِمْ [ط] غَيْرَ [ع] غَيْرَ عَلَيْهِمْ [ل، و] وفي
الهامش: غَنَّى لَهُمْ [ع].
(٢٢٣٩) مُضَادّاً وَإِمَّا مُشَاكلاً: مُضَادَّةٌ لَهُ وَإِمَّا مُشَابَهَةٌ [ع] مُضَادَّةٌ لَهُ وَإِمَّا مُشَاكَلَةٌ [ط]
مُضَادّاً لَهُ أَوْ مُشَاكلاً لَهُ [ك] مُضَادُّ لَهُ وَإِمَّا مُشَاكَلَةٌ [د] مُضَادُّ لَهُ أَوْ مُشَاكَلٌ
لَهُ [ل].

الأعداد^(٢٢٠٩) التسعة في الشهر التاسع من الحَمَل^(٢٢١٠) في الساعة التاسعة^(٢٢١١) من الطَّلَق، ويكون^(٢٢١٢) ربُّ الطالع في التاسع أو ربُّ التاسع في الطالع، أو يكون القمر في التاسع أو متّصلاً^(٢٢١٣) بكوكبٍ منه^(٢٢١٤) في التاسع، وما شاكل ذلك من^(٢٢١٥) المتّسعات.

[٢٣٣] فصل [١٥]

اعلم يا أخي أيّدك الله وإيّانا بروحٍ منه بأن الله جلّ ثناؤه جعل بواجب حكّمته لكلّ جنسٍ من الموجودات حاسّة^(٢٢١٦) مُختصّة بإدراكها وقوّة^(٢٢١٧) من قوى النّفس تنالها بها^(٢٢١٨) وتعرفها^(٢٢١٩) بطريقة لا تُنال^(٢٢٢٠) بطريقة أخرى، وجعل أيضاً^(٢٢٢١) في جبلة كلّ حاسّة^(٢٢٢٢) درّاكة أو^(٢٢٢٣) قوّة علامة

(٢٢٠٩) الأعداد: الأعداد [ل].

(٢٢١٠) الحمل: الحمل [ل].

(٢٢١١) الساعة التاسعة: التاسعة من الساعات [ل].

(٢٢١٢) ويكون: أو يكون [ع].

(٢٢١٣) متّصلاً: متّصل [ف] زيادة في ع: منه.

(٢٢١٤) سقط من د، ط: منه.

(٢٢١٥) زيادة في د، ط: الأمور.

(٢٢١٦) حاسّة: خاصّة [أ] سقط من ف: حاسّة.

(٢٢١٧) وقوّة: وقوى [ف] أو قوّة [د].

(٢٢١٨) تنالها بها: [ب]لناها [ف] تنال بها كلّ حاسّة [د، ك، ل] سقط من أ: بها.

(٢٢١٩) تعرفها: يعرفها [د، ك] معرفتها [ف] زيادة في أ: بها.

(٢٢٢٠) تنال: ينال [أ، د، ك].

(٢٢٢١) سقط من ط، ع: أيضاً.

(٢٢٢٢) زيادة في د ومن فوق في ط: قوّة.

(٢٢٢٣) أو: و [د، ل].

الْأَرْوَاحَ كُلَّهَا^(٢١٩٧) مِمَّا تُنْبِئُ الْأَرْضُ وَمِنْ أَنْفُسِهِمْ وَمِمَّا لَا يَعْلَمُونَ^(٢١٩٨).

واعلم يا أخي أيَّدك الله وإيانا بروح منه بأن هذه الأشياء المشاكِلة إذا جُمع^(٢١٩٩) بينها على النسبة التأليفية ائتلفت وتضاعفت قواها وظهرت أفعالها وغلبت أضدادها وقهرت ما يُخالفها، وبمعرفتها استخرجت الحكماء الأدوية المبرئة من الأمراض الشافية للأسقام^(٢٢٠٠) مثل الترياقات^(٢٢٠١) والمراهم والشربات^(٢٢٠٢) المعروفة^(٢٢٠٣) بين^(٢٢٠٤) الأطباء الموصوفة في كتبهم، وعلى مثل ذلك عمل أصحاب الطلسمات في نصبها^(٢٢٠٥) بعد معرفتهم بطبائع^(٢٢٠٦) الأشياء وخواصها ومشاكلتها وكيفية تركيبها ونسب^(٢٢٠٧) تأليفها، المِثال في ذلك الشَّكل^(٢٢٠٨) المتَّسع في تسهيل الولادة إذا كُتب فيه

(٢١٩٧) سقط من ك: كلها.

(٢١٩٨) ومن أنفسهم ومما لا يعلمون: ومن أنفسهم ومما لا تعلمون فصل [ف] الآية [د].

(٢١٩٩) إذا جُمع: إذا اجتمع [ف].

(٢٢٠٠) الأمراض الشافية للأسقام: الأسقام الشافية للأمراض [ل] الأمراض والأسقام [ع].

(٢٢٠١) الترياقات: الدرياقات [أ، ف، ل].

(٢٢٠٢) المراهم والشربات: الشربات والمراهم [د] المراهم والأشربة والمعاجين [أ، ف].

(٢٢٠٣) المعروفة: المعروف [ف] المعروفات [ك].

(٢٢٠٤) بين: من [ع].

(٢٢٠٥) زيادة في أ: وذلك. سقط من ك: في نصبها.

(٢٢٠٦) سقط من ف: مثل ذلك عمل أصحاب... بعد معرفتهم بطبائع.

(٢٢٠٧) نسب: نسبة [ع].

(٢٢٠٨) ذلك الشكل: هذا [أ] هذا الشكل [ف].

ومن الروائح رائحة^(٢١٨٠) النرجس والخيري^(٢١٨١) والتيلوفر^(٢١٨٢) وما شاكلها،
وبالجُملة كل^(٢١٨٣) لونٍ وطعمٍ ورائحة^(٢١٨٤) باردةٍ رطبة،
وعلى هذا (٥٧ أ) المِثال والقياس^(٢١٨٥)، إذا تصفّحت يا
أخي^(٢١٨٦) أحوال^(٢١٨٧) الموجودات الطبيعية واعتبرت أوصاف
المحسوسات الكائنات^(٢١٨٨)، وجدتها^(٢١٨٩) كلّها^(٢١٩٠) داخلَةً
في هذه الأقسام الأربعة، مُشاكِلاتٍ^(٢١٩١) بعضها لبعض أو^(٢١٩٢)
مُضادّاتٍ بعضها لبعض^(٢١٩٣)، كما ذكر الله تعالى بقوله^(٢١٩٤)
﴿وَمِنْ كُلِّ شَيْءٍ خَلَقْنَا^(٢١٩٥) زَوْجَيْنِ﴾ اثنين وقوله^(٢١٩٦) ﴿خَلَقَ

(٢١٨٠) الروائح رائحة: الرائحة [ع].

(٢١٨١) الخيري والتيلوفر: التيلوفر والخيري [ع].

(٢١٨٢) التيلوفر: اللينوفر [ل].

(٢١٨٣) كل: فكل [ع، ل].

(٢١٨٤) لون وطعم ورائحة: طعم أو لون أو رائحة [أ] لون أو طعم أو رائحة [د]، ط، ك، [ل] سقط من ف: النرجس والخيري... وطعم ورائحة.

(٢١٨٥) سقط من أ، ف: والقياس.

(٢١٨٦) إذا تصفّحت يا أخي: يا أخي إذا تصفّحت [د].

(٢١٨٧) سقط من ع: أحوال.

(٢١٨٨) المحسوسات الكائنات: الكائنات المحسوسات [د، ك، ل].

(٢١٨٩) وجدتها: وجدت [ك].

(٢١٩٠) سقط من ع: واعتبرت... كلها.

(٢١٩١) مشاكِلات: المشاكِلات [ل].

(٢١٩٢) أو: و [ع، ف].

(٢١٩٣) سقط من د: أو مضادات بعضها لبعض.

(٢١٩٤) سقط من د: بقوله. زيادة في ك: جل ثناؤه.

(٢١٩٥) ومن كل شيء خلقنا: من كل [أ، د، ط، ل] ومن كل [ك].

(٢١٩٦) زيادة في د، ط: عز وجل. زيادة في ل: تعالى الذي.

ومن أخلاط المزاج^(٢١٦٩) البَلْغَمُ،
ومن القوى الطبيعية القوَّة الدافعة،
ومن القوى^(٢١٧٠) الحيوانية القوَّة المذكَّرة^(٢١٧١)،
ومن الأخلاقِ الحِلْمُ والتجاوز،
ومن الأفعالِ الظاهرة السهولةُ في المعاملة وحُسْنُ
العِشرة^(٢١٧٢)،
ومن المحسوساتِ المشاكلةُ لها^(٢١٧٣) نغماتُ وترِ البَمِّ،
ومن الألحانِ الهَزْجُ والرَّمْلُ،
ومن [٢٣٢] الكلامِ والأشعارِ^(٢١٧٤) ما^(٢١٧٥) كان
مديحاً في^(٢١٧٦) الجود والكرم والعدل^(٢١٧٧) وحُسْنُ^(٢١٧٨)
الخُلُقِ،
ومن الطعومِ الدُّسوماتُ^(٢١٧٩) والعذوباتُ،
ومن الألوانِ الخُضْرَةُ،

(٢١٦٩) أخلاط المزاج: الأخلاط والمزاج [أ، ف، ك].

(٢١٧٠) القوى: القوة [د].

(٢١٧١) الحيوانية القوة المذكَّرة: النفسانية المفكَّرة [أ] الحيوانية المذكَّرة [ف].

(٢١٧٢) العِشرة: المعاشرة [ك، وفي هامش ل].

(٢١٧٣) زيادة في أ، ف، ك: أيضاً.

(٢١٧٤) والأشعار: الأشعار [ف، ل].

(٢١٧٥) ما: وما [ل].

(٢١٧٦) في: من [ل].

(٢١٧٧) الجود والكرم والعدل: العدل والجود والكرم [أ، ف].

(٢١٧٨) زيادة في ل: العشرة وحسن.

(٢١٧٩) الدسومات: الدسوم [د].

شاكلهما^(٢١٥٧) من الروائح الباردة اليابسة^(٢١٥٨)،
والذي^(٢١٥٩) يُشاكلُ زمانَ^(٢١٦٠) الشتاء،
من أرباع الفلك الرُّبْعُ^(٢١٦١) الصاعدُ من وتد الأرض
إلى أفق المشرق،
ومن البروج من^(٢١٦٢) أول الجَدِّي إلى آخر الحوت،
ومن أرباع الشهر الرُّبْعُ الأخيرُ سبعةُ أيام،
ومن الاتّصالات^(٢١٦٣) التريبعُ^(٢١٦٤) الأيمن،
ومن الأركانِ رُكنُ^(٢١٦٥) الماء،
ومن الطبائع البرودةُ والرطوبةُ^(٢١٦٦)،
ومن الجهاتِ الشمالُ،
ومن الرياحِ الجَرياءُ^(٢١٦٧)،
ومن أرباع اليوم نصفُ الليلِ الأخير^(٢١٦٨)،

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- (٢١٥٧) شاكلهما: شاكلها [ط، ل] سقط من ف: ومن الروائح... وما شاكلهما.
(٢١٥٨) من الروائح الباردة اليابسة: ومن الطبائع الباردة واليابسة [ل].
(٢١٥٩) والذي: واما الذي [د، ط].
(٢١٦٠) سقط من أ، ف: زمان.
(٢١٦١) سقط من أ، د، ط، ف، ك: الربع.
(٢١٦٢) سقط من أ، ف: من.
(٢١٦٣) الاتّصالات: اتّصالات [ع] زيادة في ف: إلى آخر الحوت ومن أرباع الشهر الربع الأخير سبعة أيام من الاتّصالات.
(٢١٦٤) زيادة في ف: الأول.
(٢١٦٥) سقط من أ، ف: ركن.
(٢١٦٦) سقط من أ: والرطوبة.
(٢١٦٧) الجَرياء: الجنوبي [أ] الجنوب [ك] الجرى [ف] الجريبي ؟ [د، ط] الحز[بلي] [ل].
(٢١٦٨) نصف الليل الأخير: الصف الأخير من الليل [ك].

ومن القوى^(٢١٤٣) الحيوانية القوة^(٢١٤٤) الحافظة،
 ومن الأخلاق العفة،
 ومن الأفعال الظاهرة التأني والتثبت^(٢١٤٥)،
 ومن المحسوسات المُشاكلة لها نعمات المثلث،
 ومن الألحان الثقيل^(٢١٤٦) وما شاكله^(٢١٤٧)
 ومن الكلام والشعر^(٢١٤٨) ما كان في وصف العقل
 والرّزّانة والركّانة والحصافة^(٢١٤٩)،
 ومن الطّعموم^(٢١٥٠) القبوضات^(٢١٥١)،
 ومن الألوان السّواد^(٢١٥٢) والغبرة وما شاكلهما^(٢١٥٣)،
 ومن الروائح^(٢١٥٤) رائحة^(٢١٥٥) الورد والعود^(٢١٥٦) وما

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- (٢١٤٣) القوى: القوة [د، ط، ف، ك].
 (٢١٤٤) القوة: النفسية [أ] سقط من د، ط، ف، ل: القوة.
 (٢١٤٥) التأني والتثبت: التأني والتثيب [ل].
 (٢١٤٦) الثقيل: الثقال [د، ل].
 (٢١٤٧) شاكله: شاكلها [أ، د، ف، ل].
 (٢١٤٨) والشعر: الشعر [ف] المديح [ع] والمديح [ط، ل] المدح و [ك] سقط من د: والشعر.
 (٢١٤٩) الرزّانة والركّانة والحصافة: الرزّانة والحصافة والركّانة [أ، ف] سقط من ع: والركّانة.
 (٢١٥٠) الطّعموم: الطعامات [ك].
 (٢١٥١) القبوضات: القابضات [د، ط] العفوصات [أ، ف] الحموضات [ك، وفي هامش ل].
 (٢١٥٢) السواد: السود [ل].
 (٢١٥٣) شاكلهما: شاكلها [أ، ط، ف، ل].
 (٢١٥٤) الروائح: الرائحة [ع].
 (٢١٥٥) سقط من أ: رائحة.
 (٢١٥٦) الورد والعود: العود والورد [أ].

من أرباع الفلك الرُّبْعُ^(٢١٣٥) الهَابِطُ من وتدِ المغرب إلى
وتد الأرض،

ومن البروج من أوَّلِ الميزان إلى آخر القوس، [٢٣١]
ومن أرباع الشهر الرُّبْعُ الثالثُ السبعةُ الأيام^(٢١٣٦) بعد
النِّصف^(٢١٣٧)،

ومن الاتِّصالات^(٢١٣٨) بعد المقابلة إلى التربيع الأيمن،
ومن الأركانِ رُكْنُ الأرض،
ومن الطبائع البرودةُ واليُبوسة^(٢١٣٩)
ومن الجهاتِ الغربُ،
ومن الرياحِ الدَّبُورُ،
ومن أرباعِ اليومِ السَّتُّ^(٢١٤٠) ساعات من أول
الليل^(٢١٤١)،

ومن أخلاطِ المزاجِ^(٢١٤٢) السَّوداءُ،
ومن أرباعِ العُمُرِ أيامُ الكُهولةِ،
ومن القوى الطبيعيةِ القوَّةُ الماسِكةُ،

(٢١٣٥) سقط من أ، د، ف: الربع.
(٢١٣٦) الأيام: الأيام التي [أ] أيام التي [ف] أيام [د، ط].
(١٣٧) زيادة في أ، ف: منه.
(١٣٨) زيادة في أ، ف: ما.
(١٣٩) اليبوسة: اليبس [ع، ل].
(١٤٠) الست: ست [أ، ف، ك، ل].
(١٤١) زيادة في أ، ف: إلى نصفه.
(١٤٢) أخلاط المزاج: الأخلاط المرة [أ، ف، ك].

ومن المحسوساتِ المشاكلة^(٢١٢٠) لها مثلُ نغماتِ وترِ

الزَّيرِ

ومن الألحانِ^(٢١٢١) الماخوريُّ وما شاكله^(٢١٢٢)

ومن الكلامِ والأشعارِ^(٢١٢٣) ما^(٢١٢٤) شاكلها^(٢١٢٥) من

مديحِ^(٢١٢٦) الفرسانِ وذكرِ^(٢١٢٧) الشُّجعانِ

ومن الطعومِ^(٢١٢٨) الحرِّيفاتِ^(٢١٢٩)

ومن الألوانِ الصُّفرةِ والحُمْرةِ

ومن الروائحِ المسكُ والياسمين وما شاكلها^(٢١٣٠)،

وبالجُملة كلُّ^(٢١٣١) لونٍ وطعمٍ ورائحةٍ^(٢١٣٢) حارَّةٍ يابِسةٍ،

والذي^(٢١٣٣) يُشاكلُ زمانَ^(٢١٣٤) الخريفِ،

(٢١٢٠) المشاكلة: المقوِّية [أ، د، ط، ع، ك، ل] المقربة [ف].

(٢١٢١) مثل نغمات وتر الزير ومن الألحان: النغمات التي للزير واللحن [أ] النغمات التي هي للزير واللحن [ف].

(٢١٢٢) شاكلة: شاكلها [أ، ف].

(٢١٢٣) الأشعار: الشعر [أ، ف].

(٢١٢٤) والأشعار ما: الأشعار وما [د، ل].

(٢١٢٥) شاكلها: كان [أ، ف].

(٢١٢٦) مديح: مديح [د].

(٢١٢٧) سقط من د، ط، ك، ل: ذكر.

(٢١٢٨) الطعوم: الطعومات [ط] المطعومات [د].

(٢١٢٩) الحرِّيفات: الحرِّيفيات [ع].

(٢١٣٠) شاكلها: شاكلهما [ك].

(٢١٣١) كل: فكل [ع، ل].

(٢١٣٢) لون وطعم ورائحة: طعم ولون ورائحة [د، ط] رائحة [ع، ك، ل].

(٢١٣٣) والذي: وأما الذي [د، ط].

(٢١٣٤) زمان: أيام [د].

من أرباع الفلك الرُّبْعُ الهَابِطُ من وتِدِ السماءِ إلى وتِدِ
المغرب^(٢١١٣)،

ومن البروجِ من أولِ السرطانِ إلى آخرِ السُّنْبُلَةِ
ومن أرباعِ الشهرِ الرُّبْعُ الثاني سبعةً أيامٍ
ومن الاتصالاتِ ما جاوزَ التريبعَ الأيسرَ إلى المُقابِلَةِ،
ومن الأركانِ رُكْنُ النارِ
ومن الطبائعِ الحرارةُ واليُبوسةُ^(٢١١٤)
ومن الجهاتِ الشرقُ
ومن الرياحِ الصِّبَا
ومن أرباعِ اليومِ الستُ^(٢١١٥) ساعاتٍ إلى آخرِ النهارِ،
ومن أخلاطِ المِزاجِ^(٢١١٦) الصِّفراءُ
ومن أرباعِ العُمُرِ أيامُ الشبابِ
ومن القوى الطَّبِيعِيَّةِ القُوَّةُ الجاذِبَةُ
ومن القوى^(٢١١٧) الحيوانِيَّةِ (٥٦ ب) القُوَّةُ^(٢١١٨)
المفكِّرة

ومن الأخلاقِ^(٢١١٩) الشَّجَاعَةُ والسَّخَاءُ
ومن الأفعالِ الظَّاهِرَةِ سرْعَةُ الحَرَكَةِ والقُوَّةُ والجَلْدُ

(٢١١٣) المغرب: الغارب [ع].

(٢١١٤) اليبوسة: اليبس [أ، ف، ك، ل، ط (ومن فوق: اليبوسة)].

(٢١١٥) الست: ست [أ، ف، ك، ل].

(٢١١٦) أخلاط المِزاج: الأخلاط المرة [أ، ف، ك].

(٢١١٧) القوى: قوى [ط، ف] القوة [ك].

(٢١١٨) الحيوانية القوة: النفسية [أ].

(٢١١٩) الأخلاق: الأخلاط [أ] زيادة في ك، ل: الباطنة.

ومن القوى الحيوانية^(٢١٠٣) القوة^(٢١٠٤) المتخيّلة
 ومن الأفعال الظاهرة الفرح والسرور والطرب
 ومن الأخلاق الجود والكرم والعدل
 ومن [٢٣٠] المحسوسات المُشاكِلات^(٢١٠٥) لهذه أيضاً
 مثل^(٢١٠٦) وتر المثنى ونغماته
 ومن الألحان الزّير بِمْ^(٢١٠٧)
 ومن الكلام والأشعار المديح^(٢١٠٨)
 ومن الطّعموم الحلّوات
 ومن الألوان ما اعتدلت أصباغه كالمتشور
 ومن الروائح الغالية البنفسج والمرزنجوش^(٢١٠٩) وما
 شاكلها من الروائح الحارة اللينة،
 وبالجملة كل^(٢١١٠) طعم ورائحة ولون معتدل،
 والذي^(٢١١١) يشاكل زمان^(٢١١٢) الصّيف،

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- (٢١٠٣) القوى الحيوانية: قوى النفسية [أ] القوة الطبيعية الحيوانية [ف] القوة الحيوانية [د، ط، ل].
 (٢١٠٤) سقط من أ، ع: القوة.
 (٢١٠٥) المشاكِلات: المتشاكِلات [ل].
 (٢١٠٦) لهذه أيضاً مثل: لمثل هذه أيضاً [أ، ف].
 (٢١٠٧) بِمْ: واليم (ل) ثم (د) سقط من ف، ك: بِمْ.
 (٢١٠٨) والأشعار المديح: الأشعار والمديح [أ، ف].
 (٢١٠٩) سقط من ع: والمرزنجوش.
 (٢١١٠) كل: فكل [ع].
 (٢١١١) والذي: وأما الذي [د، ط].
 (٢١١٢) زمان: أزمان [ط، ع، ل] سقط من ف: زمان.

من أول الشهر^(٢٠٩١)،

والذي يُشاكله^(٢٠٩٢) من اتّصالات الكواكب التربعُ

الأيسرُ

ومن الأركان الأربعة^(٢٠٩٣) رُكنُ الهواء

ومن الطبائع الحرارة والرطوبةُ

ومن الجهات الجنوبُ

ومن الرياح التيمّي^(٢٠٩٤)

ومن أرباع^(٢٠٩٥) اليوم الستُّ ساعات^(٢٠٩٦) الأولى من

النهار^(٢٠٩٧)

ومن أخلاط المزاج^(٢٠٩٨) الدّمُ

ومن أرباع العمر أيام^(٢٠٩٩) الصّبي

ومن القوى^(٢١٠٠) الطّبيعية^(٢١٠١) القوّة^(٢١٠٢) الهاضمة

(٢٠٩١) سقط من أ، ف: من أول الشهر.

(٢٠٩٢) يشاكله: يشاكلها [أ، د، ط، ع، ف، ك، ل].

(٢٠٩٣) سقط من أ، ف: الأربعة.

(٢٠٩٤) التيمّي: الثمين [ف] الليل[ل]لي [ل] التيمّن التيمي [أ].

(٢٠٩٥) سقط من د: أرباع.

(٢٠٩٦) ساعات: الساعات [أ، د، ك].

(٢٠٩٧) سقط من أ، د، ط، ف، ك، ل: من النهار.

(٢٠٩٨) المزاج: البدن [أ، ف].

(٢٠٩٩) أيام: أيضاً [د، ط].

(٢١٠٠) القوى: قوى [أ].

(٢١٠١) سقط من ف: الطّبيعية.

(٢١٠٢) سقط من ك، ل: القوّة.

المتضادات والمتشاكِلات^(٢٠٧٩)، ليكون تنبيهاً لنفوس الغافلين^(٢٠٨٠) عن النظر فيها وحثاً لهم على التفكير^(٢٠٨١) والاعتبار لها^(٢٠٨٢) وتسهيلاً لنفوس^(٢٠٨٣) الباحثين عن معرفة عللها^(٢٠٨٤) والطالين ما الحكمة فيها،
فمن الأمور^(٢٠٨٥) المربعات الظاهرات البيّنات الأزمان الأربعة التي هي^(٢٠٨٦) فصول السنة وهي الربيع والصيف والخريف والشتاء،
والذي يُشاكِل الربيع^(٢٠٨٧):

من البروج من أول^(٢٠٨٨) الحمل إلى آخر الجوزاء،
والذي يُشاكِله^(٢٠٨٩) من أرباع الفلك الربع الشرقي الصاعد إلى وتد السماء،
والذي يُشاكِله^(٢٠٩٠) من الشهر الربع الأول سبعة أيام

-
- (٢٠٧٩) المتضادات والمتشاكِلات: المتضادات المشاكِلات [ع، ك] المتشاكِلات والمتضادات [ل].
(٢٠٨٠) لنفوس الغافلين: للنفوس الغافلة [أ، ف].
(٢٠٨١) زيادة في د، ط: فيها.
(٢٠٨٢) سقط من أ، ف: والاعتبار لها.
(٢٠٨٣) لنفوس: على نفوس [أ، ف].
(٢٠٨٤) معرفة عللها: معرفتها: [ع].
(٢٠٨٥) الأمور: الأسرار؟ [ف].
(٢٠٨٦) سقط من ع: هي.
(٢٠٨٧) سقط من أ: الربيع (وفي الهامش في خط آخر: الشتاء).
(٢٠٨٨) سقط من د: من أول.
(٢٠٨٩) يشاكِله: يشاكِلها [د، ط، ع، ل] [ت]شاكِلها [ك].
(٢٠٩٠) الذي يشاكِله: الذي يشاكِلها [أ، ع، ف، ل] التي [ت]شاكِلها [د، ك] والتي يشاكِلها [ط].

أخي وجدت صِحَّةَ ما قلنا وعرفتَ^(٢٠٦٤) حقيقةَ ما وصفنا .

فصل^(٢٠٦٥) [١٤]

اعلم يا أخي أيَّدك الله وإيَّانا بروحٍ منه بأن الله جلَّ (٥٦ أ) ثناؤه جعل بواجبِ حكمته^(٢٠٦٦) الأشياءَ الطبيعية^(٢٠٦٧) التي تحت الكون والفساد وأسبابها^(٢٠٦٨) وعللها الموجبة لكونها أكثرها^(٢٠٦٩) مربَّعاتٌ ، بعضها متضادَّات وبعضها متشاكلات^(٢٠٧٠) ، لما فيها من إحكام الصَّنعة وإتقان الحكمة لا يعلم^(٢٠٧١) أحدٌ من خلقه^(٢٠٧٢) كنهه^(٢٠٧٣) معرفتها إلَّا هو^(٢٠٧٤) الذي أبدعها واخترعها^(٢٠٧٥) وأوجدها وركبها وألفها كما شاء^(٢٠٧٦) .

ونريد أن نذكر^(٢٠٧٧) طرفاً من تلك^(٢٠٧٨) الأشياء المربَّعات

(٢٠٦٤) سقط من ع: عرفت .

(٢٠٦٥) سقط من أ: فصل .

(٢٠٦٦) حكمته: الحكمة [أ، ف] .

(٢٠٦٧) سقط من أ، ف: الطبيعية .

(٢٠٦٨) سقط من ك: وأسبابها .

(٢٠٦٩) لكونها أكثرها: لكونها أكثر [ع] لها ولكونها أكثرها [أ، ف] .

(٢٠٧٠) متشاكلات: مشاكلات [ع، ف] .

(٢٠٧١) يعلم: يعرف [د] .

(٢٠٧٢) سقط من د: من خلقه .

(٢٠٧٣) كنه: كمية [د] كيفية [ط، ومن فوق: كنه] .

(٢٠٧٤) سقط من د: هو . زيادة في ل: سبحانه .

(٢٠٧٥) أبدعها واخترعها: اخترعها وأبدعها [ل] .

(٢٠٧٦) زيادة في أ، ف: وكيف شاء فسبحانه وتعالى علواً كبيراً . زيادة في د، ط، ل: كيف شاء .

(٢٠٧٧) زيادة في أ، ف: من ذلك .

(٢٠٧٨) سقط من أ، ف: تلك .

وأما الهَزَج فهو نَقْرَةٌ مُسَكَّنَةٌ (٢٠٤٨) وأخرى أَخَفْتُ (٢٠٤٩) منها
[ليس] بينهما زمانٌ نَقْرَةٌ وبين كلِّ اثنتين (٢٠٥٠) زمانٌ نَقْرَتَيْنِ مثلُ
قولك (٢٠٥١)

فَاعِلُنْ فَاعِلُنْ (٢٠٥٢)

تَنْ تَنْ تَنْ تَنْ (٢٠٥٣).

فهذه الثمانية الأجناس (٢٠٥٤) التي قلنا إنها أصلُ
وقوانينُ (٢٠٥٥) لَغْناءِ العربية (٢٠٥٦) وألحانها (٢٠٥٧). فأما غيرُ
العربية كالفارسية والرومية واليونانية فلاألحانها (٢٠٥٨) وغنائها
قوانينُ أُخَرُ (٢٠٥٩) غيرُ هذه، ولكنها كلها (٢٠٦٠) مع كثرة أجناسها
وفنونِ أنواعها ليس تخرج (٢٠٦١) من الأصل والقانون الذي ذكرنا
قبل هذا الفصل، وإذا (٢٠٦٢) تأملت واعتبرت (٢٠٦٣) يا [٢٢٩]

(٢٠٤٨) مسكنة: ساكنة [ع، ك، ل].

(٢٠٤٩) أَخَفْتُ: خَفَ [ف].

(٢٠٥٠) اثنتين: اثني [ل].

(٢٠٥١) سقط من ك: مفاعلن مفاعلن... وأما الهَزَج... مثل قولك.

(٢٠٥٢) فاعلن فاعلن: فاعل فاعل (ف).

(٢٠٥٣) تَنْ تَنْ تَنْ تَنْ: تن تن تن تن [ط، ل] سقط من أ، ف، ك: تَنْ تَنْ تَنْ تَنْ.

(٢٠٥٤) الأجناس: أجناس [ل].

(٢٠٥٥) إنها أصل وقوانين: أصل قوانين الغناء [أ، ف].

(٢٠٥٦) لَغْناءِ العربية: الغناء العربي [أ، ف] لغناء العرب [ك].

(٢٠٥٧) وألحانها: وألحانها [أ، ف] كلها [ع].

(٢٠٥٨) فلاألحانها: لألحانها [ع].

(٢٠٥٩) أُخَرُ: أخرى [أ].

(٢٠٦٠) سقط من ف: كلها.

(٢٠٦١) ليس تخرج: ليست بمستغنية [ع].

(٢٠٦٢) وإذا: فإذا [ف] ولو [د].

(٢٠٦٣) سقط من أ، ف، ك: واعتبرت.

فاعِلُنْ (٢٠٣٥) مفا عِلُنْ (٢٠٣٦)

تَنْ تَنْ تَنْ (٢٠٣٧) تَنْ (٢٠٣٨)

مثل صياح الدُّرَّاج (٢٠٣٩) كَي كَي (٢٠٤٠) كَي كَي .

وأما (٢٠٤١) خفيف الرَّمْل فهو ثلاثُ نقراتٍ متوالياتٍ

متحرّكات، مثلُ قولك

مُتفاعِلْتُنْ (٢٠٤٢)

تَنْ تَنْ تَنْ (٢٠٤٣) .

وأما خفيف الخفيف (٢٠٤٤) فهو نقرتانِ متواليَتانِ (٢٠٤٥) لا

يكون بينهما زمانُ نقرَةٍ ولكنْ (٢٠٤٦) بين كلِّ نقرتين ونقرتين (٢٠٤٧)

زمانُ نقرَةٍ مثل قولك

مفاعِلُنْ مفاعِلُنْ

تَنْ تَنْ تَنْ تَنْ .

(٢٠٣٥) فاعِلُنْ: فاعِل [ف].

(٢٠٣٦) مفاعِلُنْ: فاعِلُنْ [د].

(٢٠٣٧) تَنْ: تَنْ [د].

(٢٠٣٨) سقط من أ، ف، ك: تَنْ تَنْ تَنْ تَنْ .

(٢٠٣٩) الدراج: القباچ تَنْ تَنْ تَنْ تَنْ [أ] القباچ تَنْ تَنْ تَنْ [ف] القباچ تَنْ تَنْ

تَنْ تَنْ [ك].

(٢٠٤٠) كَي كَي: كَي كَي [ف].

(٢٠٤١) وأما: فأما [ط، ع].

(٢٠٤٢) متفاعِلْتُنْ: متفاعِلُنْ [د، ط، ع] مفاعِلُنْ [ك] سقط من أ، ف: متفاعِلْتُنْ .

(٢٠٤٣) تَنْ تَنْ تَنْ: تَنْ تَنْ تَنْ [د، ط، ع].

(٢٠٤٤) الخفيف: الرَّمْل [د].

(٢٠٤٥) نقرتانِ متواليَتانِ: ثلاثُ نقراتٍ متوالياتٍ [ل].

(٢٠٤٦) سقط من ل: لكنْ .

(٢٠٤٧) سقط من ع: ونقرتين .

وأما خفيف الثقيل الثاني فهو ثلاثُ نقراتٍ متوالياتٍ لا يكون بينهما^(٢٠٢١) زمانُ نقرةٍ ولكن^(٢٠٢٢) بين^(٢٠٢٣) كلّ ثلاثٍ نقراتٍ وثلاثٍ نقراتٍ زمانُ نقرةٍ^(٢٠٢٤)، مثلُ قولك

فَعِلْنُ فَعِلْنُ

تنن تنن^(٢٠٢٥)

يُكْرَرُ^(٢٠٢٦) دائماً إلى أن يسكت المغني .

وأما^(٢٠٢٧) الرَّمَلُ فهو عكس الماخوريّ وذلك أنه سبع^(٢٠٢٨) نقراتٍ مثله ولكن أوله نقرة مفردة ثقيلة ثم نقرتان متواليتان^(٢٠٢٩) لا يكون^(٢٠٣٠) بينهما^(٢٠٣١) زمانُ نقرةٍ ثم أربعُ نقراتٍ كلُّ اثنتين منها^(٢٠٣٢) متواليتان^(٢٠٣٣) ليس^(٢٠٣٤) بينهما زمانُ نقرةٍ، مثلُ قولك

(٢٠٢١) بينها : بينهما [أ، د، ك] .

(٢٠٢٢) سقط من ع : ولكن .

(٢٠٢٣) بين : من [ك] .

(٢٠٢٤) سقط من ل : زمان نقرة .

(٢٠٢٥) تنن تنن : تنن تنن [ك] سقط من ع : تنن تنن .

(٢٠٢٦) يكرر : تكرر [ع، ف] ويكرر [د] .

(٢٠٢٧) وأما : فأما [ع] .

(٢٠٢٨) سبع : يُسمع [ع] تسع [أ، ف] .

(٢٠٢٩) متواليتان : متواليان [أ] .

(٢٠٣٠) لا يكون : لم يكن [ف] .

(٢٠٣١) سقط من ع : نقرات مثله ولكن أوله نقرة مفردة ثقيلة ثم نقرتان متواليتان لا يكون بينهما .

(٢٠٣٢) منها : منهما [د، ط] .

(٢٠٣٣) متواليتان : متواليتين [أ، ف، ل] .

(٢٠٣٤) ليس : لا يكون [ك، ل] سقط من د، ط، ع : ليس .

ثم يعود الإيقاع (٢٠٠٥) دائماً (٢٠٠٦)،

وأما خفيف الثقل الأول فهو سبعُ نقراتٍ، [٢٢٨] نقرتان منها متواليتان^(٢٠٠٧) لا^(٢٠٠٨) يكون بينهما زمانُ نقرَةٍ ثم نقرَةٌ مُفَرَّدَةٌ ثِقِيلَةٌ ثم^(٢٠٠٩) أربعُ نقراتٍ واحدةٌ^(٢٠١٠) مطوَّيَّةٌ في أولها، مثلُ قولك^(٢٠١١)

مَفَاعِلُنْ (٢٠١٢) مُتَفَاعِلُنْ (٢٠١٣)

تنن تنن تنن تنن (٢٠١٤)

وَيُكْرَّرُ دَائِمًا^(٢٠١٥) إِلَى أَنْ يَسْكُتَ^(٢٠١٦) الْمَوْسِيقَارُ^(٢٠١٧). وَأَهْلُ
زَمَانِنَا يُسَمُّونَ هَذَا اللَّحْنَ الْمَاخُورِيَّ، وَهُوَ مِثْلُ^(٢٠١٨) صِيَاحِ
الْفَاخِشَةِ^(٢٠١٩) كَكَو كَكَو كَكَو^(٢٠٢٠)

(٢٠٠٥) الإيقاع: ويكرر [ل].

(٢٠٠٦) سقط من أ، ع، ك: ثم يعود الإيقاع دائماً.

(٢٠٠٧) متوالياتان: متواليان [أ] متواليات [ف].

(٢٠٠٨) لا : ما [٤].

(٢٠٠٩) سقط من ع: ثم.

(٢٠١٠) سقط من ٤: واحدة.

(٢٠١١) قولك : ذلك [ل].

(٢٠١٢) مفاعِلن: مفاعِل [د، ف، ل] مفاعِل (ط، ك).

(٢٠١٣) متفاعِلن: متفاعِل [د] مفاعِل [ل]. زيادة في ف: ثم يعود إلى الإيقاع.

(٢٠١٤) تَنْ تَنْ تَنْ تَنْ : تَنْ تَنْ تَنْ تَنْ [أ، د] تَنْ تَنْ تَنْ تَنْ [ف] تَنْ تَنْ تَنْ

تن [ك]. زيادة في د، ط، ك: ثم يعود الإيقاع.

(٢٠١٥) ويكرّر دائماً: وتكرّر [ع] وتكرر دائماً [ف] ويكرر [د، ك].

(۲۰۱۶) یسکت: یسکن [ك].

(٢٠١٧) الموسيقار: المغني [أ، د، ط، ف، ك] زيادة في ل (من تحت): المغني.

(٢٠١٨) مثل، : مثال [ل].

(٢٠١٩) الفاخّته: الفاخّته [أ، ف] الفاخّات [ك].

(۲۰۲۰) ڪڪوڪڪو ڪڪو ڪڪو: ڪڪو ڪڪو ڪو [ا، د، ط، ف، ڪ] ڪڪو ڪڪو [ل].

مَفْعُولُنْ مَفْ (١٩٨٩) مَفَاعِيلُنْ مَفْ (١٩٩٠)

تَنْ تَنْ تَنْ تَنْ تَنْ تَنْ تَنْ تَنْ تَنْ تَنْ (١٩٩١)

ثم يعود (١٩٩٢) الإيقاع ويكرّر (١٩٩٣) دائماً إلى أن يسكت (١٩٩٤)
الموسيقار،

فأمّا الثقليل الثاني فهو إحدى عشرة (١٩٩٥) نَقرة، ثلاثُ نقراتٍ
متواليات ثم واحدة ساكنة [ثم واحدة متحرّكة] ثم واحدة ثقيلة ثم
سِتْ (١٩٩٦) نقراتٍ في (١٩٩٧) أولها واحدة مطويّة (١٩٩٨) مثلُ
قولك (١٩٩٩)

مَفْعُولُنْ مَفْ عُو (٢٠٠٠) مَفَاعِيلُنْ مَفْ عُو (٢٠٠١)،

تَنْ تَنْ تَنْ تَنْ تَنْ تَنْ تَنْ (٢٠٠٢) تَنْ تَنْ تَنْ تَنْ تَنْ تَنْ (٢٠٠٣) تَنْ تَنْ تَنْ تَنْ (٢٠٠٤)

(١٩٨٩) سقط من ف: مَفْ.

(١٩٩٠) مفاعيلن مَفْ: مفعولن مَفْ، عو مفاعِلن مَفْ عو [ل] زيادة في أ، ف: وهي.

(١٩٩١) تَنْ تَنْ تَنْ تَنْ تَنْ تَنْ تَنْ تَنْ تَنْ تَنْ : تنن تن تن تن تن تن تن تن تن تن تن [ف]

تن تن تن، تن، تنن تن، تن، تن تن، تنن تن تن تن، تن [ل].

(١٩٩٢) ثم يعود: فهو بعيد [ع] زيادة في أ، د، ف، ك: إلى.

(١٩٩٣) يُكْرَّر: يُكْرَّر [ع] يكون [ف].

(١٩٩٤) يسكت: يسكن [ك].

(١٩٩٥) إحدى عشرة: أحد عشر [أ، د، ط، ف، ل] أحد عشرة [ك].

(١٩٩٦) ست: ستة [أ].

(١٩٩٧) سقط من ع: نقرات في.

(١٩٩٨) مطوية: مطوّلة [ع].

(١٩٩٩) قولك: هذا [أ] هذه [ف].

(٢٠٠٠) مَفْ عُو: مفعو [أ، د، ك وكذا فيما يلي].

(٢٠٠١) مفعولن مَفْ عو مفاعيلن مَفْ عو: فعولن مفعولن مفعو مفاعيل مفعو هي

[ف].

(٢٠٠٢) سقط من ك: تن.

(٢٠٠٣) تنن: تن [ل].

(٢٠٠٤) زيادة في ف، ل، ط (ثم شطبت في ل): تن.

كما هو مذكور في كُتب العروض وشرحها^(١٩٧٦).
 فأما الثمانية التي هي^(١٩٧٧) قوانين غناء العربية^(١٩٧٨)
 فأولها الثقيل الأول ثم خفيف الثقيل
 ثم الثقيل الثاني^(١٩٧٩) ثم خفيفه
 ثم الرمل ثم خفيف الرمل
 ثم خفيف الخفيف ثم الهزج^(١٩٨٠)،
 فهذه الثمانية هي^(١٩٨١) كالأجناس^(١٩٨٢) وسائرهما^(١٩٨٣) (٥٥ ب)
 كالأنواع المتفرّعة منها المنسوبة إليها،
 فأما الثقيل الأول^(١٩٨٤) فهو تسع نقرات ثلاثة منها متواليات
 وواحدة^(١٩٨٥) مُفردة ثقيلة ساكنة ثم خمس نقرات^(١٩٨٦)
 واحدة^(١٩٨٧) مطوية في أولها^(١٩٨٨)، مثل قولك

-
- (١٩٧٦) وشرحها: لشرحها [ف] بشرحها [د، ط، ك، ل].
 (١٩٧٧) التي هي: اللواتي هن [ع، ل].
 (١٩٧٨) العربية: العرب [ل].
 (١٩٧٩) سقط من ف: الثاني.
 (١٩٨٠) خفيف الخفيف ثم الهزج: الهزج ثم خفيف الخفيف [أ].
 (١٩٨١) هي: هن [ع].
 (١٩٨٢) كالأجناس: الأجناس [ف].
 (١٩٨٣) زيادة في أ، ف: هي.
 (١٩٨٤) سقط من د، ط: الأول.
 (١٩٨٥) وواحدة: واحدة [أ، ف].
 (١٩٨٦) سقط من ع: ثلاثة منها متواليات... خمس نقرات.
 (١٩٨٧) واحدة: منها واحدة (د) منها وواحدة [ل].
 (١٩٨٨) سقط من ع: في أولها.

أُخْرَى^(١٩٦٢)، كما ذكر الله تعالى حِكَايَةَ عَنْهُمْ ﴿قَالُوا رَبَّنَا آمَنَّا أَشْثِينَ وَأَحْيَيْنَا أَثْنَتَيْنِ فَأَعَرَفْنَا بِذُنُوبِنَا فَهَلْ إِلَى خُرُوجٍ مِّن سَبِيلٍ﴾^(١٩٦٥) أعاذك الله^(١٩٦٣) وإيانا وجميع إخواننا^(١٩٦٤) حيث^(١٩٦٥) كانوا في^(١٩٦٦) البلاد إنه رؤوف^(١٩٦٧) بالعباد.

فصل^(١٩٦٨) [١٣]

فَنَرْجِعُ^(١٩٦٩) إِلَى مَا كُنَّا^(١٩٧٠) وَعَدْنَا بِهِ مِنْ ذِكْرِ^(١٩٧١) قَوَانِينِ الْأَلْحَانِ الْعَرَبِيَّةِ، فنقول إن لُغْنَاءَ الْعَرَبِيَّةِ وَأَلْحَانَهَا ثَمَانِيَّةَ قَوَانِينِ هِيَ كَالْأَجْناسِ^(١٩٧٢) لَهَا وَمِنْهَا يَتَفَرَّعُ سَائِرُهَا وَإِلَيْهَا يُنْسَبُ بَاقِيهَا، كَمَا أَنَّ لِأَشْعَارِهَا^(١٩٧٣) ثَمَانِيَّةَ مَقَاطِعَ مِنْهَا يَتَرَكَّبُ^(١٩٧٤) سَائِرُ دَوَائِرِ الْعَرُوضِ وَأَنْوَاعِهَا وَإِلَيْهَا يُنْسَبُ وَعَلَيْهَا يُقَاسُ بَاقِيهَا^(١٩٧٥)،

(١٩٦٢) سقط من ع، ك: ويذوقون الموت مرة أخرى.

(١٩٦٣) زيادة في أ، ف: أيها الأخ البار الرحيم. زيادة في د، ط، ك: أيها الأخ عن حال هذه الطائفة.

(١٩٦٤) زيادة في أ، ف: من حال هذه الطائفة.

(١٩٦٥) حيث: حيث ما [ف].

(١٩٦٦) في: من [أ].

(١٩٦٧) رؤوف: لطيف [أ، د، ط، ف، ك].

(١٩٦٨) سقط من أ، د، ط، ك، ل: فصل.

(١٩٦٩) فنرجع: نعود [أ، ف].

(١٩٧٠) زيادة في ك: فيه وقد.

(١٩٧١) كنا وعدنا به من ذكر: كنا فيه ووعدنا من تبين [أ، ف].

(١٩٧٢) كالأجناس: الأجناس [ع، ف].

(١٩٧٣) لأشعارها: للأشعار [د، ط، ل].

(١٩٧٤) يتركب: تركيب [أ، ف].

(١٩٧٥) باقيةا: ما فيها [د].

المتجسّدة إلى وقت المفارقة التي هي^(١٩٤٩) الموت، مماثلةً لمُدّة
 كَوْن الجنين في الرَّحِم من يوم مَسْقِط النُّطفة إلى يوم الولادة.
 واعلم أن الموت ليس هو^(١٩٥٠) شيئاً سوى مُفارقة النفس
 الجسد، كما أن الولادة لم تكن شيئاً^(١٩٥١) سوى مفارقة
 الجنين^(١٩٥٢) الرَّحِم، كما^(١٩٥٣) قال المسيح عليه السلام «مَنْ
 لم^(١٩٥٤) يولّد ولادتين لم^(١٩٥٥) يصعد إلى ملكوت السماء»،
 وقال الله سبحانه^(١٩٥٦) في صفة أهل الجنة ﴿لَا يَذُوقُونَ
 فِيهَا الْمَوْتَ إِلَّا الْمَوْتَةَ الْأُولَى﴾^(١٩٥٨) وهي مفارقة النفس
 [٢٢٧] الجسد مرّةً واحدةً على الشريطة التي تقدّم ذكرها،
 وهؤلاء^(١٩٥٩) هم السّعداء الذين أشار إليهم بقوله تعالى ﴿وَقَالُوا
 الْحَمْدُ لِلَّهِ الَّذِي هَدَانَا لِهَذَا وَمَا كُنَّا لِنَهْتَدِيَ لَوْلَا أَنَّ هَدَانَا
 اللَّهُ﴾^(١٩٦٠) فأمّا الأشقياء فهم الذين يتمتّون العود إلى الدُّنيا
 والتعلّق بالأجساد^(١٩٦١) مرّةً أخرى، ويدوقون الموت مرّةً

(١٩٤٩) التي هي: الذي هو [ط].

(١٩٥٠) سقط من ك: هو.

(١٩٥١) لم تكن شيئاً: ليست شيء [أ] ليست شيئاً [ف، ك].

(١٩٥٢) زيادة في ك: من.

(١٩٥٣) كما: و [د، ط، ك] وقد [أ، ف].

(١٩٥٤) لم: لا [ع].

(١٩٥٥) لم: لا [د، ط، ع].

(١٩٥٦) سقط من ع: وقال الله سبحانه. زيادة في ف: وتعالى.

(١٩٥٧) سقط من أ، ف: أهل.

(١٩٥٨) الموتة الأولى: الموت الأول [ع].

(١٩٥٩) سقط من د، ط، ع، ك: هؤلاء.

(١٩٦٠) زيادة في ك: لقد جاءت رسل ربنا بالحق.

(١٩٦١) بالأجساد: إلى الأجساد [ف].

واعملُ بما^(١٩٣٦) وُصِفَ^(١٩٣٧) في كُتِبَ الأنبياء عليهم السلام^(١٩٣٨)، وُصِفَ نفسك من الأخلاق الرديئة والآراء الفاسدة^(١٩٣٩) والجهالات المتراكمة والأعمال^(١٩٤٠) السيئة، فإن هذه الخصال هي المانعة لها عن الصعود إلى هناك^(١٩٤١) بعد الموت، كما ذكر الله تعالى بقوله^(١٩٤٢) ﴿لَا تُفْنَحُ لَهُمْ أَبْوَابُ السَّمَاءِ وَلَا يَدْخُلُونَ الْجَنَّةَ حَتَّى يَلِجَ الْجَمَلُ فِي سَمِّ الْخِيَاطِ﴾^(١٩٤٣)

واعلم^(١٩٤٤) أن جوهر نفسك من الأفلاك، نزل يوم مسقط النطفة، كما بيّنا في رسالة لنا وإلى هناك يكون^(١٩٤٥) مصيرها بعد الموت الذي هو مُفارقة الجسد، كما أن من التراب يكون جسدك وإلى التراب يكون^(١٩٤٦) مصيره^(١٩٤٧) بعد الموت.

واعلم يا أخي أن هذه الحياة الدنيا^(١٩٤٨)، للنفوس

(١٩٣٦) بما: [د، ط، ك].

(١٩٣٧) وُصِفَ: وصفت [د] وصفنا [ك].

(١٩٣٨) بما وُصِفَ في كتب الأنبياء عليهم السلام: كما وصفته الأنبياء صلوات الله عليهم في كتبهم [أ، ف].

(١٩٣٩) زيادة في أ، ف: الدنيا.

(١٩٤٠) الأعمال: الأفعال [د، ط، ك].

(١٩٤١) هناك: السماء [أ، ف].

(١٩٤٢) ذكر الله تعالى بقوله: قال الله سبحانه وتعالى [أ، ف] سقط من د: بقوله.

(١٩٤٣) سقط من أ، ف: حتى يلج الجمل في سم الخياط.

(١٩٤٤) واعلم: واعلم أيها الأخ أيذك الله وإيانا بروح منه [أ] الآية فصل واعلم أيها الأخ أيذك الله وإيانا بروح منه [ف] واعلم يا أخي [ط، ك].

(١٩٤٥) سقط من ك: يكون.

(١٩٤٦) سقط من أ، ف: يكون.

(١٩٤٧) مصيره: جسدك [د، ك].

(١٩٤٨) سقط من ع، ف: الدنيا.

تَشَوَّقَتْ (١٩٢١) نَفْسُهُ إِلَى (١٩٢٢) الصُّعُودِ إِلَى هُنَاكَ وَالِاسْتِمَاعِ لَهَا
وَالنَّظَرِ إِلَيْهَا كَمَا صَعَدَتْ نَفْسُ هِرْمِس [٢٢٦] الْمَثَلُثِ بِالْحِكْمَةِ
وَرَأَتْ ذَلِكَ (١٩٢٣)، وَهُوَ إِدْرِيسُ النَّبِيِّ (١٩٢٤) عَلَيْهِ السَّلَامُ الْمَشَارِ
إِلَيْهِ (١٩٢٥) بِقَوْلِهِ ﴿وَرَفَعْنَاهُ مَكَانًا عَلِيًّا﴾، وَكَمَا سَمِعَتْ نَفْسُ
فِيثَاغُورَسِ الْحَكِيمِ لَمَّا صَفَّتْ مِنْ دَرَنِ الشَّهَوَاتِ (١٩٢٦) الْجِسْمَانِيَةِ
وَلَطُفَتْ (١٩٢٧) بِالْأَفْكَارِ الرُّوحَانِيَةِ (١٩٢٨) وَبِالرِّيَاضَاتِ الْعَدَدِيَةِ
وَالْهَنْدَسِيَةِ (١٩٢٩) وَالْمُوسِيقِيَةِ.

فَاجْتَهَدُ (١٩٣٠) يَا أَخِي أَيَّدُكَ اللَّهُ وَإِنَّا بِرُوحٍ مِنْهُ (١٩٣١) فِي
تَصْفِيَةِ نَفْسِكَ وَتَخْلِيصِهَا (١٩٣٢) مِنْ بَحْرِ الْهَيُولَى وَأَسْرِ الطَّبِيعَةِ
وَعِبُودِيَةِ الشَّهَوَاتِ الْجِسْمَانِيَةِ، (٥٥ أ) وَافْعَلْ كَمَا فَعَلْتَ (١٩٣٣)
الْحُكَمَاءُ (١٩٣٤)، فَإِنَّ جَوْهَرَ نَفْسِكَ مِنْ جَوَاهِرِ (١٩٣٥) نَفُوسِهِمْ،

(١٩٢١) تشوقت: يتشوق [أ، ف].

(١٩٢٢) سقط من د، ط، ك: إلى.

(١٩٢٣) ورأت ذلك: فرأت ذلك [د]. وأرت ذلك [ل، في الهامش]، سقط من ع:
ورأت ذلك.

(١٩٢٤) سقط من ع: النبي.

(١٩٢٥) المشار إليه: وإليه أشار سبحانه [أ] وإليه أشار سبحانه وتعالى [ف] وإليه
أشار [د، ط، ك].

(١٩٢٦) الشهوات: شهوات [د].

(١٩٢٧) لطفت: لطف [د].

(١٩٢٨) الروحانية: الدائمة [د، ط، ع، ك، ل].

(١٩٢٩) وبالرياضات العددية والهندسية: بالرياضات الهندسية العددية [د].

(١٩٣٠) فاجتهد: فاحرص [أ، ف].

(١٩٣١) زيادة في أ، ف: واجتهد.

(١٩٣٢) تخلصها: تخلصها [ف].

(١٩٣٣) فعلت: فعل [أ، ف، ل].

(١٩٣٤) زيادة في أ، د، ط، ف، ك: ووصفت في كتبها.

(١٩٣٥) من جواهر: من جواهر [ط، ف، ك] وجواهر [د] سقط من أ: جواهر.

لذيذات، كما بيّنا في حركات أوتار العود^(١٩٠٣) ونغماتها، فإذا تفكّر^(١٩٠٤) ذو اللبّ واعتبر تبين له عند^(١٩٠٥) ذلك وعلم أن لها^(١٩٠٦) صانعاً^(١٩٠٧) حكيماً^(١٩٠٨) صنعها ومُرْكَباً^(١٩٠٩) مُتَقَنّاً^(١٩١٠) ركبها ومؤلفاً لطيفاً ألفها، ويتيقّن بذلك^(١٩١١) وتزول الشبهة المموّهة^(١٩١٢) التي دخلت^(١٩١٣) على^(١٩١٤) قلوب^(١٩١٥) كثير من المُرتابين، وترتفع الشكوك ويتضح الحق، ويعلم أيضاً ويتبين^(١٩١٦) له أن^(١٩١٧) في حركات تلك الأشخاص ونغمات تلك الحركات لذّة وسروراً لأهلها هناك، كما^(١٩١٨) في نغمات أوتار العيدان لذّة وسرور^(١٩١٩) لأهلها ها هنا^(١٩٢٠)، فعند ذلك

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- (١٩٠٣) العود: العيدان [أ، د، ط، ف، ك].
 (١٩٠٤) زيادة في أ، ف: فيها.
 (١٩٠٥) سقط من د: عند.
 (١٩٠٦) سقط من د: لها.
 (١٩٠٧) زيادة في أ، ف: لا نظير له ولا ضد. زيادة في د: كبيراً.
 (١٩٠٨) سقط من ع: حكيماً.
 (١٩٠٩) زيادة في ل (من تحت): حكيماً حاذقاً.
 (١٩١٠) متقناً: حاذقاً [أ، ف، ك].
 (١٩١١) يتيقن بذلك: يتيقن ذلك [أ، ط] يتقن ذلك [د، ف] يتقن بذلك [ك].
 (١٩١٢) سقط من د، ط: المموّهة.
 (١٩١٣) دخلت: قد دخلت [أ، ف].
 (١٩١٤) على: في [د].
 (١٩١٥) قلوب: القلوب الساهية وعقول [ع].
 (١٩١٦) يتبين: تبين [ل].
 (١٩١٧) له أن: له بأن [ع، ل] لذلك بأن [ف].
 (١٩١٨) لأهلها هناك كما: هناك لأهلها مثل ما [أ، د، ط، ف].
 (١٩١٩) سقط من ك: لأهلها هناك... لذّة وسرور.
 (١٩٢٠) ها هنا: هنا [ع] في هذا العالم [ك، وفي هامش ل].

المِثَالَات^(١٨٨٦) التي تقدّم ذكرها في هذه الفصول الدالات^(١٨٨٧) على أن أحكم المصنوعات وأتقن المركّبات وأحسن التّأليفات هو ما كان تركيبُ بنيته^(١٨٨٨) على النّسبة الأفضل^(١٨٨٩) وتأليفُ أجزائه على مثل ذلك، دليلاً وقياساً^(١٨٩٠) لكلّ عاقل متفكّر^(١٨٩١) معتبر على أن تركيب الأفلاك وكواكبها ومقادير^(١٨٩٢) أجزائها^(١٨٩٣) ومقادير هذه^(١٨٩٤) الأركان ومولّداتها موضوعة أيضاً^(١٨٩٥) بعضها من^(١٨٩٦) بعض على النسبة الأفضل^(١٨٩٧)، وهكذا حكم^(١٨٩٨) أبعاد هذه الأفلاك وكواكبها، وحركاتها مُتناسبات^(١٨٩٩) ومؤلفات على النسبة الأفضل، وأن لتلك الحركات^(١٩٠٠) المُتناسبة نغماتٍ متناسباتٍ^(١٩٠١) مُطربات^(١٩٠٢)

(١٨٨٦) زيادة في د، ط: الدالات.

(١٨٨٧) الدالات: دلالات [أ، ف] سقط من د، ط: الدالات.

(١٨٨٨) تركيب بنيته: تركيبه [ع].

(١٨٨٩) الأفضل: الفاضلة [ف].

(١٨٩٠) دليلاً وقياساً: دليل وقياس [أ، د، ط، ك] الدليل وقياس [ف].

(١٨٩١) متفكر: مفكر [أ، ط].

(١٨٩٢) مقادير: مقاديرها ومقادير [ل].

(١٨٩٣) أجزائها: أجزامها [ف، ك، ل].

(١٨٩٤) سقط من د، ط، ك، ل: هذه.

(١٨٩٥) سقط من ك، ل: أيضاً.

(١٨٩٦) من: عند [أ، د، ط] على [ك، ل].

(١٨٩٧) سقط من ع: الأفضل.

(١٨٩٨) سقط من ك، ل: حكم.

(١٨٩٩) متناسبات: مناسبات [أ].

(١٩٠٠) زيادة في أ: المتناهية.

(١٩٠١) زيادة في د، ط: متنزات. زيادة في أ: متنزات. زيادة في ف: متربات.

زيادة في ك، ل (من فوق): متوازيات.

(١٩٠٢) سقط من د، ع، ط: مطربات.

العارضة^(١٨٧٢) عند الابتداء وعند النشو من فساد الأخلاط وتغيير المزاج ومناحس [٢٢٥] أشكال الفلك، وعلى هذا المثال والقياس^(١٨٧٣) يعمل الصَّنَاع الحَذَّاق^(١٨٧٤) مصنوعاتهم من الأشكال والتماثيل^(١٨٧٥) والصُّور^(١٨٧٦) مناسبات^(١٨٧٧) بعضها لبعض في التركيب والتأليف والهندام، كلُّ ذلك اقتداءً بصنعة^(١٨٧٨) البارئ عزَّ اسمه^(١٨٧٩) وتشبُّهاً^(١٨٨٠) بحكمته^(١٨٨١)، كما قيل في حدِّ^(١٨٨٢) الفلسفة إنها^(١٨٨٣) هي التشبُّه بالإله بحسب^(١٨٨٤) الطاقة الإنسانية^(١٨٨٥).

فصل [١٢]

واعلم يا أخي أيَّدك الله وإيانا بروح منه بأن في اعتبار هذه

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- (١٨٧٢) زيادة في ع: لها.
 (١٨٧٣) المثال والقياس: القياس والمثال [أ] المثال [ف].
 (١٨٧٤) يعمل الصَّنَاع الحَذَّاق: يعملون الصَّنَاع والحَذَّاق [ف].
 (١٨٧٥) الأشكال والتماثيل: التماثيل [أ، ف].
 (١٨٧٦) التماثيل والصور: الصور والتماثيل [ل].
 (١٨٧٧) مناسبات: مناسباً [أ].
 (١٨٧٨) بصنعة: بحكمة [ل].
 (١٨٧٩) عز اسمه: جل ثناؤه [ط] تعالى وصنعتة وقدرته [ل] سقط من د: عز اسمه.
 (١٨٨٠) البارئ عز اسمه وتشبُّهاً: الله جل جلاله وتشبيهاً [أ، ف] البارئ تعالى قدرته وتشبيهاً [ك].
 (١٨٨١) زيادة في د: جل ثناؤه.
 (١٨٨٢) سقط من د، ط: حد.
 (١٨٨٣) إنها: إنما [ك].
 (١٨٨٤) بحسب: حسب [د].
 (١٨٨٥) الطاقة الإنسانية: طاقة الإنسان [أ، ف].

وعلى هذا القياس والمِثال^(١٨٥٧) يوجد إذا اعتُبر^(١٨٥٨)
 طولُ^(١٨٥٩) أمعائه^(١٨٦٠) ومصارين جوفه^(١٨٦١) وعروق جسده
 والعَصَبَات المُمسِكَات لِعِظامه وأوتار مفاصله متناسبات^(١٨٦٢)
 بعضها لبعض^(١٨٦٣) طولاً وعرضاً وعمقاً، مثل ما ذكرنا من
 مناسبات مقادير أعضائه (٥٤ ب) الظاهرة، وعلى هذا المِثال
 والقياس^(١٨٦٤) توجد بنية^(١٨٦٥) أبدان سائر الحيوانات^(١٨٦٦)
 مُناسبة أعضاء كلِّ صورة في^(١٨٦٧) كلِّ نوع منها^(١٨٦٨) لجملة بدنه
 ومُناسبة بعضها لبعض^(١٨٦٩)، إما بالكمية وإما بالكيفية^(١٨٧٠) وإما
 بهما جميعاً، لا يُخلَّ شيئاً^(١٨٧١) إذا سَلِمَت من الآفات

(١٨٥٧) القياس والمِثال: المِثال والقياس [د، ط، ك، ل] القياس وعلى هذا المِثال

[ع].

(١٨٥٨) اعتُبر: اعتبرت [ل].

(١٨٥٩) سقط من أ، ف: طول.

(١٨٦٠) أمعائه: معاه [أ، ف].

(١٨٦١) مصارين جوفه: مقادير جوفه [ك] مصارينه ومقادير جوفه [ل].

(١٨٦٢) متناسبات: مناسبات [أ، ط، ف، ك، ل].

(١٨٦٣) بعضها لبعض: بعضها الى بعض [ك، ل] سقط من ع: بعضها لبعض.

(١٨٦٤) المِثال والقياس: القياس [أ، ف] القياس والمِثال [ك].

(١٨٦٥) توجد بنية: يوجد [ع].

(١٨٦٦) أبدان سائر الحيوانات: سائر أجساد الحيوان [أ] أجساد الحيوان [ف].

(١٨٦٧) كل صورة في: كل صورة [د] صورة [أ، ط، ف، ك].

(١٨٦٨) زيادة في د، وفي ط (من فوق، في خط آخر): مناسباً.

(١٨٦٩) ومناسبة بعضها لبعض: وبعضها إلى بعض متناسبة [أ، ف] أو بعضها إلى

بعض مناسبة [د، ط، ك].

(١٨٧٠) إما بالكمية وإما بالكيفية: إما بالكمية او بالكيفية [د] إما الكيفية وإما

بالكمية [ف، ك] سقط من أ: وإما بالكيفية.

(١٨٧١) شيئاً: شيء [ل].

وطول كَفِّه^(١٨٤٣) من رأس الكوع^(١٨٤٤) إلى^(١٨٤٥)
رأس^(١٨٤٦) الإصبع الوسطى شِبراً،
ويوجد طول إِبْهامِه^(١٨٤٧) وطول خِنْصرِه^(١٨٤٨) متساويين،
ورأس الْبِنْصر زائد^(١٨٤٩) على رأس الْخِنْصر ثَمَن
شِبر^(١٨٥٠)،

وكذلك زيادة الوسطى على الْبِنْصر، وكذلك^(١٨٥١) السَّبَّابة،
ويوجد عرض صدره شِبراً ونصفاً،
وبُعد ما بين ثدييه شِبراً^(١٨٥٢)،
وما^(١٨٥٣) بين سُرته إلى عانته شِبراً،
ومن رأس فؤاده إلى^(١٨٥٤) تَرْقوته شِبراً،
ويوجد الْبُعد^(١٨٥٥) ما بين مَنكِيّه شِبرين^(١٨٥٦)،

-
- (١٨٤٣) كفه: [ل].
(١٨٤٤) الكوع: الكر سوع [أ، ط، ك، ل].
(١٨٤٥) سقط من ف: رأس الكوع إلى.
(١٨٤٦) سقط من ع: رأس.
(١٨٤٧) إِبْهامه: الإِبْهامين [أ، ف].
(١٨٤٨) خِنْصره: خِنْصرِه [أ، ف].
(١٨٤٩) زائد: زائداً [أ، د، ف، ل].
(١٨٥٠) شِبر: شِبره [ك، ل].
(١٨٥١) زيادة في د، ط، ل: على.
(١٨٥٢) زيادة في ع: ونصفاً.
(١٨٥٣) ما: بعد ما [ع].
(١٨٥٤) زيادة في أ، ف، ك، ل: رأس.
(١٨٥٥) البعد: بعد [ل] سقط من أ، ف: البعد.
(١٨٥٦) شِبرين: شِبراً [ع].

رجليه، كان البُعد بينهما متساوياً عشرة أشبار، الزيادة^(١٨٢٩) رُبْع
على طول قامته^(١٨٣٠)،

ويوجد طولُ وجهه من رأس ذقنه إلى مَنبِت الشعر فوق
جبينه^(١٨٣١) شِبْرًا وثُمناً،

ويوجد البُعد^(١٨٣٢) ما بين أُذنيه شِبْرًا ورُبْعًا،

ويوجد طول أنفه^(١٨٣٣) رُبْع^(١٨٣٤) شِبْر^(١٨٣٥)،

ويوجد طول شقّ عينيه كلّ واحدة ثُمْن^(١٨٣٦) شِبْر^(١٨٣٧)،

وطول جبينه^(١٨٣٨) ثُلث طول وجهه،

ويوجد شقّ فمه وشفتيه^(١٨٣٩) كلّ واحد^(١٨٤٠) مساوياً لطول

أنفه،

وطول قدميه كلّ واحد^(١٨٤١) شِبْرًا ورُبْع شِبْر^(١٨٤٢)،

(١٨٢٩) الزيادة: بزيادة ؟ [د، ط] وزيادة [ع].

(١٨٣٠) على طول قامته: طول البدن [ف].

(١٨٣١) الشعر فوق جبينه: شعر جبينه [أ، ف].

(١٨٣٢) البعد: بعد [أ، ف].

(١٨٣٣) أنفه: أذنه [ع].

(١٨٣٤) سقط من أ، ف: ربع.

(١٨٣٥) شبر: شبره [أ، ع، ك].

(١٨٣٦) واحدة ثمن: واحد ربع ثمن [أ، ف، ك، ل].

(١٨٣٧) شبر: شبرة [ف، ك] شبره [ل].

(١٨٣٨) جبينه: جبهته [ف].

(١٨٣٩) سقط من أ: وشفتيه.

(١٨٤٠) واحد: واحدة منهما [ع].

(١٨٤١) واحد: واحدة [ع].

(١٨٤٢) ربع شبر: ربعاً [ل].

وكان^(١٨١٤) طول قامته ثمانية أشبارٍ بشبره سواءً،
 فمن^(١٨١٥) رأس رُكْبَتَيْهِ^(١٨١٦) إلى أسفل قدميه شبران،
 ومن^(١٨١٧) ركبتيه إلى حَقْوَيْهِ شبران^(١٨١٨)،
 ومن حَقْوَيْهِ إلى رأس فؤاده شبران،
 ومن رأس فؤاده إلى مَفْرِقِ رأسه شبران،^(١٨١٩)
 وإذا فتح يديه ومدهما^(١٨٢٠) يَمْنَةً وَيَسْرَةً كما يفتح
 الطائر^(١٨٢١) جناحيه، وجد ما بين رؤوس^(١٨٢٢) أصابع^(١٨٢٣) يده
 اليمنى إلى رؤوس^(١٨٢٤) أصابع يده اليسرى ثمانية أشبار، [٢٢٤]
 النصف من ذلك عند تَرْقُوتِهِ والرُّبْع عند مَرْفَقَيْهِ، وإذا مدَّ يده إلى
 فوق رأسه ووُضِعَ^(١٨٢٥) رأسُ البَرْكارِ على سُرَّتِهِ وُفُتِحَ إلى
 رؤوس^(١٨٢٦) أصابعه^(١٨٢٧) ثم أُدِيرَ إلى رأس^(١٨٢٨) أصابع

(١٨١٤) وكان: يكون [أ، ف].

(١٨١٥) فمن: من [د، ط، ع، ك].

(١٨١٦) ركبتيه: ركبته [أ، د، ط، ع، ف، ل].

(١٨١٧) زيادة في د، ط، ك، ل: رأس.

(١٨١٨) سقط من ع: ومن ركبتيه إلى حقويه شبران.

(١٨١٩) سقط من ف: ومن رأس فؤاده... شبران.

(١٨٢٠) ومدهما: مدهما [ع].

(١٨٢١) الطائر: الطير [ك].

(١٨٢٢) رؤوس: رأس [أ، د، ك] سقط من ف: رؤوس.

(١٨٢٣) أصابع: الأصابع [ل].

(١٨٢٤) رؤوس: رأس [أ، د، ط، ف، ك].

(١٨٢٥) وضع: ترك [أ، ع، ف].

(١٨٢٦) رؤوس: رأس [أ، ف].

(١٨٢٧) أصابعه: أصابع قدميه [أ، ف] أصابع يديه [د، ط، ك].

(١٨٢٨) رأس: رؤوس [د، ط، ك].

نِسْبَةً (٥٤ أ) أُخْرَى لَا يَعْلَمُ كُنْهَهُ^(١٨٠١) إِلَّا اللَّهُ تَعَالَى الَّذِي خَلَقَهَا وَصَوَّرَهَا كَيْفَ شَاءَ وَكَمَا شَاءَ^(١٨٠٢)، كَمَا ذَكَرَ اللَّهُ جَلَّ ثَنَاؤُهُ بِقَوْلِهِ^(١٨٠٣) ﴿لَقَدْ خَلَقْنَا الْإِنْسَانَ فِي أَحْسَنِ تَقْوِيمٍ﴾ وَقَالَ ﴿الَّذِي خَلَقَكَ فَسَوَّاكَ فَعَدَلَكَ فِي أَيِّ صُورَةٍ مَّا شَاءَ رَكَّبَكَ﴾.

فصل [١١]

وَاعْلَمْ يَا أَخِي أَيَّدَكَ اللَّهُ وَإِيَّانَا بِرُوحٍ مِنْهُ أَنْ التُّظْفَةَ إِذَا سَلِمَتْ فِي الرَّحْمِ مِنْ^(١٨٠٤) الْآفَاتِ الْعَارِضَةِ^(١٨٠٥) هُنَاكَ مِنْ^(١٨٠٦) فُسَادِ الْأَخْلَاطِ وَتَغْيِيرِ^(١٨٠٧) الْمِزَاجِ وَمَنَاحِسِ أَشْكَالِ^(١٨٠٨) الْفَلَكَ عِنْدَ مَسْقُطِ^(١٨٠٩) التُّظْفَةِ وَعِنْدَ الْمَبَادِي شَهْرًا شَهْرًا^(١٨١٠)، وَتَمَّتْ بِنْيَةُ الْبَدَنِ وَكَمِلَتْ صُورُهُ^(١٨١١) الْجَسَدِ، كَمَا بَيَّنَّا فِي رِسَالَةِ لَنَا، خَرَجَ الْطِفْلُ مِنَ الرَّحْمِ صَحِيحَ الْبِنْيَةِ تَامًا^(١٨١٢) الصُّورَةِ^(١٨١٣)،

-
- (١٨٠١) يعلم كنهه: يعرف كنه معرفتها [أ، د] يعلم كنه معرفتها [ط، ف، ك] يعلم كنه ولا يعلم معرفتها [ل].
- (١٨٠٢) كيف شاء وكما شاء: كيف شاء كما شاء [ل] كما شاء كيف يشاء [ك] كما شاء وكيف شاء [ط] سقط من أ، ف: كيف شاء وكما شاء.
- (١٨٠٣) سقط من د: الذي خلقها... بقوله.
- (١٨٠٤) من: عن [د، ك].
- (١٨٠٥) زيادة في ل: لها.
- (١٨٠٦) من: ومن [د، ك].
- (١٨٠٧) تغيير: تغير [ط، ك].
- (١٨٠٨) مناحس أشكال: أجناس مناحس [ع].
- (١٨٠٩) مسقط: سقوط [ف].
- (١٨١٠) شهراً: بشهر [د، ط، ك].
- (١٨١١) صورة: قوة [أ، ف].
- (١٨١٢) تام: تام [د، ك، ل].
- (١٨١٣) صحيح البنية تمام الصورة: صحيحاً بنيته تاماً صورته [أ، ف].

وطولَ أمعائه^(١٧٨٦) مناسباً لطول^(١٧٨٧) أوراده
وتجويّف معدته مناسباً^(١٧٨٨) لكِبَر كِبده
ومقدارَ قلبه مناسباً لكِبَر رِثته^(١٧٨٩)
وشكل^(١٧٩٠) طَحاله مناسباً لشكل معدته^(١٧٩١)
وسعة حُلقومه مناسباً لكِبَر رِثته
وطولَ أعضائه وغلظها مناسباً لكِبَر عِظامه^(١٧٩٢)
وطولَ أضلاعه وتقويسها مناسباً لَصندوق صدره^(١٧٩٣)
وطولَ عُروقه وسعتها مناسباً لُبعد مسافة^(١٧٩٤) أقطارِ جسده،
وعلى هذا المِثال إذا تُؤمّل واعتُبر كلُّ عضوٍ^(١٧٩٥) من
أعضاء^(١٧٩٦) بَدَن الإنسان، وُجِدَ^(١٧٩٧) مناسباً لجملة جُثته^(١٧٩٨)
نسبةً ما، ومناسباً لعضوٍ عضوٍ^(١٧٩٩) من أعضاء الجسد^(١٨٠٠)

-
- (١٧٨٦) أمعائه: معائه [أ، ف].
(١٧٨٧) سقط من ع: طول. سقط من ل: طول.
(١٧٨٨) سقط من د، ف: مناسباً.
(١٧٨٩) رِثته: كبده ومقدار قلبه مناسباً لكِبَر رِثته [د] سقط من أ: ومقدار... رِثته.
(١٧٩٠) سقط من أ، ف: شكل.
(١٧٩١) معدته: كبده [أ، د، ط، ف، ك، وفي هامش ل].
(١٧٩٢) سقط من أ، ف: وطول أعضائه... عظامه.
(١٧٩٣) صدره: ظهره [ع].
(١٧٩٤) لبعد مسافة: لكِبَر رِثته لبعد [ف].
(١٧٩٥) إذا تُؤمّل واعتُبر كل عضو: توجد إذا اعتُبر كل واحد عضواً عضواً [أ، ف]
يوجد إذا تُؤمّل واعتُبر كل عضو [د، ط، ك].
(١٧٩٦) من أعضاء: لأعضاء [ط].
(١٧٩٧) وجد: يوجد [ع].
(١٧٩٨) لجملة جثته: لجملة جسمه [أ، ف] لبعد مسافة أقطار الجسد وجملة الجثة
[ع].
(١٧٩٩) سقط من ك: عضو.
(١٨٠٠) الجسد: البدن [أ، ف].

والنَّصْفُ، والمِثْلُ والثُّلُثُ، والمِثْلُ والرُّبْعُ^(١٧٧٥)، والمِثْلُ
والثُّمْنُ، كما^(١٧٧٦) بَيْنَا قَبْلُ^(١٧٧٧)، ومن أمثال^(١٧٧٨) ذلك أيضاً
صورةُ الإنسان وبِنْيَةُ هَيْكَلِهِ، وذلك أن الباري عزَّ اسمُه جعل
طَوْلَ قَامَتِهِ مُنَاسِباً لِعَرْضِ جُثَّتِهِ
وعَرْضَ جُثَّتِهِ^(١٧٧٩) مُنَاسِباً لِعُمُقِ تَجْوِيفِهِ
وطَوْلَ ذِرَاعِيهِ مُنَاسِباً لَطَوْلَ سَاقِيهِ
وطَوْلَ عِضْدَيْهِ مُنَاسِباً لَطَوْلَ فَخْذَيْهِ
وطَوْلَ رِقْبَتِهِ مُنَاسِباً لَطَوْلَ^(١٧٨٠) عَمُودِ ظَهْرِهِ
وكَبِيرَ رَأْسِهِ مُنَاسِباً لَكَبَرِ جُثَّتِهِ
وَاسْتِدَارَةَ وَجْهِهِ مُنَاسِبَةً لَسَعَةِ صَدْرِهِ
وَشَكْلَ عَيْنَيْهِ مُنَاسِباً لَشَكْلِ فَمِهِ
وطَوْلَ أَنْفِهِ مُنَاسِباً لِعَرْضِ جَبِينِهِ^(١٧٨١)
وقَدَرَ أُذُنَيْهِ^(١٧٨٢) مُنَاسِباً لِمَقْدَارِ^(١٧٨٣) خَدْيَيْهِ [٢٢٣]
وطَوْلَ أَصَابِعِ يَدَيْهِ^(١٧٨٤) مُنَاسِباً لِأَصَابِعِ رِجْلَيْهِ^(١٧٨٥)

(١٧٧٥) والمثل والنصف والمثل والثالث والمثل والرابع: والمثل والثالث والمثل
والربع والمثل والنصف [أ، ف].
(١٧٧٦) زيادة في ل: قد.
(١٧٧٧) سقط من ع: كما بَيْنَا قَبْلُ.
(١٧٧٨) سقط من أ، ف: أمثال.
(١٧٧٩) سقط من أ: وعرض جثته.
(١٧٨٠) سقط من ع: طول.
(١٧٨١) جبينه: جَبِينُهُ [ل] وجنتيه [ع] جثته [د].
(١٧٨٢) أذنيه: ذَقْنُهُ [ع].
(١٧٨٣) لمقدار: لِقْدَر [د، ط].
(١٧٨٤) أصابع يديه: زَنْدِيهِ [ع].
(١٧٨٥) رجليه: يَدِيهِ وَرِجْلِيهِ [ع].

في كتابة العربية، وأن يكون غِلْظُ الحروف إلى الانخراط ما هو،
وأن تكون الزوايا عند تركيب^(١٧٦١) كلّها حادّة أو إلى التدوير ما
هي^(١٧٦٢).

فهذا^(١٧٦٣) ما قاله أهل الصّناعة في تقدير^(١٧٦٤) الحروف
ومناسباتها مُفْرَدَةً^(١٧٦٥)، فأما عند التركيب والتأليف فربّما يختلف
ويتغيّر تغيّراً^(١٧٦٦) يطول شرحه^(١٧٦٧)، ولكن على المحرّر
واجب^(١٧٦٨) عند تعليمه للخط^(١٧٦٩) التوقيف^(١٧٧٠) عليها.

فقد تبَيَّن إذا^(١٧٧١) بما ذكرنا بأن أحكم المصنوعات^(١٧٧٢)
وأتقن المركّبات وأحسن المؤلّفات ما كان^(١٧٧٣) تركيبُ بِنْيَتِهِ
وتأليفُ أجزائه على النّسبة الأفضل.

واعلم يا أخي بأن النّسبة^(١٧٧٤) الفاضلة هي المثلّ، والمثلّ

(١٧٦١) الزوايا عند تركيب: عند تركيب الزوايا [أ] عند التركيب الزوايا (د، ط،
ف، ك).

(١٧٦٢) هي: هو [أ، د، ط، ف، ك].

(١٧٦٣) فهذا: فهذه [ع].

(١٧٦٤) زيادة في د، ط، ع، ك، ل: هذه. زيادة في ط (من فوق): تدوير.

(١٧٦٥) زيادة في ك: مفردة.

(١٧٦٦) تغيّراً: تغيّراً [أ] العلل [ط، ك] لعل [ع، ل] لعلك [د].

(١٧٦٧) شرحه: شرحها [د، ط، ع، ك، ل].

(١٧٦٨) واجب: قد يجب [أ، ف] يجب [د، ط، ك].

(١٧٦٩) تعليمه للخط: تعليمه الخط [د] تعلمه الخط [أ].

(١٧٧٠) التوقيف: التوقف [د، ط].

(١٧٧١) سقط من أ: إذا.

(١٧٧٢) المصنوعات: الصناعات [أ، ف].

(١٧٧٣) زيادة في أ، ف: عند.

(١٧٧٤) واعلم يا أخي بأن النّسبة: واعلم يا أخي بأن النسب [ل] والنسبة [أ، ف،
ك] والنسب [د، ط].

[٢٢٢] اعلم^(١٧٤٦) يا أخي أَيْدَكَ اللَّهُ وَإِيَّانَا بَرُوحَ مِنْهُ بِأَنْ
صُورَ حُرُوفٍ (٥٣ ب) الْكِتَابَاتِ كَثِيرَةً الْفُنُونِ مُخْتَلِفَةً الْأَنْوَاعِ،
كَمَا تَقَدَّمَ ذِكْرُهَا، وَهِيَ بِحَسَبِ مَوْضُوعَاتِ حُكَمَاءِ^(١٧٤٧) الْكِتَابِ
وَاخْتِيَارَاتِهِمْ^(١٧٤٨) وَتَوَاطُطِهِمْ عَلَيْهَا، لِعَلَّ يَطُولُ شَرْحُهَا^(١٧٤٩)،
وَلَكِنْ نَذَكَرُ قَوْلًا^(١٧٥٠) مُخْتَصَرًا^(١٧٥١)، ثَلَاثَ كَلِمَاتٍ بِحَسَبِ مَا
تُوجِبُهُ قَوَانِينُ الْهَنْدَسَةِ وَالْقِيَاسَاتِ الْفَلَسْفِيَّةِ^(١٧٥٢)، كَمَا
أَوْصَى^(١٧٥٣) الْمَحَرَّرُ الْحَازِقُ الْمَهَنْدِسُ، فَقَالَ:

يَنْبَغِي أَنْ تَكُونَ صُورَ الْحُرُوفِ كُلِّهَا، لِأَيِّ^(١٧٥٤) أُمَّةٍ كَانَتْ،
فِي أَيِّ^(١٧٥٥) لُغَةٍ كَانَتْ^(١٧٥٦)، وَبِأَيِّ^(١٧٥٧) أَقْلَامٍ خُطَّتْ، إِلَى
التَّقْوِيسِ^(١٧٥٨) وَالْإِنْحِنَاءِ مَا تَكُونُ^(١٧٥٩)، إِلَّا^(١٧٦٠) الْأَلِفَ الَّتِي

(١٧٤٦) اعلم: فصل اعلم [ف].

(١٧٤٧) حكماء: الحكماء [ل] الحكماء من [أ، د، ط، ف، ك].

(١٧٤٨) زيادة في أ، د، ف، ك، ل (من فوق): لها.

(١٧٤٩) لعل يطول شرحها: العلل يطول شرحها [ع] يطول علة ذلك وشرحه [أ]،
ف [ف] يطول ذكر علة ذلك وشرحه [د، ط، ك] يطول ذكر علة ذلك وشرحه
[ل].

(١٧٥٠) زيادة في أ، د، ف، ك، ل: مجملًا.

(١٧٥١) زيادة في د، ك: في. زيادة في ل (من تحت): قدر.

(١٧٥٢) القياسات الفلسفية: قياسات الفلسفة [أ، ف].

(١٧٥٣) أوصى: وصى [أ، ف].

(١٧٥٤) لأي: لأية [ع].

(١٧٥٥) في أي: وبأي [ل] وبأية [ع].

(١٧٥٦) كانت: عُبِّرَتْ [ع، ل].

(١٧٥٧) بأي: بأية [ع، ل].

(١٧٥٨) التقويس: التقوُس [أ، ف].

(١٧٥٩) سقط من ك: ما تكون.

(١٧٦٠) سقط من د، ط، ل: إلا.

بعض^(١٧٣٣)، فهو^(١٧٣٤) شيء تُوجبه قوانين الهندسة والنسب الفاضلة، فأما ما يتعارفه^(١٧٣٥) الناس ويستحسنه الكتاب فعلى غير ما ذكرنا من المقادير والنسب، وذلك بحسب موضوعاتهم^(١٧٣٦) واختياراتهم دون غيرها، وبحسب طول الدربة وجريان العادة فيها^(١٧٣٧).

وإذ قد تبين بما ذكرنا من^(١٧٣٨) ماهية النسب الفاضلة مقادير^(١٧٣٩) الحروف وكمية أطوالها، فنريد أن نذكر^(١٧٤٠) أيضاً^(١٧٤١) طرفاً من كيفية صورها وتخطيط أشكالها^(١٧٤٢) وكيفية تركيبها^(١٧٤٣) بعضها مع^(١٧٤٤) بعض على ما يوجبه القياس والقانون بطريق^(١٧٤٥) الهندسة.

(١٧٣٣) مقادير أطوالها بعضها عن بعض: مقاديرها وأطوال بعضها عند بعض [أ، ف].

(١٧٣٤) فهو: وهو [ع].

(١٧٣٥) يتعارفه: يتعرفه [ع].

(١٧٣٦) موضوعاتهم: مواضعاتهم [أ، ف] زيادة في ك، ل (من فوق): ومرضياتهم.

(١٧٣٧) فعلى غير ما ذكرنا من المقادير... وجريان العادة فيها: فعلى... دون

غيرها بحسب... العادة فيها [ف] فيحسب موضوعاتهم واختياراتهم بحسب

طول الدربة وجريان العادة فيها، فهو غير ما ذكرنا من القوانين والمقادير

والنسب [ع] زيادة في ل: فهو غير ما ذكرنا من المقادير والنسب.

(١٧٣٨) سقط من ل: من.

(١٧٣٩) مقادير: ومقادير [أ، د، ط، ف، ك، ل].

(١٧٤٠) زيادة في ك: هاهنا.

(١٧٤١) زيادة في ل (من تحت): هنا.

(١٧٤٢) تخطيط أشكالها: تخطيطها وأشكالها [أ، ف].

(١٧٤٣) تركيبها: تركيب [ل] سقط من ك: تركيبها.

(١٧٤٤) مع: من [د، ط].

(١٧٤٥) بطريق: وبطريق [ل].

مثل تقويس^(١٧١٦) الرء والزاي^(١٧١٧)،

ثم يجعل تقويس النون مثل^(١٧١٨) نصف محيط^(١٧١٩) الدائرة التي^(١٧٢٠) الألف مساوٍ لقطرها^(١٧٢١)،

ثم يجعل^(١٧٢٢) الياء مثل الدال ومدته^(١٧٢٣) إلى خلف مثل طول الألف^(١٧٢٤)، وتقويسه^(١٧٢٥) إلى أسفل مثل نصف^(١٧٢٦) الدائرة^(١٧٢٧).

وهذا^(١٧٢٨) الذي ذكرنا من نسب هذه^(١٧٢٩) الحروف، وكمية^(١٧٣٠) مقادير أطوالها^(١٧٣١) بعضها عن^(١٧٣٢)

(١٧١٦) تقويس: تقوَس [د].

(١٧١٧) الزاي: الزاء [د، ع، ل] زيادة في د: مثل هذا م زيادة في ط، ك، ل: مثل هذا م و.

(١٧١٨) سقط من ع، ف: مثل.

(١٧١٩) زيادة في د، ط، ك، ل: تلك.

(١٧٢٠) التي: زيادة في ل: هي.

(١٧٢١) زيادة في د، ط، ك: مثل هذا ن.

(١٧٢٢) يجعل: تجعل [ف، ل].

(١٧٢٣) مدته: مدتها [ف].

(١٧٢٤) زيادة في ك، ل: مثل هذا ي.

(١٧٢٥) وتقويسه: أو تقويسه.

(١٧٢٦) مثل نصف: نصف محيط [ك] مثل نصف محيط [ل].

(١٧٢٧) سقط من أ، ف: وتقويسه إلى أسفل مثل نصف الدائرة. زيادة في ك: مثل

هذا ي. زيادة في د: مثل هذا ي أو مثل هذا ي في تقويسه مثل نصف الدائرة.

(١٧٢٨) هذا: زيادة في ل: أي.

(١٧٢٩) سقط من ع: هذه.

(١٧٣٠) وكمية: فكيف [ع].

(١٧٣١) مقادير أطوالها: مقاديرها طولاً وعرضاً [ك، ل].

(١٧٣٢) عن: عند [د، ط، ك، ل].

والميم^(١٧٠٠) والهاء^(١٧٠١) كلّها متساوية مثل^(١٧٠٢) ثلث
الألف^(١٧٠٣) إذا دُور^(١٧٠٤)،

ويجعل مدّة القاف إلى أسفل مثل نصف محيط^(١٧٠٥)
الدائرة^(١٧٠٦)،

ثم يجعل مدّة الكاف إلى قُدام مثل طول الألف وفتّحت^(١٧٠٧)
ثمن الألف وكسرت^(١٧٠٨) إلى فوق رُبع الألف^(١٧٠٩)،

ثم يجعل طول^(١٧١٠) اللام كطول^(١٧١١) الألف^(١٧١٢) ومُدّته
إلى قُدام نصف الألف^(١٧١٣)،

ثم يجعل مدة^(١٧١٤) الميم والواو كلّ واحد^(١٧١٥) إلى أسفل

(١٧٠٠) سقط من أ، ف: والميم.

(١٧٠١) سقط من ل: والهاء.

(١٧٠٢) مثل: من [ع].

(١٧٠٣) زيادة في د: وخلقتها وحلقة القاف والواو والميم والهاء كلها متساوية مثل
ثلث الألف.

(١٧٠٤) زيادة في د، ط، ك، ل: مثل هذا ف ق و م هـ.

(١٧٠٥) محيط: تلك [ع] محيط تلك [د، ط، ك، ل].

(١٧٠٦) زيادة في د، ط، ك، ل: مثل هذا ق.

(١٧٠٧) فتحته: فتحها [أ، ف] زيادة في أ: مثل.

(١٧٠٨) كسرت: كسرتها [أ، ف].

(١٧٠٩) سقط من ل: الألف. زيادة في د، ط، ك، ل: مثل هذا كـ.

(١٧١٠) ثم يجعل طول: وطول [ع].

(١٧١١) كطول: مثل [د، ط، ك، ل].

(١٧١٢) سقط من ع: كطول الألف.

(١٧١٣) زيادة في ك، ل: مثل هذا ل.

(١٧١٤) ثم تجعل مدة: ومدة [ع].

(١٧١٥) واحد: واحدة [أ، ف] زيادة في د، ط (من فوق)، ل (من فوق): منهما.

وَمَدَّتْهَا^(١٦٨٣) إِلَى أَسْفَلٍ مِثْلَ نِصْفِ مَحِيطِ^(١٦٨٤) الدَّائِرَةِ الْمَقْدَمِ ذِكْرُهَا^(١٦٨٥)،

ثُمَّ يَجْعَلُ^(١٦٨٦) الطَّاءَ وَالظَّاءَ كُلَّ وَاحِدٍ مِنْهُمَا^(١٦٨٧) طُولَهُ مِثْلَ طُولِ الْأَلِفِ وَفُتِّحَتْهَا مِثْلُ^(١٦٨٨) ثَمْنِ الْأَلِفِ وَرُؤُوسِهَا^(١٦٨٩) إِلَى فَوْقِ بَطُولِ^(١٦٩٠) الْأَلِفِ^(١٦٩١)،

ثُمَّ يَجْعَلُ الْعَيْنَ وَالْغَيْنَ كُلَّ وَاحِدٍ مِنْهُمَا تَقْوِيْسَهُ مِنْ فَوْقِ^(١٦٩٢) رُبْعِ مَحِيطِ^(١٦٩٣) الدَّائِرَةِ وَتَقْوِيْسَهُ مِنْ^(١٦٩٤) أَسْفَلِ^(١٦٩٥) نِصْفِ مَحِيطِ الدَّائِرَةِ^(١٦٩٦)،

ثُمَّ يَجْعَلُ مَدَّةَ الْفَاءِ إِلَى قُدَّامِ [٢٢١] مِثْلَ طُولِ^(١٦٩٧) الْأَلِفِ وَفُتِّحَتْهُ^(١٦٩٨) ثَمْنِ الْأَلِفِ، وَحَلَقَتْهُ وَحَلَقَةُ^(١٦٩٩) الْقَافِ وَالْوَاوِ

(١٦٨٣) مَدَّتْهَا: تَعَرَّقَهَا [أ] تَعْرِيقُهَا [ف].

(١٦٨٤) نِصْفِ مَحِيطٍ: مَحِيطُ نِصْفِ [ل] سَقَطَ مِنْ أ، ف: مَحِيطٌ.

(١٦٨٥) زِيَادَةٌ فِي د، ط، ك، ل: مِثْلُ هَذَا ص ض.

(١٦٨٦) ثُمَّ يُجْعَلُ: وَيُجْعَلُ [ع، وَكَذَا فِيمَا يَلِي، ك، ل].

(١٦٨٧) سَقَطَ مِنْ ع: مِنْهُمَا.

(١٦٨٨) فَتَحَتْهَا مِثْلُ: فَتَحَهَا [ع، ك، ل] سَقَطَ مِنْ ط: مِثْلُ.

(١٦٨٩) رُؤُوسِهَا: رُءُوسُهَا [ك].

(١٦٩٠) بَطُولُ: مِثْلُ طُولِ [أ، ف] كَطُولِ [د، ط، ك، ل].

(١٦٩١) زِيَادَةٌ فِي د، ط، ك، ل: مِثْلُ هَذَا ط ظ.

(١٦٩٢) زِيَادَةٌ فِي د، ط (مِنْ فَوْقِ): مِثْلُ.

(١٦٩٣) زِيَادَةٌ فِي د، ط، ك، ل: تِلْكَ.

(١٦٩٤) تَقْوِيْسَهُ مِنْ: تَقْوِيْسَ تَعْرِيقِهِ إِلَى [أ، ف].

(١٦٩٥) زِيَادَةٌ فِي أ، ف: مِثْلُ.

(١٦٩٦) مَحِيطُ الدَّائِرَةِ: مَحِيطُهَا [أ، ف] مَحِيطُ الدَّائِرَةِ مِثْلُ هَذَا ع غ [ل] مَحِيطُهُ

مِثْلُ هَذَا ع غ [ك] مَحِيطُهَا مِثْلُ هَذَا ع غ [د، ط].

(١٦٩٧) سَقَطَ مِنْ ع: طُولُ.

(١٦٩٨) فَتَحَتْهُ: فَتَحَهُ [أ].

(١٦٩٩) حَلَقَتْهُ وَحَلَقَةُ: حَلَقَتْهُ مِثْلُ حَلَقَةِ [ل] خَلَقَتْهُ خَلَقَةُ [د، ع] وَحَلَقَهُ [ط].

ثم ^(١٦٦٧) يجعل الدال والذال كلّ واحدٍ منهما مثل ^(١٦٦٨) الألف إذا قُوسَ ^(١٦٦٩)،

ثم يجعل الراء والزاء ^(١٦٧٠) كلّ واحدٍ منهما مثل ^(١٦٧١) رُبع محيط الدائرة ^(١٦٧٢)،

ثم يجعل السين ^(١٦٧٣) والشين كلّ واحدٍ منهما ^(١٦٧٤) رؤوسهما ^(١٦٧٥) إلى فوق ^(١٦٧٦) ثُمّن الألف ومَدَّتْهُمَا ^(١٦٧٧) إلى أسفل ^(١٦٧٨) نصف محيط ^(١٦٧٩) الدائرة ^(١٦٨٠)،

ثم يجعل الصاد ^(١٦٨١) والضاد مَدَّةً طول كلّ واحدٍ منهما إلى قَدَامٍ مثل طول الألف وفُتِّحَتْهَا قدر ^(١٦٨٢) ثُمّن الألف

(١٦٦٧) سقط من ف: ثم.

(١٦٦٨) زيادة في د، ط، ك، ل: طول.

(١٦٦٩) زيادة في ك، ل: مثل هذا د.

(١٦٧٠) الراء والزاء: الراء والزاي [ط] الزاء والراي [ط].

(١٦٧١) مثل: كمثل [ك، ل].

(١٦٧٢) ثم يجعل الدال... إذا قُوسَ، ثم يجعل الراء... ربع محيط الدائرة: ثم

يجعل الزاء... الدائرة، والدال... إذا قُوسَ [د] ثم يجعل الراء... ربع

الدائرة، والدال... إذا قُوسَ [ط، ع] ثم يجعل الراء... الدائرة التي

الألف قطرها، والدال... إذا قُوسَ [ل] زيادة في ك: التي الألف قطرها.

(١٦٧٣) ثم يجعل السين: والسين [ع].

(١٦٧٤) سقط من أ، د، ط، ف: منهما.

(١٦٧٥) رؤوسهما: رؤوسها [أ، ط، ف، ل].

(١٦٧٦) زيادة في أ، ف: مثل.

(١٦٧٧) مدتها: تعريفها [أ] مدتها [د، ط، ف، ك].

(١٦٧٨) زيادة في أ: مثل.

(١٦٧٩) سقط من أ، ف: محيط.

(١٦٨٠) زيادة في ك، ل: مثل هذا س ش. زيادة في د، ط: مثل س ش.

(١٦٨١) ثم يجعل الصاد: والصاد [ع].

(١٦٨٢) فتحتها قدر: فتحها [د، ط، ع، ك، ل].

كتابة العربية هو أن يَحْطَّ الألف أولاً بأي قدرٍ شاء ويجعل^(١٦٥٢)
غَلْظَه مُنَاسِباً لثَمْن طُولِه^(١٦٥٣)، ثم يجعل الألف قُطْرَ
الدائرة^(١٦٥٤) كما^(١٦٥٥) يُبْنَى سائر الحروف مناسِباً^(١٦٥٦) لطولِ
الألف ولمحيط الدائرة التي الألف مُساوٍ لَقُطْرِها،

وهو أن يجعل الباء (٥٣ أ) والتاء والثاء^(١٦٥٧) كل واحدٍ
منها^(١٦٥٨) طوله مساوياً لطول الألف وتكون رؤوسها^(١٦٥٩) إلى
فوق مثل الثمن من الألف^(١٦٦٠)،

ثم يجعل الجيم والحاء والخاء^(١٦٦١) كل واحدٍ منها^(١٦٦٢)
مَدَّتِه من فوق^(١٦٦٣) نصف الألف وتقويسه^(١٦٦٤) إلى أسفل نصف
محيط الدائرة التي الألف^(١٦٦٥) مساوٍ لَقُطْرِها^(١٦٦٦)،

-
- (١٦٥٢) ويجعل: ثم يجعل [ل].
(١٦٥٣) لثمن طوله: لطوله وهو الثمن [د، ط، ع، ك، ل] زيادة في ف: وأسفله
أدق من أعلاه.
(١٦٥٤) الدائرة: دائرة [د، ط].
(١٦٥٥) كما: ما ثم [أ، د، ط، ك، ل] ثم [ف].
(١٦٥٦) مناسِباً: مناسبة [ع].
(١٦٥٧) سقط من ع: والثاء.
(١٦٥٨) منها: منهما [ع، ف، ك].
(١٦٥٩) تكون رؤوسها: يكون رؤوسهما [ع].
(١٦٦٠) مثل الثمن من الألف: الثمن مثل هذا ا ب ت ث [د، ع، ك، ل] بقدر
الثمن مثل هذا ا ب ت ث [ط].
(١٦٦١) سقط من ع: والحاء.
(١٦٦٢) منها: منهما [ع].
(١٦٦٣) من فوق: زيادة في أ، ف: مثل.
(١٦٦٤) تقويسه: تقوِّسه [ل] وهو نسبة [د].
(١٦٦٥) زيادة في أ، ف: المفروض.
(١٦٦٦) زيادة في د، ط، ك، ل: مثل هذا ج ح خ.

وإذ قد تبين بما ذكرنا أن أصل^(١٦٤١) الحروف والكتابات كلها هو الخط المستقيم الذي هو قُطر الدائرة والخط المُقَوَّس الذي هو محيطها، فنريد أن نبين أيضاً أن أجودَ الخطوط وأصحَّ الكتابات وأحسنَ المؤلفات ما كان مقادير^(١٦٤٢) حروفها بعضها من^(١٦٤٣) بعض على النسبة الأفضل، ونذكر^(١٦٤٤) أولاً ما قاله^(١٦٤٥) أهلُ هذه^(١٦٤٦) الصناعة، أعني^(١٦٤٧) صناعة الكتابة، ليكون أقوى^(١٦٤٨) للحجة وأوضح للبيان^(١٦٤٩) وأرشد إلى القياس والقانون.

قال المُحرِّر الحاذقُ المُنْهَدِسُ: ينبغي لمن يريد أن يكون خطه جيداً وكتابته^(١٦٥٠) صحيحة أن يجعل لها أصلاً يبني عليه حروفه وقانوناً يقيس عليه خطوطه^(١٦٥١)، والمثال في ذلك في

+ (بالتقريب) ثم في ل: وكذلك الفارسية مثل هذا [بياض]. زيادة في ط: وهكذا اليونانية مثل هذا [بياض] والرومية [حروف عربية، بعضها منزحفة] والفارسية مثل هذا [بياض] زيادة في د: وكذلك اليونانية مثل هذا [بياض] والرومية مثل هذا [حروف عربية، بعضها منزحفة] والفارسية مثل هذا [بياض].

(١٦٤١) أصل: العدد [د] زيادة في ط: العدد.

(١٦٤٢) مقادير: مقدار [أ، ف].

(١٦٤٣) من: عند [ل، و من تحت: من].

(١٦٤٤) ونذكر: فلنذكر [د، ط، ك، ل].

(١٦٤٥) ما قاله: مقالة [أ].

(١٦٤٦) سقط من ل: هذه.

(١٦٤٧) أعني: التي هي [ل].

(١٦٤٨) زيادة في ك وفي هامش ل: وأصح.

(١٦٤٩) للحجة وأوضح للبيان: وأوضح للحجة والبيان [أ، ف].

(١٦٥٠) وكتابته: كاتباً كتابة [ل].

(١٦٥١) خطوطه: بخطوطه [ع] خطه [ل].

منهما ومؤلفه^(١٦١٦) كما بيّنّا في رسالة الجومطريا الذي هو^(١٦١٧) المدخل إلى صناعة الهندسة^(١٦١٨)، ونُبِّين مثلاً^(١٦١٩) لما^(١٦٢٠) ذكرنا من الحروف التي في الكتابة^(١٦٢١) العربية، ليكون^(١٦٢٢) دليلاً على صحة^(١٦٢٣) ما قُلنا وحقيقة ما^(١٦٢٤) وصفنا بأن^(١٦٢٥) أصل الحروف كلّها هو الخط المستقيم والخط المُقَوَّس اللذان أحدهما^(١٦٢٦) قُطر الدائرة والآخر مُحيطها، وهي هذه:

ا ب ت ث ج ح خ د ذ ر ز س ش ص ض ط ظ ع غ ف ق ك
ل م ن ه و^(١٦٢٧) ي
فانظر الآن يا أخي أيّديك الله بروح منه واعتبر وتأمل^(١٦٢٨) فإنك تجد هذه^(١٦٢٩) الحروف بعضها خطأً مستقيماً مثل^(١٦٣٠) ا ب ت

(١٦١٦) زيادة في ل: عنها.

(١٦١٧) سقط من أ، ع، ط، ف: الذي هو.

(١٦١٨) صناعة الهندسة: الصناعة الهندسية [ك].

(١٦١٩) ونُبِّين مثلاً: فلنُبِّين المثال [ل] سقط من د: مثلاً.

(١٦٢٠) لما: بما [ع].

(١٦٢١) الكتابة: كتابة [د، ط، ع].

(١٦٢٢) زيادة في ل: ذلك.

(١٦٢٣) سقط من أ، ع، ف: صحة.

(١٦٢٤) ما: لما [ع].

(١٦٢٥) بأن: ان [ك، ل] فإن [د، ط].

(١٦٢٦) زيادة في ع: دون.

(١٦٢٧) ه و: وه [أ، د، ط، ف، ل]. زيادة في أ، د، ع، ك، ل: لا.

(١٦٢٨) يا أخي أيّديك الله بروح منه واعتبر وتأمل: واعتبر وتأمل يا أخي أيّديك الله

وإيانا بروح منه [ك] سقط من ل: وتأمل.

(١٦٢٩) سقط من ل: هذه.

(١٦٣٠) سقط من د: مثل. زيادة في ك، ل: هذا.

وصناعاتهم وعلومهم ومعارفهم، كلُّ ذلك لسعة^(١٦٠٢) علمه ونفاذ مشيئته^(١٦٠٣) وإتقان^(١٦٠٤) (٥٢ ب) حكيمته سبحانه وبحمده^(١٦٠٥).

ونريد أن نذكّر في هذا الفصل أصلَ الحروف وكيفية تركيبها^(١٦٠٦) وكمية مقاديرها ونسب^(١٦٠٧) تأليفها الفاضلة منها^(١٦٠٨)، فنقول إن أصلَ حروفِ الكتابات كلّها في أي لغة وُضعت^(١٦٠٩) ولأبي^(١٦١٠) أمة كانت وبأي^(١٦١١) أقلام خُطت أو بأيّ نقش^(١٦١٢) صوّرت، وإن كُثرت، فإن أصلها كلّها^(١٦١٣) هو الخطّ المستقيم الذي هو قُطر الدائرة، والخط المقوّس الذي هو محيط بالدائرة^(١٦١٤)، فأما سائر الحروف فمركبة^(١٦١٥)

(١٦٠٢) لسعة: بسعة [ل].

(١٦٠٣) سقط من أ، ع، ف، ك: كل ذلك لسعة علمه ونفاذ مشيئته.

(١٦٠٤) سقط من ك: وإتقان.

(١٦٠٥) سقط من ل: وبحمده.

(١٦٠٦) تركيبها: ترتيبها [ع].

(١٦٠٧) نسب: نسبة [ع].

(١٦٠٨) منها: بينها [ك، ل].

(١٦٠٩) في أي لغة وُضعت: وضعت في أية لغة [د، ط] في أي لغة كانت [ل]:

ومن تحت: وضعت [ل].

(١٦١٠) لأبي: لأية [أ، ف] في لغة أي [ل].

(١٦١١) وبأي: أو بأي [د، ط، ل].

(١٦١٢) خُطت أو بأيّ نقش: كتبت وخُطت أو بأيّ نقش [ك، ل] كتبت وخُطت

وبأي صورة [أ] كتبت وخُطت وأي صورة [ف].

(١٦١٣) سقط من د، ط: كلها.

(١٦١٤) محيط بالدائرة: محيط الدائرة [د، ط، ك] محيطها [ل].

(١٦١٥) سقط من أ: فمركبة.

منهما ومؤلفه^(١٦١٦) كما بيّنّا في رسالة الجومطريا الذي هو^(١٦١٧) المدخل إلى صناعة الهندسة^(١٦١٨)، ونُبِّين مثلاً^(١٦١٩) لما^(١٦٢٠) ذكرنا من الحروف التي في الكتابة^(١٦٢١) العربية، ليكون^(١٦٢٢) دليلاً على صحّة^(١٦٢٣) ما قُلنا وحقيقة ما^(١٦٢٤) وصفنا بأن^(١٦٢٥) أصل الحروف كلّها هو الخط المستقيم والخط المُقَوَّس اللذان أحدهما^(١٦٢٦) قُطر الدائرة والآخر مُحيطها، وهي هذه:

ا ب ت ث ج ح خ د ذ ر ز س ش ص ض ط ظ ع غ ف ق ك
ل م ن ه و^(١٦٢٧) ي
فانظر الآن يا أخي أيّذك الله بروح منه واعتبر وتأمل^(١٦٢٨) فإنك
تجد هذه^(١٦٢٩) الحروف بعضها خطأً مستقيماً مثل^(١٦٣٠) ا ب ت

(١٦١٦) زيادة في ل: عنها.

(١٦١٧) سقط من أ، ع، ط، ف: الذي هو.

(١٦١٨) صناعة الهندسة: الصناعة الهندسية [ك].

(١٦١٩) ونُبِّين مثلاً: فلنُبِّين المثال [ل] سقط من د: مثلاً.

(١٦٢٠) لما: بما [ع].

(١٦٢١) الكتابة: كتابة [د، ط، ع].

(١٦٢٢) زيادة في ل: ذلك.

(١٦٢٣) سقط من أ، ع، ف: صحّة.

(١٦٢٤) ما: لما [ع].

(١٦٢٥) بأن: ان [ك، ل] فإن [د، ط].

(١٦٢٦) زيادة في ع: دون.

(١٦٢٧) ه و: [أ، د، ط، ف، ل]. زيادة في أ، د، ع، ك، ل: لا.

(١٦٢٨) يا أخي أيّذك الله بروح منه واعتبر وتأمل: واعتبر وتأمل يا أخي أيّذك الله

وإيانا بروح منه [ك] سقط من ل: وتأمل.

(١٦٢٩) سقط من ل: هذه.

(١٦٣٠) سقط من د: مثل. زيادة في ك، ل: هذا.

وصناعاتهم وعلومهم ومعارفهم، كلُّ ذلك لِسَعَةٍ (١٦٠٢) علمه ونفاذِ مشيئته (١٦٠٣) وإِتْقَانٍ (١٦٠٤) (٥٢ ب) حِكْمَتِهِ سُبْحَانَهُ وبِحَمْدِهِ (١٦٠٥).

ونريد أن نذكُرَ في هذا الفصل أصلَ الحروف وكيفية تركيبها (١٦٠٦) وكميَّةَ مقاديرها ونَسَبَ (١٦٠٧) تأليفها الفاضلة منها (١٦٠٨)، فنقول إن أصلَ حروفِ الكتابات كُلِّها في أي لغة وُضِعَتْ (١٦٠٩) ولأَيِّ (١٦١٠) أُمَّة كانت وبأَيِّ (١٦١١) أَقْلَامٍ خُطَّتْ أو بِأَيِّ نَقْشٍ (١٦١٢) صُوِّرَتْ، وإن كَثُرَتْ، فإن أصلَها كُلُّها (١٦١٣) هو الخُطُّ المستقيم الذي هو قُطْر الدائرة، والخط المقوَّس الذي هو محيط بالدائرة (١٦١٤)، فأَمَّا سائر الحروف فمركَّبة (١٦١٥).

(١٦٠٢) لسعة: بسعة [ل].

(١٦٠٣) سقط من أ، ع، ف، ك: كل ذلك لسعة علمه ونفاذ مشيئته.

(١٦٠٤) سقط من ك: وإِتْقَان.

(١٦٠٥) سقط من ل: وبِحَمْدِهِ.

(١٦٠٦) تركيبها: ترتيبها [ع].

(١٦٠٧) نسب: نسبة [ع].

(١٦٠٨) منها: بينها [ك، ل].

(١٦٠٩) في أي لغة وُضِعَتْ: وضعت في أية لغة [د، ط] في أي لغة كانت [ل]: ومن تحت: وضعت[.

(١٦١٠) لأَيِّ: لأَيَّة [أ، ف] في لغة أي [ل].

(١٦١١) وبأَيِّ: أو بأَيِّ [د، ط، ل].

(١٦١٢) خُطَّتْ أو بِأَيِّ نَقْشٍ: كتبت وخطت أو بأَيِّ نَقْشٍ [ك، ل] كتبت وخُطَّتْ وبأَيِّ صورة [أ] كتبت وخُطَّتْ وأي صورة [ف].

(١٦١٣) سقط من د، ط: كلها.

(١٦١٤) محيط بالدائرة: محيط الدائرة [د، ط، ك] محيطها [ل].

(١٦١٥) سقط من أ: فمركبة.

ومن أمثال ذلك أيضاً صناعةُ الكِتابة التي هي أشرفُ الصنائع، وبها يفتخر الوزراء والكُتّاب وأهلُ الأدب^(١٥٨٨) في مجالس الملوك مع كثرة أنواعِها وفنون فروعِها^(١٥٨٩)، وذلك أن لكلِّ أُمَّة من الناس^(١٥٩٠) كتابَةً^(١٥٩١) غيرَ ما للأخرى^(١٥٩٢)، كالعربية والفارسية^(١٥٩٣) والسريانية والعبرانية^(١٥٩٤) والرومية^(١٥٩٥) واليونانية^(١٥٩٦) والهندية^(١٥٩٧) وما شاكلها مما^(١٥٩٨) لا يُحصى عددها إلا اللهُ تعالى الذي خلقهم^(١٥٩٩) مع اختلاف ألسِنَتِهِم وألوانِهِم وأخلاقِهِم^(١٦٠٠) وطباعِهِم^(١٦٠١)

وهنا في ك جدول له زخرفة مملوكية الأسلوب. شكل هذا الجدول مستطيل وتوجد في وسطه دائرة كتبت حولها ١٥٠٠ ١٥٠٠ ١٥٠٠ ١٥٠٠ ١٥٠٠ ١٥٠٠ ١٥٠٠ ١٥٠٠ ١٥٠٠ ١٥٠٠ وفي وسطها:

هذه الدائرة

بحر الطویل

فَعُولُن مَفَاعِيلُن أَرْبَع مَرَّاتٍ .

(١٥٨٨) الأدب: الآداب [د، ط].
 (١٥٨٩) سقط من أ، ف: وفنون فروعها.
 (١٥٩٠) الناس: الأمم [د، ط، ك].
 (١٥٩١) زيادة في ط: ما.
 (١٥٩٢) ما للآخرى: الأخرى [أ، ف].
 (١٥٩٣) سقط من أ، ف: والفارسية.
 (١٥٩٤) سقط من أ، ف: والعبرانية.
 (١٥٩٥) سقط من د، ك: والرومية.
 (١٥٩٦) سقط من أ، ط، ف: واليونانية.
 (١٥٩٧) زيادة في أ، ف: والفهلوية.
 (١٥٩٨) سقط من د، ط، ع، ك، ل: مما.
 (١٥٩٩) سقط من ك: الذي خلقهم.
 (١٦٠٠) وأخلاقهم: واختلاف [أ، ف].
 (١٦٠١) وطباعهم: وطبائعهم [د، ف] صناعتهم [ف].

[٢١٩] {ورد جدول مَفَاعِيلُنْ سِتِّ مَرَّاتٍ فِي شَكْلِ دَائِرَةٍ} (١٥٧٥)

١٥١٥١٥١٥

الهَاءُ (١٥٧٦) علامة (١٥٧٧) المتحرّكات (١٥٧٨)، والألِفَات (١٥٧٩)
علامة (١٥٨٠) السواكن (١٥٨١).

فقد تبيّن بهذا المثال أيضاً (١٥٨٢) أن أحكم (١٥٨٣)
المصنوعات (١٥٨٤) وأتقن (١٥٨٥) المركّبات ما كان تأليفُ أجزائه
وأساسُ (١٥٨٦) بُنْيَتِهِ على النّسبة الأفضل (١٥٨٧).

(١٥٧٥) سقط الجدول من أ، د، ط، ف، ك. وفي ل جدول فارغ.

(١٥٧٦) الهَاءُ: الهيات [ف].

(١٥٧٧) علامة: علامات [ط].

(١٥٧٨) المتحرّكات: متحرّكات [ع].

(١٥٧٩) والألفَات: وصورة الألفَات [أ، ف] الألقاب الألفَات [ع].

(١٥٨٠) علامة: علامات [ط، ك].

(١٥٨١) السواكن: السكون [ط] زيادة في أ، ف: وهي هذه ١١١١٥٥٥٥٥٥. سقط

من د: الهَاءُ علامة المتحرّكات... السواكن.

(١٥٨٢) سقط من أ: أيضاً.

(١٥٨٣) أحكم: حُكْم [ف].

(١٥٨٤) سقط من ل: المصنوعات.

(١٥٨٥) وأتقن: وأحكم [ع] سقط من أ، ف: وأتقن.

(١٥٨٦) سقط من ك: وأساس.

(١٥٨٧) زيادة في د، ط، ل: مثل ما بينت في هذه الدائرة من الشرح والمثال جميعاً

{ل: - جميعاً} ليكون قريباً من {ل: الى} فهم المتعلمين ذلك {ل: -

ذلك} والناظرين فيه والمتأملين لمعانيه {ل: والمتأملين} معانيه {بصفاء

ذهنهم وجودة فكرهم ودقة نظرهم وروبتهم {ل: نظره وروبتهم} واعتباره.

وتحاذي هذا النص في ط دائرة كُتِبَ حولها:

فعولن مفاعيلن.

١٥١٥١٥١٥١٥١٥

أربع مرات. ويحاذي هذا النص في د بياض.

كلّها إلى متحرّكاته كلّها،

وهكذا تَجِدُ^(١٥٦٢) حُكَمَ الوافر والكامِل، فإن كلّ واحدٍ

منهما مُرَكَّبٌ من سِتَّة^(١٥٦٣) مقاطع وهي هذه:

مَفَاعِيلُنْ مَفَاعِيلُنْ مَفَاعِيلُنْ

مَفَاعِيلُنْ مَفَاعِيلُنْ مَفَاعِيلُنْ

سِتّ مَرَّات، فَنِسْبَةُ^(١٥٦٤) سواكنِ حروفِ^(١٥٦٥) ثُلُثِ البيتِ إلى

حروفِ مُتحرّكاته^(١٥٦٦) كَنِسْبَةِ حروفِ سواكنِ^(١٥٦٧) نصفه إلى

متحرّكاته وكنسبة حروفِ^(١٥٦٨) سواكنِ^(١٥٦٩) كلّهُ إلى

متحرّكات^(١٥٧٠) كلّهُ وعلى هذا المِثال والحُكم يوجد كلّ بيت من

الأشعار إذا سَلِمَ من^(١٥٧١) الزّحاف مُنَصِّفاً كان أو مُرَبَّعاً أو

مُسَدَّساً^(١٥٧٢)، وكذلك حُكْمُ^(١٥٧٣) الأزمانِ التي بينها، وهذه

صورتها^(١٥٧٤):

(١٥٦٢) تجد: نجد [أ، ف] للـ[تـ]جد [د].

(١٥٦٣) ستة: ست [ع، ف].

(١٥٦٤) فنسبة: ونسبة [ك] وستة [د] زيادة في ف: حروف.

(١٥٦٥) سقط من ع: حروف.

(١٥٦٦) حروف متحرّكاته: متحرّكات حروفه [د، ط، ل].

(١٥٦٧) حروف سواكن: سواكن حروف [أ، د، ف، ل] سقط من ط: كنسبة

حروف سواكن.

(١٥٦٨) سقط من أ، د، ط، ف، ك: حروف.

(١٥٦٩) حروف سواكن: سواكن حروف [ل].

(١٥٧٠) متحرّكات: متحرّكاته [أ، ف] سقط من ع: متحرّكات.

(١٥٧١) من: عن [د].

(١٥٧٢) زيادة في د: أو مثنياً.

(١٥٧٣) سقط من ل: حكم.

(١٥٧٤) هذه صورتها: هذه [د، ثم بياض] صورة [أ، ع، ف].

فَعُولُنْ مَفَاعِيلُنْ^(١٥٤٦) فَعُولُنْ مَفَاعِيلُنْ^(١٥٤٧)

فَعُولُنْ مَفَاعِيلُنْ^(١٥٤٨) فَعُولُنْ مَفَاعِيلُنْ.

وهذه الثمانية مركبة من اثني عشر سبباً وثمانية أوتاد،

جُمِلَتْهَا ثمانية وأربعون حرفاً، عشرون منها^(١٥٤٩) سواكن^(١٥٥٠) وثمانية^(١٥٥١) وعشرون^(١٥٥٢) متحرّكات^(١٥٥٣)،

والمِصْرَاعُ^(١٥٥٤) منه^(١٥٥٥) أربعة وعشرون حرفاً، عشرة

سواكن وأربعة عشر متحرّكات^(١٥٥٦)، ونِصْفُ المِصْرَاعِ الذي هو رُبْعُ البيت اثنا عشر حرفاً، خمسة منها سواكن^(١٥٥٧) وسبعة متحرّكات،

فَنِسْبَةُ حُرُوفِ سواكن^(١٥٥٨) رُبْعُهُ إلى متحرّكاته كنسبة^(١٥٥٩)

سواكن نصفه إلى متحرّكاته وكنسبة^(١٥٦٠) سواكن حروفه^(١٥٦١)

(١٥٤٦) مفاعيلن: مفاعِلن [أ: هنا وفيما يلي] مفاعيل [ل: هنا وفيما يلي].

(١٥٤٧) مفاعيلن: مفاعِلن [ف].

(١٥٤٨) مفاعيلن: مفاعِلن [ف].

(١٥٤٩) سقط من ع: منها.

(١٥٥٠) سواكن: ساكنة [أ، ف].

(١٥٥١) ثمانية: تسعة [أ].

(١٥٥٢) زيادة في د، ط، ك: حرفاً. زيادة في ل: منها.

(١٥٥٣) متحرّكات: متحركة [أ، ف].

(١٥٥٤) المِصْرَاع: المِصْرَاع [ك] المِصْرَاع [ل].

(١٥٥٥) منه: منها [أ، ف، ل].

(١٥٥٦) سقط من ك: عشرة سواكن وأربعة عشر متحرّكات.

(١٥٥٧) سواكن: ساكنة [أ].

(١٥٥٨) حروف سواكن: سواكن حروف [أ، د، ط، ل].

(١٥٥٩) سقط من ع، ف: سواكن رُبْعُهُ إلى متحرّكاته كنسبة.

(١٥٦٠) وكنسبة: كنسبة [ع، ف].

(١٥٦١) سواكن حروفه: حروف سواكنه [ع، ف].

فصل [١٠]

ومن المصنوعات المُحَكِّمَةُ الْمُتَقَنَّةُ^(١٥٣١) أَيْضاً^(١٥٣٢) صَنْعَةٌ^(١٥٣٣) الكلام والأقاويل، وذلك أن أحكم الكلام ما كان أبين وأبلغ^(١٥٣٤)،

[٥٢ أ] وأتقن البلاغات ما كان أفصح،

وأحسن الفصاحة^(١٥٣٥) ما كان موزوناً مُقَفًى^(١٥٣٦)،

وَأَلَدَّ الْمَوْزُونَاتِ مِنَ الْأَشْعَارِ مَا كَانَ غَيْرَ مُنْزَجِفٍ^(١٥٣٧)، وَالَّذِي هُوَ^(١٥٣٨) غَيْرُ مُنْزَجِفٍ^(١٥٣٩) مِنَ الْأَشْعَارِ هُوَ^(١٥٤٠) الَّذِي حُرُوفُهُ^(١٥٤١) السَّوَائِي^(١٥٤٢) وَأَزْمَانُهَا مُنَاسِبَةٌ^(١٥٤٣) لِحُرُوفِ مُتَحَرِّكَاتِهِ^(١٥٤٤) وَأَزْمَانُهَا،

وَالْمِثَالُ فِي ذَلِكَ الطَّوِيلُ وَالْمَدِيدُ وَالْبَسِيطُ، فَإِنْ كُلُّ وَاحِدٍ^(١٥٤٥) مِنْهَا مُرَكَّبٌ مِنْ ثَمَانِيَةِ مَقَاطِعَ وَهِيَ هَذِهِ:

(١٥٣١) المتقنة: والمتقنة [ع].

(١٥٣٢) سقط من د، ط: أيضاً.

(١٥٣٣) صنعة: صناعة [أ، ف].

(١٥٣٤) أبين وأبلغ: أبلغ وأبين [د].

(١٥٣٥) الفصاحة: الفصاحات [د].

(١٥٣٦) مقفًى: متقفاً [ف].

(١٥٣٧) منزحف: مزحف [د].

(١٥٣٨) والذي هو: وما كان [أ، ف] والذي [ك].

(١٥٣٩) منزحف: مزحف [د].

(١٥٤٠) هو: فهو [أ، ف].

(١٥٤١) حروفه: حروف [ع].

(١٥٤٢) السواكن: سواكن [ل] ساكنه [أ، ع، ف] الساكنة [ك].

(١٥٤٣) مناسبة: متناسبة [ف].

(١٥٤٤) لحروف متحركاته: لحروف متحركاتها [ك] لمتحركات حروفه [د].

(١٥٤٥) سقط من ف: واحد.

فلنُعَد^(١٥١٨) إلى ما كُنَّا فيه فنقول: قد^(١٥١٩) تبيَّن^(١٥٢٠) إذن بما ذكرناه طرف^(١٥٢١) من صنعة العود، وكمية أوتاره وتناسب ما بين غلاظها ودقاقها، وكمية دساتينها وكيفية شدّها وما بينها من التناسب^(١٥٢٢)، بأن^(١٥٢٣) أحكم المصنوعات وأتقن المركّبات وأحسن المؤلفات^(١٥٢٤) ما كان تأليف أجزائه وبنية^(١٥٢٥) تركيبه على النسبة الأفضل، ومن^(١٥٢٦) أجل هذا صارت تستلذّها أكثر المسامع ويستحسن صنعها^(١٥٢٧) [٢١٨] واستعمالها^(١٥٢٨) أكثر ذوي^(١٥٢٩) العقول، ويغنى بها في مجالس الملوك والرؤساء. (١٥٣٠)

(١٥١٨) فلنعد: زيادة في ك، ل: الآن.

(١٥١٩) قد: فقد [د، ط].

(١٥٢٠) قد تبيّن: تبيّن [ع].

(١٥٢١) ذكرناه طرف: ذكرنا طرفاً [ع، ك، ل] ذكرناه طرفاً [ف].

(١٥٢٢) زيادة في د، ط، ك، ل: كمية {ك، ل + نغمات} نقرات أوتاره مطلقاً

ومزموماً وما بينها {د، ط: وما بينهما، ل - وما بينها} من التناسب.

(١٥٢٣) بأن: وأن [أ، ف] فإن [ك، ل] لان [د].

(١٥٢٤) سقط من د، ط: المؤلفات.

(١٥٢٥) بنية: هيئة [ف، ك].

(١٥٢٦) ومن: وإن من [ل].

(١٥٢٧) صنعها: صنعتها [د].

(١٥٢٨) استعمالها: استعمالهم [ع].

(١٥٢٩) سقط من أ، ع، ف، ك: ذوي.

(١٥٣٠) سقط من أ، ف: والرؤساء. زيادة في ك: والله تعالى أعلم.

بلغ. وإنما أردنا بذكر^(١٥٠١) المَثَمَّات^(١٥٠٢) أن نُنبِّهك^(١٥٠٣) من نوم الغفلة، ولتَعلَمَ أن^(١٥٠٤) المُسَبَّعة^(١٥٠٥) الذين قد^(١٥٠٦) شَغَفُوا بذكر المُسَبَّعات وتفضيلها على غيرها، إنما^(١٥٠٧) كان نَظَرُهُم نظراً^(١٥٠٨) جُزئياً وكلامُهُم^(١٥٠٩) غيرَ كُلِّي^(١٥١٠)، وكذلك^(١٥١١) حُكْم الثَّنَوِيَّة في المَثَنَوِيَّات، والنَّصَارَى^(١٥١٢) في تثليثهم، والطبيعِيِّين^(١٥١٣) في مُربَّعاتهم، والخُرُمِيَّة^(١٥١٤) في مُخَمَّساتهم، والهندِ والكيَالِيَّة^(١٥١٥) في مُتَسَّعاتهم، وليس هذا مذهبَ إخواننا الكِرَام أيدَهم الله وإيانا بروح منه حيث كانوا في^(١٥١٦) البلاد، بل نَظَرُهُم كُلِّي وبحثُهم عموم وعِلْمُهُم^(١٥١٧) جامعٌ ومعرفتهم شاملة.

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- (١٥٠١) بذكر: نذكرُ [ل] زيادة في ك: الثمانيات.
 (١٥٠٢) المَثَمَّات: الثمانيات [ط، ومن فوق: المَثَمَّات].
 (١٥٠٣) نُنْبِّهك: ننبهل ؟ [ك].
 (١٥٠٤) أن: بأن [ط، ل] مَن [ع].
 (١٥٠٥) المُسَبَّعة: السبعة [ل].
 (١٥٠٦) سقط من د، ف: قد.
 (١٥٠٧) إنما: انه إنما [أ، ف].
 (١٥٠٨) سقط من ك، ل: نظراً.
 (١٥٠٩) زيادة في ل: على.
 (١٥١٠) سقط من د: وكلامهم غير كلي.
 (١٥١١) كذلك: لذلك [ل].
 (١٥١٢) النصارى: حكم النصارى [ل].
 (١٥١٣) الطبيعيون: [أ، ع، ل].
 (١٥١٤) الخُرُمِيَّة: الجرمية [أ، ف] الحرمية [د، ل] الحرملية [ك].
 (١٥١٥) الكيَالِيَّة: الكاثلية ؟ [ك] الكليلة [ل] [د] الكليلة [ل].
 (١٥١٦) في: من [ع، ف، ل].
 (١٥١٧) علمهم: عملهم [ع].

ثمانية^(١٤٨٥)، وأجناس^(١٤٨٦) غنائهم أيضاً ثمانية^(١٤٨٧)، كما
سُنيّن أيضاً^(١٤٨٨) في فصلٍ آخر^(١٤٨٩)،
وقد قيل أيضاً^(١٤٩٠) إن الجنان^(١٤٩١) ثمانى مراتب^(١٤٩٢)
والنيران^(١٤٩٣) سبعة أبواب، وقد بيّنا في رسالة البعث والقيامة
حقيقتها^(١٤٩٤). وعلى هذا القياس يا أخي أيّدك الله إن تأملت
الموجودات وتصفّحت^(١٤٩٥) أحوال^(١٤٩٦) الكائنات وجدت أشياء
كثيرة ثنائية^(١٤٩٧) وثلاثية^(١٤٩٨) ورباعية^(١٤٩٩) ومخمّسة ومسدّسة
ومُسبعة ومُثمّنة ومُتسّعة ومُعشّرة^(١٥٠٠) وما زاد على ذلك بالغاً ما

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- (١٤٨٥) زيادة في د، ك، ل: أجزاء وهي أجزاء العروض. زيادة في هامش ط:
أجزاء و
(١٤٨٦) زيادة في ط، ل: ألحان.
(١٤٨٧) زيادة في ط: ثمانية.
(١٤٨٨) سقط من د، ط، ك، ل: أيضاً.
(١٤٨٩) سقط من ع: ومفاعيل أشعار العرب... في فصل آخر.
(١٤٩٠) سقط من د، ع، ك: أيضاً.
(١٤٩١) الجنان: للجنان [ك، ل].
(١٤٩٢) زيادة في ك، ل: وحملة العرش ثمانية.
(١٤٩٣) النيران: للنيران [ك، ل].
(١٤٩٤) سقط من ع: حقيقتها.
(١٤٩٥) تصفّحت: تفحصت [د] تفحصت عن [ك].
(١٤٩٦) سقط من ل: أحوال.
(١٤٩٧) ثنائية: ثنائيات [د، ط، ك، ل] ثنائيات [ع].
(١٤٩٨) وثلاثية: ثلاثيات [د، ط، ك، ل] سقط من ع: وثلاثية.
(١٤٩٩) رباعية: رباعيات [د، ط، ع، ك] مربعات [ل].
(١٥٠٠) مخمّسة... ومُعشّرة: مخمّسات... ومُعشّرات [د، ط، غ، ل]
خماسيات... وثمانيات ومتسّعات ومُعشّرات [ك].

وهي (١٤٦٩) أصول^(١٤٧٠) الموجودات الطبيعية وعُنُصُر الكائنات الفاسِدت.

وأيضاً من فضيلة الثمانية أنك تجد مُناظراتِ الكواكب إلى ثمانية^(١٤٧١) مواضع في^(١٤٧٢) الفلك مخصوصة^(١٤٧٣) دونَ غيرها، وهي المركزُ والمقابلَةُ والتَّليثانِ والتَّربيعانِ والتَّسديسانِ، [٢١٧] وهذه الثمانية^(١٤٧٤) هي^(١٤٧٥) أيضاً^(١٤٧٦) أحدُ^(١٤٧٧) أسبابِ^(١٤٧٨) الكائنات الفاسِدت التي دونَ فلك القمر.

وإذا تأملت أيضاً واعتبرت وجدت الثمانية وعشرين^(١٤٧٩) حرفاً التي^(١٤٨٠) في اللغة^(١٤٨١) العربية المُمائلة لثمانية وعشرين منزلاً^(١٤٨٢) من منازل القمر هجاؤها ثمانية أحرفٍ وهي ال ف ي م ن د و^(١٤٨٣)، ومفاعيلُ أشعار العرب^(١٤٨٤)

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- (١٤٦٩) زيادة في د، ط: أيضاً.
 (١٤٧٠) أصول: أصل [د، ع، ك، ل].
 (١٤٧١) ثمانية: ثمان [ط، ف، ل].
 (١٤٧٢) في: من [أ، ف].
 (١٤٧٣) سقط من أ: مخصوصة.
 (١٤٧٤) زيادة في ك: أيضاً.
 (١٤٧٥) سقط من أ، ف: هي.
 (١٤٧٦) هي أيضاً: أيضاً هي [د، ط، ل].
 (١٤٧٧) أحد: إحدى [ع، ك، ل].
 (١٤٧٨) أسباب: الأسباب [أ، ف].
 (١٤٧٩) وعشرين: والعشرين [د، ط، ع].
 (١٤٨٠) زيادة في د: هي.
 (١٤٨١) اللغة: لغة [أ، د، ط، ف، ل].
 (١٤٨٢) منزلاً: منزله [أ، ف] منزلة (ل).
 (١٤٨٣) ال ف ي م ن د و: ال ي و م ر د ف [أ] ال و م د ر [ف] ال ف ي م ز د د [د، ط] ال ف ي م ن ر د [ل].
 (١٤٨٤) زيادة في ك، ل: أيضاً.

جَوْف^(١٤٥٤) بعضٍ مركَّبةٌ ومؤَلَّفةٌ^(١٤٥٥) وموضوعةٌ بعضُها من بعضٍ على هذه النَّسب المذكورة المُقدَّم^(١٤٥٦) ذِكْرُها، وأن جُملة جِسمِ العالَمِ تجري^(١٤٥٧) مجرى^(١٤٥٨) جِسمِ حيوانٍ واحدٍ أو^(١٤٥٩) إنسانٍ واحدٍ أو^(١٤٦٠) مدينة واحدة، وأن مدبَّرها ومصوِّرها ومركَّبها ومؤَلَّفها ومُبْدَعها ومُخترِعها (٥١ ب) واحدٌ لا شريكَ له. وهذا كان^(١٤٦١) أحدُ أغراضنا من^(١٤٦٢) هذه الرسالة. ومن فضيلة الثمانية أيضاً أنك إذا تأملت يا أخي أيَّدك الله وإيانا وتصفَّحت^(١٤٦٣) الموجوداتِ^(١٤٦٤) وجدتَ موجوداتٍ كثيرةً مُثَمَّناتٍ كَطَباع^(١٤٦٥) الأركان^(١٤٦٦)، الحارِّ اليابس^(١٤٦٧)، والحارِّ الرُّطب، والبارد اليابس، والبارد الرطب^(١٤٦٨) ثمانية،

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- (١٤٥٤) جوف: على جوف [ل].
 (١٤٥٥) ومؤَلَّفة: مؤَلَّفة [أ، ف] زيادة في ك، ل: وموضوعة.
 (١٤٥٦) المُقدَّم: المُتقدِّم [ط].
 (١٤٥٧) تجري: يجري [ع].
 (١٤٥٨) مجرى: بمجرى [ك].
 (١٤٥٩) أو: و [أ، د، ط، ف، ك، ل].
 (١٤٦٠) أو: و [د، ط، ف، ك، ل].
 (١٤٦١) كان: أيضاً [د].
 (١٤٦٢) من: في [أ، د، ف، ك].
 (١٤٦٣) تصفَّحت: تفحصت عن [ك] تصفَّحت وتفحصت [ل].
 (١٤٦٤) زيادة في ك، ل: وعنصر الكائنات الفاسدات.
 (١٤٦٥) كطباع: مثل طبائع [أ، ف] كطبايع [ط، ك].
 (١٤٦٦) زيادة في أ، ط: الأربعة. زيادة في د وفي هامش ل: الحار والبارد والرطب واليابس.
 (١٤٦٧) سقط من ك: الحار اليابس.
 (١٤٦٨) زيادة في ك: والحار اليابس.

ونسبة قُطْرِ الكواكب الثابتة من^(١٤٤١) قُطْرِ المشتري
المِثْلُ والرُّبْعُ^(١٤٤٢)، ومن الزُّهْرَةِ الضَّعْفُ^(١٤٤٣)، ومن الشمس
المِثْلُ والثلاثة الأرباع^(١٤٤٤)، ومن القمر الضَّعْفَانِ والثلاثة
الأرباع^(١٤٤٥)، ومن الأرض أربعة أضعاف،
وأما عطارد والمِرْيَخُ وزُحَلُ فغير^(١٤٤٦) هذه النسبة، فمن
أجل هذا قيل إنها^(١٤٤٧) نُحُوسٌ.

وذكر هؤلاء الحكماء أيضاً أن بين عِظَمِ أجرام هذه الكواكب
بعضها لبعض^(١٤٤٨) نِسْباً^(١٤٤٩) شَتَّى، إما عددية وإما^(١٤٥٠)
هندسية وإما موسيقية، وهكذا بينها وبين جِزْمِ الأرض هذه النِّسَبُ
أيضاً موجودة، فمنها^(١٤٥١) شريفة فاضلة ومنها دون ذلك يطول
شَرْحُهَا.

فقد بيَّنَّا^(١٤٥٢) بما ذكرنا أن جُمْلَ^(١٤٥٣) جِسمِ العالَمِ بجميع
أفلاكه وأشخاص كواكبه وأركانهِ الأربعة وتركيب بعضها

(١٤٤١) من: الى [ط].

(١٤٤٢) الربع: الثلث [في هامش ع].

(١٤٤٣) سقط من د: ومن الزهرة المثل والنصف... ومن الزهرة الضعف.

(١٤٤٤) الأرباع: أرباع [ف] والسبعة الأتساع [ع، في الهامش].

(١٤٤٥) الأرباع: أرباع [ف] والثلثان [ع، في الهامش].

(١٤٤٦) فغير: فعلى غير [د، ط].

(١٤٤٧) إنها: إنه [د، ع].

(١٤٤٨) لبعض: إلى بعض [أ، ف].

(١٤٤٩) نسباً: نسب [وردت في جميع المخطوطات].

(١٤٥٠) وإما: أو [ل، ومن فوق: وإما].

(١٤٥١) فمنها: ولكن منها [ك، ل].

(١٤٥٢) بيَّنَّا: تبين [د، ط، ك، ل].

(١٤٥٣) جُمْلَ: جملة [د، ط، ل].

وَزُحِّلَ سَبْعَةٌ وَعَشْرُونَ^(١٤٣٠) وَأَرْبَعَةٌ أَسَاعَ،
 وَفُطِرَ فَلَكَ الْكَوَاكِبُ^(١٤٣١) الثَّابِتَةُ اثْنَانِ وَثَلَاثُونَ^(١٤٣٢)،
 فَنِسْبَةُ قُطْرِ^(١٤٣٣) الْقَمَرِ مِنْ قُطْرِ الْأَرْضِ مِثْلُهُ وَمِثْلُ
 نِصْفِهِ^(١٤٣٤)، وَمِنْ قُطْرِ الْهَوَاءِ الْمِثْلُ وَالثَّلْثُ^(١٤٣٥)،
 وَنِسْبَةُ قُطْرِ الزُّهْرَةِ مِنْ قُطْرِ الْأَرْضِ نِسْبَةُ الضَّعْفِ، وَمِنْ
 قُطْرِ الْقَمَرِ الْمِثْلُ وَالثَّلْثُ^(١٤٣٦)،
 وَنِسْبَةُ قُطْرِ الشَّمْسِ مِنْ قُطْرِ الْهَوَاءِ [٢١٦] الضَّعْفُ،
 وَمِنْ قُطْرِ الْأَرْضِ الضَّعْفَانِ وَالرُّبْعُ، وَمِنْ قُطْرِ الْقَمَرِ الْمِثْلُ
 وَالنِّصْفُ،
 وَنِسْبَةُ قُطْرِ الْمَشْتَرِيِّ مِنْ قُطْرِ الْقَمَرِ الضَّعْفُ^(١٤٣٧)، وَمِنْ
 قُطْرِ الْأَرْضِ الثَّلَاثَةُ الْأَضْعَافُ^(١٤٣٨)، وَمِنْ الزُّهْرَةِ الْمِثْلُ^(١٤٣٩)
 وَالنِّصْفُ^(١٤٤٠)،

(١٤٣٠) سبعة وعشرون: كر [د، ع] كز [ط] ثمانية وعشرون [ك] كذ / كز ؟ (ومن فوق: ثمانية وعشرون) [ل].
 (١٤٣١) سقط من أ، ع، ك: قطر فلك [ك، ل]. سقط من د، ط: فلك.
 (١٤٣٢) اثنان وثلاثون: لب [د، ط، ع، ف، ل (ومن فوق: اثنى وثلاثين)].
 (١٤٣٣) زيادة في د، ط، ك، ل: فلك.
 (١٤٣٤) مثله ومثل نصفه: مثل وثلث [د، ط، ك، ل].
 (١٤٣٥) الثلث: الربع [د، ط، ك، ل (وفي الهامش: الثلث)].
 (١٤٣٦) الثلث: النصف [ف] المثلث [ك].
 (١٤٣٧) زيادة في ف: ومن قطر القمر المثل والنصف ونسبة قطر المشتري من قطر القمر الضعف.
 (١٤٣٨) الأضعاف: أضعاف [ف].
 (١٤٣٩) المثل: المثلث [ف].
 (١٤٤٠) الزهرة المثل والنصف: الشمس المثل والثلث [ط] الزهرة المثل والثلث [ل: وفي الهامش: والنصف].

ومن فضيلة^(١٤١٦) الثمانية أيضاً^(١٤١٧) ما ذكرت الحكماء
الرياضيون بأن بين أقطار أكر الأفلاك^(١٤١٨) وبين قطر الأرض
والهواء^(١٤١٩) نسبة موسيقية، وبيان ذلك أنه إذا كان قطر^(١٤٢٠)
الأرض ثمانية وكان قطر^(١٤٢١) كرة^(١٤٢٢) الهواء تسعة،
فإن قطر كرة^(١٤٢٣) فلك القمر اثنا عشر،
وقطر فلك عطارد ثلاثة عشر،
وقطر فلك^(١٤٢٤) الزهرة ستة عشر^(١٤٢٥)،
وقطر فلك^(١٤٢٦) الشمس ثمانية عشر^(١٤٢٧)،
وقطر فلك المريخ أحد وعشرون ونصف^(١٤٢٨)،
وقطر فلك المشتري أربعة وعشرون^(١٤٢٩)،

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- (١٤١٦) زيادة في ف: الاثنا عشر.
(١٤١٧) سقط من ك، ل: أيضاً.
(١٤١٨) الأفلاك: الفلك [ع] الأرض [أ].
(١٤١٩) سقط من ط، ع: والهواء.
(١٤٢٠) قطر: نصف قطر [في كل المخطوطات].
(١٤٢١) قطر: نصف قطر [في كل المخطوطات عدا أ].
(١٤٢٢) سقط من ل: كرة.
(١٤٢٣) سقط من أ، د، ط، ف: كرة.
(١٤٢٤) سقط من ع: قطر فلك.
(١٤٢٥) ستة عشر: يو [ع، ل (ومن تحت: ستة عشر)].
(١٤٢٦) سقط من ع: قطر فلك (وكذا فيما يلي).
(١٤٢٧) ثمانية عشر: يح [د، ط، ع، ل (ومن تحت: ثمانية عشر)] ثمانية [أ].
(١٤٢٨) أحد وعشرون ونصف: كا ونصف [د، ط، ع، ل (ومن تحت: إحدى وعشرين)].
(١٤٢٩) أربعة وعشرون: كد [د، ط، ع، ل (ومن فوق: أربعة وعشرون)].

وله^(١٤٠٤) سِتَّة (٥١ أ) سطوحٍ مُربَّعاتٍ كُلُّها
متساوية^(١٤٠٥)،

وله ثماني زوايا مُجسَّمة كُلُّها متساوية،

وله اثنا عشر ضِلْعاً متوازية متساوية^(١٤٠٦)،

وله أربع وعشرون زاويةً قائمةً متساوية، وهي من
ضَرْبِ^(١٤٠٧) ثلاثة في ثمانية^(١٤٠٨)،

وقد قلنا قبل^(١٤٠٩) إن كلَّ مصنوع التساوي فيه أكثرُ فهو
أفضل، وليس بعدَ الشكل الكُرِّيَّ شكلٌ أكثرُ تساويًا^(١٤١٠) من
الشكل المكعَّب، فمن أجل هذا^(١٤١١) قال إقليدس في
كتابه^(١٤١٢) في المقالة الأخيرة^(١٤١٣) إن شكل الأرض بالمكعَّب
أشبهه، وشكل الفلكِ بذِي اثنتي عشرة قاعدةً مجسَّماتٍ
أشبهه^(١٤١٤). وقد بيَّنا في رسالة الأسطرنوميا فضيلة الشكل
الكَروِيَّ^(١٤١٥) والعدد الاثني عشر.

(١٤٠٤) له: لها [ل].

(١٤٠٥) متساوية: متساويات [أ، د، ك].

(١٤٠٦) زيادة في أ، ف: وهي من (ف: وهو) مضروب ثلثه في ثمانية.

(١٤٠٧) ضرب: مضروب [د، ط، ك، ل].

(١٤٠٨) سقط من أ، ف: وهي من ضرب ثلاثة في ثمانية.

(١٤٠٩) سقط من أ، ف، ل: قبل.

(١٤١٠) تساويًا: متساويًا [ف].

(١٤١١) هذا: هذه [أ، ع، ف، ل].

(١٤١٢) قال إقليدس في كتابه: قال في كتاب إقليدس [أ، ك] قيل في كتاب إقليدس

[د، ط، ل] قال في إقليدس [ف].

(١٤١٣) الأخيرة: الآخرة [ع] الأخرى [ل] سقط من د: في المقالة الأخيرة.

(١٤١٤) سقط من د، ط: أشبه.

(١٤١٥) الكروي: الكري [أ، د، ط، ف، ك، ل].

وَعِلَظَ^(١٣٩٢) المثلث إلى البَمّ،

كِنِسَبَةِ قُطْرِ الأَرْضِ إلى قُطْرِ كُرَّةِ النِّسِيمِ،

وَقُطْرِ^(١٣٩٣) كُرَّةِ النِّسِيمِ إلى قُطْرِ^(١٣٩٤) كُرَّةِ الزَّمْهَرِيرِ،

وَقُطْرِ كُرَّةِ^(١٣٩٥) الزَّمْهَرِيرِ^(١٣٩٦) إلى قُطْرِ كُرَّةِ^(١٣٩٧)

الأثير،

فهذا كان سَبَبَ شَدِّهِمْ لها على هذا [٢١٥] الترتيب^(١٣٩٨).

وأما استعمالُهم نِسَبَةَ الثُّمَنِ في نغم الأوتار دون الخمس

والسُّدُسِ^(١٣٩٩) والسُّبُعِ وتفضيلُهم إيّاها فمن أجل أنها مشتَقَّةٌ من

الثمانية، والثمانية^(١٤٠٠) هي أوَّلُ عددٍ مُكعَّب، وأيضاً فإن السِّتَّةَ

لَمَّا كانت أوَّلَ عددٍ تامٍّ وكانت الأشكالُ ذواتُ السُّطُوحِ

السِّتَّةِ^(١٤٠١) أفضلُها هو المُكعَّبُ والمقدَّمُ عليها^(١٤٠٢) لما فيه من

التساوي، كما بيَّنا في رسالة الجومطريا، وذلك أن طولَ هذا

الشكل وعرضه وعمقه كلُّها^(١٤٠٣) مُتساويةٌ،

(١٣٩٢) سقط من ط، ع، ك، ل: غلظ.

(١٣٩٣) سقط من د، ط، ع، ك، ل: قطر.

(١٣٩٤) سقط من د، ط، ع، ك، ل: قطر.

(١٣٩٥) سقط من ط، ع، ك، ل: قطر كرة. سقط من د: وقطر كرة.

(١٣٩٦) الزمهرير: كالزمهرير [د].

(١٣٩٧) سقط من د، ط، ع، ك، ل: قطر كرة. سقط من ف: قطر.

(١٣٩٨) الترتيب: التدوير [د].

(١٣٩٩) والسُّدُس: أو السُّدُس [ع].

(١٤٠٠) سقط من ف: والثمانية.

(١٤٠١) زيادة في هامش ع: الأقطار.

(١٤٠٢) هو المكعب والمقدَّم عليها: والمقدَّم عليها هو المكعب [د، ط، ك] هو

المكعب والمقدَّم عليها هو المكعب [ل].

(١٤٠٣) زيادة في أ، ف: واحد.

ونغمته مماثلثة لحرارة^(١٣٧٩) النار وحِدَّتِها تحت الأوتار
كلّها^(١٣٨٠)،

وشدّهم^(١٣٨١) البَمّ المُمائل لركن الأرض فوقها كلّها،

والمَثْنَى مِمّا يلي الزَّير

والمثلث مما يلي البَمّ^(١٣٨٢)،

فلعلّتين^(١٣٨٣) اثنتين،

إحداهما^(١٣٨٤) أن نغمة الزير حادة^(١٣٨٥) خفيفة تتحرّك^(١٣٨٦)

إلى العلوّ^(١٣٨٧)، ونغمة البَمّ غليظة ثقيلة تتحرّك إلى أسفل^(١٣٨٨)،

فيكون ذلك أمكن لمزاجيهما واتّحادهما، وكذلك حال المَثْنَى

والمثلث^(١٣٨٩)،

والعلة الأخرى أن نسبة غلظ الزَّير إلى غلظ المَثْنَى،

وغلظ^(١٣٩٠) المَثْنَى إلى^(١٣٩١) المثلث،

(١٣٧٩) لحرارة: حرارة [ع].

(١٣٨٠) كلّها: بكلها [ل].

(١٣٨١) وشدهم: وشدتهم [أ].

(١٣٨٢) زيادة في ل: المماثل لركن الأرض.

(١٣٨٣) فلعلّتين: فهي أيضاً لعلّتين [أ، ع، ف، ك، ل].

(١٣٨٤) إحداهما: أحدهما [أ، ف، ل].

(١٣٨٥) زيادة في ل، من تحت: حارة.

(١٣٨٦) سقط من د: تتحرّك.

(١٣٨٧) إلى العلوّ: علّوا [ع، ك] علّوا [ل] علّوا [د].

(١٣٨٨) إلى أسفل: سفلاً [ل].

(١٣٨٩) المَثْنَى والمثلث: المثلث والمَثْنَى [د، ك].

(١٣٩٠) سقط من د، ط، ك، ل: غلظ.

(١٣٩١) سقط من ع: وغلظ المَثْنَى إلى. سقط من د: غلظ.

فقالوا إن قُطِرَ كُرَّةُ الأثير أعني النار التي دونَ فلكِ القمر
 مثلُ قُطِرٍ (١٣٦٧) كُرَّةُ الرَّمْهَرِ ومثلُ ثُلثِها،
 وقُطِرَ كُرَّةُ الرَّمْهَرِ مثلُ قُطِرِ كُرَّةِ النسيم ومثلُ ثُلثِها (١٣٦٨)،
 وقُطِرَ كُرَّةُ النَّسِيمِ (١٣٦٩) مثلُ قُطِرِ (١٣٧٠) الأرض (١٣٧١) ومثلُ
 ثُلثِها (١٣٧٢)،

ومعنى هذه النسبة أن (١٣٧٣)

جَوْهَرَ النار في اللطافة مثلُ جَوْهَرِ الهواء ومثلُ ثُلثِها،
 وجَوْهَرَ الهواء في اللطافة مثلُ جَوْهَرِ الماء ومثلُ ثُلثِها،
 وجَوْهَرَ الماء في اللطافة (١٣٧٤) مثلُ جَوْهَرِ الأرض (١٣٧٥)
 ومثلُ ثُلثِها (١٣٧٦).

وأما عِلَّةُ شَدَّهِمِ (١٣٧٧) الرِّيزِ الذي (١٣٧٨) هو ممائِلٌ لِرُكْنِ النار

(١٣٦٧) سقط من أ، ف: قطر.

(١٣٦٨) ثلثها: ثلثه [د].

(١٣٦٩) وقطر كرة النسيم: وكرة النسيم قطرها [ع].

(١٣٧٠) زيادة في د: كرة.

(١٣٧١) قطر الأرض: قطرة كرة الماء ومثل ثلثه وقطرة كرة الماء مثل قطرة كرة

الأرض [ك، ل].

(١٣٧٢) ثلثها: ثلثه [د، ط].

(١٣٧٣) أن: هو أن [ط].

(١٣٧٤) سقط من ل: في اللطافة.

(١٣٧٥) وجوهر الماء في اللطافة مثل جوهر الأرض: والماء مثل الأرض [د، ط،

ع].

(١٣٧٦) ثلثه: ثلثها [ط، ف، ك، ل].

(١٣٧٧) شدَّهم: شدَّتْهم [أ].

(١٣٧٨) سقط من ل: الذي.

في الأوقات المضادة لطبيعة الأمراض^(١٣٥٢) والأعلال،
ولم^(١٣٥٣) اختصروا^(١٣٥٤) على أربعة^(١٣٥٥) أوتار لا أكثر ولا
أقل.

فأما العلة^(١٣٥٦) التي من أجلها جعلوا غَلْظَ كلِّ وترٍ مِثْلَ
غَلْظِ الذي^(١٣٥٧) تحته^(١٣٥٨) ومِثْلَ ثُلْثِهِ فذلك منهم هو أيضاً^(١٣٥٩)
اقتداءً بِحِكمةِ الباري^(١٣٦٠) عزَّ اسمُه واقتفاءً^(١٣٦١) لآثار
صنعتِه^(١٣٦٢) في المصنوعات الطبيعية، وذلك أن الحكماء
الطبيعيين ذكروا أن أقطار أكر^(١٣٦٣) الأركان الأربعة التي هي
النار والهواء والماء والأرض^(١٣٦٤)، كلُّ واحدٍ منها مِثْلُ الذي
تحته ومِثْلُ ثُلْثِهِ بالكيفيَّة^(١٣٦٥)، أعني في اللَّطافة^(١٣٦٦) والغَلْظِ،

(١٣٥٢) زيادة في ل: والاعراض.

(١٣٥٣) ولم: ولذلك [أ] فذلك [ف].

(١٣٥٤) اختصروا: اقتصروا [د].

(١٣٥٥) سقط من ك: الحكماء الموسيقيين المستعملين لها... أربعة.

(١٣٥٦) العلة: العلل [د].

(١٣٥٧) الذي: التي [ع].

(١٣٥٨) تحته: في ل زيادة من تحت: بجنبه.

(١٣٥٩) هو أيضاً: هو [أ] أيضاً هو [ف] أيضاً [ك].

(١٣٦٠) الباري: الله [أ، ف].

(١٣٦١) اقتفاء: اتباع [ط] اتباعاً [د، ل] اتباعاً واقتفاءً [ك].

(١٣٦٢) صنعتِه: صنعه [د].

(١٣٦٣) أقطار أكر: أقطار أكبر [د] أقطار أكر الحيوان [ف] زيادة في ل من تحت
أكر: أكثر.

(١٣٦٤) الماء والأرض: الأرض والماء [ع].

(١٣٦٥) بالكيفيَّة: في الكيفيَّة [د، ط، ك].

(١٣٦٦) في اللَّطافة: باللطافة [أ، ف] من اللطافة [ع].

فإذا^(١٣٣٨) ألفت هذه النغمات في الألحان^(١٣٣٩) المُشاكِلة لها واستُعملت تلك الألحان في أوقات الليل والنهار^(١٣٤٠) المضادة^(١٣٤١) طبيعتها لطبيعة^(١٣٤٢) الأمراض^(*) الغالبة والعلل^(١٣٤٣) العارضة، سَكَّنَتْها وكَسَرَتْ (٥٠ ب) سَوَّرَتْها وخَفَّفَتْ على^(١٣٤٤) المرضى^(١٣٤٥) آلامَها، لأن الأشياء المشاكِلة^(١٣٤٦) في الطباع إذا كَثُرَتْ واجتمعت قَوِيَتْ أفعالُها وظهرت تأثيراتها وغلَبَتْ أصدادُها، كما يعرف^(١٣٤٧) الناسُ مثلَ ذلك في الحروب والخصومات^(١٣٤٨).

[٢١٤] فقد تبَيَّنَ بما ذكرنا طَرَفُ^(١٣٤٩) من حِكْمَةِ الحُكَمَاءِ^(١٣٥٠) الموسيقيين المستعملين لها في المارِستانات^(١٣٥١)

(١٣٣٨) قَوَّرَانِه، فإذا: فورتِه، وإذا [أ، ف].

(١٣٣٩) في الألحان: والألحان [د].

(١٣٤٠) تلك الألحان في أوقات الليل والنهار: في أوقات الليل والنهار تلك الألحان [أ، ف].

(١٣٤١) المضادة: المضاد [ف] المتضادة [أ] والمضادة [ل].

(١٣٤٢) لطبيعة: طبيعة [ك] سقط من د: لطبيعة.

(*) الأمراض: الأعراض [ع]. (المدقق).

(١٣٤٣) سقط من ف: والعلل. سقط من أ: الغالبة والعلل.

(١٣٤٤) على: عن [د، ط، ل].

(١٣٤٥) المرضى: المرض [د].

(١٣٤٦) سقط من ف: المشاكِلة.

(١٣٤٧) يعرف: يعرفون [أ، ف، ل].

(١٣٤٨) الخصومات: المخاصمات [أ، ف].

(١٣٤٩) طرف: طرفاً [ع، ف، ك، ل].

(١٣٥٠) سقط من ف: الحكماء.

(١٣٥١) المارِستانات: البيمارستانات [أ].

والبَّمُّ مماثلٌ لركن الأرض

ونغمته مماثلةٌ لِثِقَلِ الأرضِ وَغِلَظِهَا.

وهذه الأوصاف لها هي ^(١٣٣٠) بحسب مُناسبة بعضها إلى

بعض وبحسب ^(١٣٣١) تأثيرات نغماتها في أَمْزِجَةِ طَباعِ المستمعين لها، وذلك أن

نغمة الزَّيْرِ تُقَوِّي خِلَطَ الصفراءِ

وتزيد في قوتها وتأثيرها

وتضادُّ ^(١٣٣٢) خِلَطَ البُلْغَمِ وتُلَطِّفُه،

ونغمة المَثْنَى تُقَوِّي خِلَطَ الدَّمِ

وتزيد في قوّته وتأثيره

وتضادُّ خِلَطَ السوداء ^(١٣٣٣) وتُليِّنُه ^(١٣٣٤)،

ونغمة المَثْلَثِ تُقَوِّي خِلَطَ البُلْغَمِ

وتزيد في قوّته وتأثيره

وتضادُّ خِلَطَ الصفراءِ وتكسِرُ حَدَّتِهَا،

ونغمة البَّمِّ تُقَوِّي خِلَطَ السوداء

وتزيد في قوّته وتأثيره ^(١٣٣٥)

وتضادُّ ^(١٣٣٦) خِلَطَ الدَّمِ وتُسَكِّنُ ^(١٣٣٧) فَوْرانَه،

(١٣٣٠) سقط من د، ط: هي.

(١٣٣١) وبحسب: أو بحسب [ع، ف، ك، ل].

(١٣٣٢) سقط من أ: تضادُّ.

(١٣٣٣) زيادة في ك: وترققه. زيادة في ط: ويرققه.

(١٣٣٤) تليِّنُه: يذيبه ويفنيه [أ] تذيبه وتفنيه [ف] ترققه وتليِّنُه [ل] يرققه و[ي]ليِّنُه [د].

(١٣٣٥) قوته وتأثيره: قوتها وتأثيرها [ك].

(١٣٣٦) زيادة في ف: في.

(١٣٣٧) تسكِّنُ: يسكِّن [ط: ع، ك].

فَنَرَجِعُ^(١٣١٦) إِلَى مَا كُنَّا فِيهِ فَنَقُولُ إِنَّ الْحُكَمَاءَ
 الْمَوْسِقَارِيِّينَ^(١٣١٧) إِنَّمَا اخْتَصَرُوا^(١٣١٨) مِنْ أَوْتَارِ الْعُودِ عَلَى
 أَرْبَعَةٍ لَا أَكْثَرَ وَلَا أَقَلَّ^(١٣١٩) لِتَكُونَ مَصْنُوعَاتُهُمْ مِمَّا ثَلَّةٌ لِلْأُمُورِ
 الطَّبِيعِيَّةِ^(١٣٢٠) الَّتِي^(١٣٢١) دُونَ فَلَكِ الْقَمَرِ اقْتِدَاءً بِحِكْمَةِ
 الْبَارِئِ^(١٣٢٢) تَعَالَى، كَمَا بَيَّنَّا فِي رِسَالَةِ الْأَرْثِمَاطِيْقِيِّ،
 فَوَتَرُ الزَّرِيرِ مِمَّا ثَلُّ لِرُكْنِ النَّارِ
 وَنَعْمَتُهُ مُنَاسِبَةٌ^(١٣٢٣) لِحَرَارَتِهَا وَجِدَّتْهَا،
 وَالْمَثْنَى مِمَّا ثَلُّ لِرُكْنِ الْهَوَاءِ
 وَنَعْمَتُهُ مُنَاسِبَةٌ^(١٣٢٤) لِرَطوبَةِ الْهَوَاءِ وَلِينِهِ^(١٣٢٥)،
 وَالْمَثْلُثُ مِمَّا ثَلُّ^(١٣٢٦) لِرُكْنِ الْمَاءِ^(١٣٢٧)
 وَنَعْمَتُهُ مُنَاسِبَةٌ^(١٣٢٨) لِرَطوبَةِ الْمَاءِ وَبَرُودَتِهِ^(١٣٢٩)،

الأمة، وقال الله تعالى «مَلَّةٌ أَيْكُمْ إِبْرَاهِيمَ هُوَ سَمَّاكُمُ الْمُسْلِمِينَ {ل + مِنْ قَبْلِ}» وهذه الأبوة روحانية لا جسمانية.

- (١٣١٦) فَنَرَجِعُ: وَنَرَجِعُ [د] وَنَعُودُ [أ، ف].
 (١٣١٧) الْمَوْسِقَارِيِّينَ: الْمَوْسِقِيِّينَ [أ، ف].
 (١٣١٨) اخْتَصَرُوا: اقْتَصَرُوا [ك].
 (١٣١٩) أَرْبَعَةٌ لَا أَكْثَرَ وَلَا أَقَلَّ: الْأَرْبَعَةُ لَا أَقَلَّ وَلَا أَكْثَرَ [أ] أَرْبَعَةٌ لَا عَلَى أَقَلَّ وَلَا أَكْثَرَ [ف] أَرْبَعَةٌ لَا أَكْثَرَ وَلَا أَقَلَّ [ك، ل] سَقَطَ مِنْ د، ط: وَلَا أَقَلَّ.
 (١٣٢٠) لِلْأُمُورِ الطَّبِيعِيَّةِ: لِلْأُمُورِ الطَّبِيعَةِ [ع] لِلْأُمُورِ الطَّبِيعَةِ [ف].
 (١٣٢١) زِيَادَةٌ فِي [أ، ف]: هِيَ.
 (١٣٢٢) الْبَارِئُ: اللَّهُ [أ].
 (١٣٢٣) سَقَطَ مِنْ ع: وَنَعْمَتُهُ مُنَاسِبَةٌ.
 (١٣٢٤) مُنَاسِبَةٌ: مُتَنَاسِبَةٌ [أ].
 (١٣٢٥) لِرَطوبَةِ الْهَوَاءِ وَلِينِهِ: لِحَرَارَةِ الْهَوَاءِ وَرَطوبَتِهِ [د].
 (١٣٢٦) سَقَطَ مِنْ ع: مِمَّا ثَلُّ.
 (١٣٢٧) الْمَاءُ: النَّارُ [ك].
 (١٣٢٨) مُنَاسِبَةٌ: مِمَّا ثَلَّةُ [ع].
 (١٣٢٩) بَرُودَتُهُ: تَبْرِيدُهُ [ل].

الذي (١٣٠١) باطنه (١٣٠٢) فيه الرحمة ساجداً في (١٣٠٣) صورة الملائكة (١٣٠٤) فقد أفلحت (١٣٠٥) وفزت ونجوت (١٣٠٦).

واعلم يا أخي أيَّدك الله وإيانا بروح منه بأن صورة (١٣٠٧) الملائكة (١٣٠٨) هي التي توفي (١٣٠٩) نفسك عند مفارقة الجسد، كما ذكر الله (١٣١٠) تعالى بقوله (١٣١١) ﴿قُلْ يَتُوفَّكُم مَّلَكُ الْمَوْتِ الَّذِي وُكِّلَ بِكُمْ ثُمَّ إِلَىٰ رَبِّكُمْ تُرْجَعُونَ﴾، واعلم يا أخي بأن ملك الموت هو قابل (١٣١٢) الأرواح وداية النفوس، كما أن الداية للأجساد هي قابلة الأطفال. [٢١٣] واعلم يا أخي أن لكل نفس من المؤمنين أبوين في عالم الأرواح (١٣١٣)، كما أن لأجسادهم (١٣١٤) أبوين في عالم الأجسام (١٣١٥).

(١٣٠١) سقط من ل: دخلت من الباب الذي.
 (١٣٠٢) ودخلت من الباب الذي باطنه: وباطنه الذي دخلت فيه [ك].
 (١٣٠٣) في: وهي [أ، ع، ف، ك، ل].
 (١٣٠٤) صورة الملائكة: صورة الملكية [ف] الصورة الملكية [ع].
 (١٣٠٥) أفلحت: فلحت [ع].
 (١٣٠٦) نجوت: نجيت [ع] نجحت [ف].
 (١٣٠٧) صورة: صوت [ك].
 (١٣٠٨) الملائكة: الملكية [ط].
 (١٣٠٩) توفي: توفي [د، ط، ك].
 (١٣١٠) سقط من ع: الله.
 (١٣١١) بقوله: في كتابه فقال [أ] في كتابه [ف] سقط من ل: بقوله.
 (١٣١٢) قابل: قابلة [د، ط].
 (١٣١٣) أبوين في عالم الأرواح: الذين في عالم الأرواح أبوين [أ، ف].
 (١٣١٤) لأجسادهم: لأجساد بني آدم [ل].
 (١٣١٥) الأجسام: الأجساد [ل]. زيادة في د، ط، ك، ل: كما قال رسول الله صلى الله عليه وسلم لعلي عليه السلام {د: لعلي رضي الله عنه} أنا وأنت يا علي {ل + بن أبي طالب صلوات الله عليه، د - يا علي} أبوا هذه

هو (١٢٨٧) أكل (١٢٨٨) لحماتها (١٢٨٩) حسب، بل غرضهم
تخليص (١٢٩٠) نفوسها من دركات جهنم عالم الكون والفساد،
ونقلها من حال النقص إلى حال التمام والكمال (١٢٩١)
في (١٢٩٢) صورة (١٢٩٣) الإنسانية التي هي أتم وأكمل صورة تحت
فلك القمر وهذه الصورة هي آخر باب في جهنم (١٢٩٤) عالم
الكون والفساد، (١٢٩٥) (٥٠ أ) كما يتنا في رسالة حكمة الموت.
فانظر الآن (١٢٩٦) يا أخي أيديك الله وتفكر، واعلم بأن
جسمك صدفة (١٢٩٧) ونفسك دُرَّةٌ ثمينة لا (١٢٩٨) تغفل عنها، فإن
لها قيمة عظيمة عند بارئها وخالقها. وقد بلغت آخر باب في
جهنم، فإن بادرت وتزودت وسبقت وخرجت من هذا الباب
الذي ظاهره (١٢٩٩) من قبله العذاب، ودخلت من (١٣٠٠) الباب

(١٢٨٧) زيادة في أ، ف: لأجل.

(١٢٨٨) أكل: لأكل [د، ط، ك، ل].

(١٢٨٩) لحماتها: لحمها [ع].

(١٢٩٠) تخليص: تلخيص [د، ع] زيادة في د، ط: أرواحها وتنجية.

(١٢٩١) سقط من أ، ف: والكمال.

(١٢٩٢) سقط من أ، د، ط، ف: في.

(١٢٩٣) صورة: الصورة [ك].

(١٢٩٤) سقط من أ: جهنم.

(١٢٩٥) سقط من ع: ونقلها من حال النقص... والفساد.

(١٢٩٦) سقط من أ، ف: الآن.

(١٢٩٧) صدفة: صدف [ع، ك، ل].

(١٢٩٨) لا: ولا [د] فلا [ط].

(١٢٩٩) سقط من د: ظاهره.

(١٣٠٠) من: في [د، ف].

قشورها^(١٢٧١) وأتبانها ويحصل لُبها^(١٢٧٢) ويستأنف بها^(١٢٧٣)
 حُكم^(١٢٧٤) آخر، وهكذا حُكم النفوس: بعد مفارقة
 الأجساد^(١٢٧٥) يُراد^(١٢٧٦) بها أمر^(١٢٧٧) آخر، كما ذكر الله
 سبحانه بقوله^(١٢٧٨) ﴿أَفَرَأَيْتُمْ مَا تُمْنُونَ، ءَأَنْتُمْ تَخْلُقُونَهُ أَمْ نَحْنُ
 الْخَالِقُونَ، نَحْنُ قَدَرْنَا بَيْنَكُمْ الْمَوْتَ وَمَا نَحْنُ بِمَسْبُوقِينَ، عَلَى أَنْ
 نُبَدِّلَ أَمْثَلَكُمْ^(١٢٧٩) وَنُنْشِئَكُمْ فِي مَا لَا تَعْلَمُونَ﴾ وهكذا
 أيضاً^(١٢٨٠) حُكم نفوس^(١٢٨١) الحيوانات بعد الذبح^(١٢٨٢)، فلا
 تُقدَّر^(١٢٨٣) يا أخي بأن غرض واضعي النواميس في
 تحليلها^(١٢٨٤) ذبح البهائم في الهياكل عند^(١٢٨٥) القرابين^(١٢٨٦)

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- (١٢٧١) ورمي قشورها: والرمي بقشورها [ك، ل].
 (١٢٧٢) ويحصل لُبها: وتخليص لبها [أ، ط] وتخليص حبها [ف].
 (١٢٧٣) بها: به [أ، د، ط، ف، ك].
 (١٢٧٤) حكم: أمر [ط].
 (١٢٧٥) الأجساد: الجسود [أ] الجسوم [ف] الأجسام [ك].
 (١٢٧٦) يُراد: ويُراد [ع].
 (١٢٧٧) أمر: أمراً [ل].
 (١٢٧٨) ذكر الله سبحانه بقوله: قال الله تعالى [أ، ف] ذكر الله تعالى [ك].
 (١٢٧٩) نحن قَدَرْنَا بينكم الموت... أمثالكم: الى قوله [د، ط].
 (١٢٨٠) سقط من ل: أيضاً.
 (١٢٨١) سقط من ف: نفوس. زيادة في أ، ف: جميع.
 (١٢٨٢) زيادة في د، ط، ف، ك، ل: يستأنف {د، ط، ك: بها} أمر {ل: أمراً}
 آخر.
 (١٢٨٣) تقدَّر: يقدَّر [أ].
 (١٢٨٤) تحليلها: تحليل [ك].
 (١٢٨٥) عند: وعند [ل].
 (١٢٨٦) زيادة في د، ط، ك، ل: إنما.

فعند ذلك^(١٢٥٥) هُدِمَتْ^(١٢٥٦) أجسادها إمّا بموت طبيعي أو عَرَضِي أو بِقُرْبَانٍ^(١٢٥٧) في سبيل الله تعالى، واستُخرجت تلك النفوس من^(١٢٥٨) الأجساد^(١٢٥٩) كما يُستخرج الدُّرُّ من الصَّدَفِ أو الجنين من الرَّحِمِ أو الحَبُّ من الأكمام أو^(١٢٦٠) الثمرة من القشرة^(١٢٦١)، واستُؤنِفَ بها^(١٢٦٢) أمرٌ^(١٢٦٣) آخرٌ كما يُستأنَفُ بالدرِّ أمرٌ آخرٌ^(١٢٦٤) إذا رُمِيَ^(١٢٦٥) بالصَّدَفِ^(١٢٦٦) وحُصِّل الدُّرُّ^(١٢٦٧)،

وهكذا^(١٢٦٨) حُكِمَ الثَّمَارِ والحَبِّ^(١٢٦٩) إذا أدرَكْتَ ونَضِجَتْ، [٢١٢] فليس إلّا الحَصَادُ والصَّرَامُ^(١٢٧٠) ورُمِيَ

-
- (١٢٥٥) زيادة في أ: إن.
 (١٢٥٦) هُدِمَتْ: تهدمت [د، ط].
 (١٢٥٧) زيادة في أ، ف: إلهي [ف: إلهي].
 (١٢٥٨) من: في [د].
 (١٢٥٩) الأجساد: الأجسام [أ، ف].
 (١٢٦٠) أو: و [ف، ل].
 (١٢٦١) القشرة: القشر [أ، ف، ك، ل].
 (١٢٦٢) واستُؤنِفَ بها: واستُؤنِفَتْ بها [ل] استُؤنِفَ لها [أ، ف].
 (١٢٦٣) أمر: أمرأ [ل].
 (١٢٦٤) بالدر أمر آخر: أمر آخر بالدر [أ] بالدر أمرأ آخر [ل] سقط من ك: كما يُستأنَفُ بالدر أمر آخر.
 (١٢٦٥) إذا رُمِيَ: إذا خلص ورُمِيَ [د، ط].
 (١٢٦٦) رُمِيَ بالصَّدَفِ: أخرج من الصَّدَفِ [أ، ف].
 (١٢٦٧) سقط من أ، د، ط، ف: وحصل الدر.
 (١٢٦٨) زيادة في ع: أيضاً.
 (١٢٦٩) الثمار والحَب: الحب والثمار [ل].
 (١٢٧٠) الحصاد والصَّرَام: الصرام والحصاد [ك] سقط من أ، ف: والصرام.

إصلاح^(١٢٤٠) الدين والدنيا^(١٢٤١). فأما غرضهم الأقصى فهو
نجاة النفوس من^(١٢٤٢) مَحَن الدنيا وشقاوة أهلها واتصالهم^(١٢٤٣)
إلى سعادة الآخرة ونعيم أهلها.

ونرجع^(١٢٤٤) إلى ما كُنّا فيه فنقول إنه إذا وصلت معاني
النعيمات والألحان إلى أفكار النفوس بطريق السمع وتصوّرت
فيها رسوم تلك^(١٢٤٥) المعاني التي كانت مستودعة في تلك
الألحان والنعيمات، استُغني^(١٢٤٦) عن وجودها في الهواء كما
استُغني^(١٢٤٧) عن المكتوب في الألواح إذا فهم وحُفظ ما كان
فيها مكتباً^(١٢٤٨) من المعاني، فهكذا يكون حكم النفوس^(١٢٤٩)
الجزئية إذا^(١٢٥٠) هي نمت وتمّت^(١٢٥١) وكملت وبلغت
إلى^(١٢٥٢) أقصى مدى غاياتها مع هذه^(١٢٥٣) الأجساد^(١٢٥٤)،

(١٢٤٠) إصلاح: صلاح [ع، ل].

(١٢٤١) زيادة في ط، ك: جميعاً.

(١٢٤٢) النفوس من: النفس في [ف].

(١٢٤٣) واتصالهم: واتصالها [أ، ف، ك] وإيصالها [د، ط، ل].

(١٢٤٤) ونرجع: فرجع [د، ط] ونعود [أ، ف] زيادة في د، ك، ل: الآن.

(١٢٤٥) سقط من أ، ف: تلك.

(١٢٤٦) زيادة في أ: بها. زيادة في ف: عنها؟

(١٢٤٧) استُغني: يستغنى [ط، ف، ك، ل].

(١٢٤٨) فيها مكتباً: فيها مكتوباً [ف، ل] مكتباً فيها [د، ط].

(١٢٤٩) النفوس: النفس [د].

(١٢٥٠) إذا: إذا ما [أ، د، ط، ف، ك].

(١٢٥١) نمت وتمّت: تمت ونمت [ف] نمت {أو: تمت} [ك] تمت [د، ط، ل].

(١٢٥٢) سقط من د، ط: إلى.

(١٢٥٣) سقط من د، ط: هذه.

(١٢٥٤) الأجساد: الأجسام [أ].

فيقعون في شكوك وحيرة^(١٢٢٤).

واعلم يا أخي أيّذك الله أنك إن لم تؤمن^(١٢٢٥)
الأنبياء^(١٢٢٦) بما خبروك عنه من نعيم الجنان^(١٢٢٧)، ولم تُصدّق
الحُكماء بما عرفوك^(١٢٢٨) من سرور عالم الأرواح^(١٢٢٩)،
ورضيت بما تُخيّل^(١٢٣٠) لك الأوهام الكاذبة والظنون الفاسدة،
بقيت متحيّراً^(١٢٣١) شاكاً ضالاً مُضِلاً.

واعلم يا أخي أيّذك الله أن غرض الأنبياء عليهم السلام في
وضعهم الشرائع^(١٢٣٢) وغرض الحُكماء في^(١٢٣٣) وضعهم
النواميس^(١٢٣٤) ليس هو إصلاح^(١٢٣٥) أمور الدنيا^(١٢٣٦)
حسب^(١٢٣٧)، بل غرضهم جميعاً^(١٢٣٨) في ذلك^(١٢٣٩)

(١٢٢٤) زيادة في ل: عند ذلك.

(١٢٢٥) تؤمن: [ت]حقق [أ].

(١٢٢٦) الأنبياء: للأنبياء [ك، ل] زيادة في د، ط: عليهم السلام.

(١٢٢٧) زيادة في ك، ل: ولذات أهلها.

(١٢٢٨) زيادة في ل: والذي أخبرت به الحكماء.

(١٢٢٩) زيادة في ل: وفضله وشرفه.

(١٢٣٠) بما تُخيّل: يخيّل [أ].

(١٢٣١) سقط من د، ط: متحيّراً.

(١٢٣٢) الشرائع: النواميس والشرائع [د، ط، ك، ل].

(١٢٣٣) في: من [أ].

(١٢٣٤) النواميس: السياسات [د، ط، ك، ل].

(١٢٣٥) هو إصلاح: هو لإصلاح [أ] لإصلاح [ف].

(١٢٣٦) الدنيا: الدين [د، ط].

(١٢٣٧) حسب: فحسب [د، ط، ك، ل].

(١٢٣٨) سقط من ل: جميعاً.

(١٢٣٩) سقط من د، ط، ك: ذلك.

ومثل^(١٢١٠) قول الآخر^(١٢١١):

ما جاءنا أحدٌ يُخبرُ أنّه
في جَنَّةٍ مُذ مات أو في نارٍ^(١٢١٢)

واعلم^(١٢١٣) أيُّها الأخ أيَّدك الله وإيانا بروح منه أن مثل
هذه الأبيات^(١٢١٤) إذا سمعها^(١٢١٥) أكثرُ الناس ظنُّوا وتوهَّموا
(٤٩ ب) أنه [٢١١] ليست لَذَّةٌ ولا نعيمٌ ولا سرورٌ^(١٢١٦) ولا
فرحٌ^(١٢١٧) غيرَ هذه المحسوسات التي يشاهدونها، وأن الذي
خَبَّرَتْ^(١٢١٨) به الأنبياءُ عليهم السلام من نعيم الجنان ولذَّات
أهلها^(١٢١٩)، والذي خَبَّرَتْ^(١٢٢٠) به الحُكماء من سرور عالم
الأرواح وفضله وشرفه كذبٌ وغرورٌ^(١٢٢١) لا^(١٢٢٢) حقيقة^(١٢٢٣)،

(١٢١٠) سقط من ك، ل: مثل.

(١٢١١) سقط من ع: خذوا بنصيب... قول الآخر. الآخر: القائل [ف، ك] (وفي
هامش ل).

(١٢١٢) ما جاءنا أحدٌ يخبرُ أنّه في جنةٍ مذ مات أو في نار: فما جاءنا خلقٌ يخبرُ
أنه أفي {د: في} جنةٍ من مات أو في جهنم [د، ط].

(١٢١٣) واعلم: فصل واعلم [ف].

(١٢١٤) مثل هذه الأبيات: هذا البيت وأمثاله [أ، ف].

(١٢١٥) سمعها: استعملها [ع].

(١٢١٦) سقط من ف: ولا سرور.

(١٢١٧) ولا سرور ولا فرح: ولا فرح ولا سرور [د، ك].

(١٢١٨) خَبَّرَتْ: أَخْبَرَتْ [ل].

(١٢١٩) زيادة في ك، ل: باطل.

(١٢٢٠) خَبَّرَتْ: أَخْبَرَتْ [ك، ل].

(١٢٢١) غرور: زور [ل] سقط من د، ط: كذب وغرور.

(١٢٢٢) لا: ليست له [د، ط، ل].

(١٢٢٣) غرور لا حقيقة: زور وخديعة ولا حقيقة له [أ] زور وخديعة لا حقيقة له
[ف] زور ليست له حقيقة [ك].

الحُكَمَاءُ يُلْحَنُونَ^(١١٩٦) مع نغمات الموسيقى في الهياكل وبيوت العبادات.

فقد تَبَيَّنَ^(١١٩٧) بما ذكرنا طرفُ^(١١٩٨) من غرض الحُكَمَاءِ في استعمالهم الموسيقي واستخراجهم^(١١٩٩) أصولَ^(١٢٠٠) ألحانه وتركيب^(١٢٠١) نغماته.

وأما عِلَّةُ تحريم الموسيقى^(١٢٠٢) في بعض شرائع^(١٢٠٣) الأنبياء عليهم السلام، فهو من أجل استعمال الناس لها على غير^(١٢٠٤) السبيل التي استعملتها الحُكَمَاءُ، بل على سبيل اللهو واللَّعِبِ والترغيب^(١٢٠٥) في شهوات لذات الدُّنْيَا^(١٢٠٦) والغرور^(١٢٠٧) بأمانيتها، والأبيات التي تُنشد مشاكلة لها^(١٢٠٨) مثل قول القائل:

خُذُوا بِنَصِيْبٍ مِنْ نَعِيْمٍ وَلَذَّةٍ
فَكُلُّوا وَإِنْ طَالَ الْمَدَى يَتَصَرَّمُ^(١٢٠٩)

-
- (١١٩٦) يلحنون: يلحن [أ، ف، ك] تلحن [ط] [تلحن [د، ل].
(١١٩٧) زيادة في د، ط، ك: إذن [وفي ل، من فوق].
(١١٩٨) طرف: طرفاً [د، ع، ف، ك، ل].
(١١٩٩) استخراجهم: استخراجاتهم [ك].
(١٢٠٠) أصول: كان لأصول [أ، د، ط]، لأصول [ف].
(١٢٠١) زيادة في أ، ف: حركاته وتأليف. زيادة في د، ط: تأليف.
(١٢٠٢) تحريم الموسيقى: تحريمها [د، ط].
(١٢٠٣) بعض شرائع: شرائع بعض [د، ط].
(١٢٠٤) زيادة في أ، ف: هذا.
(١٢٠٥) الترغيب: التردّي [ع].
(١٢٠٦) في شهوات لذات الدنيا: في الدنيا وشهواتها ولذاتها [أ، ف].
(١٢٠٧) الغرور: غورها [ك، ل].
(١٢٠٨) مشاكلة لها: شاكلة لهذا [ف] زيادة في أ، ف: المعنى.
(١٢٠٩) يتصرم: ينصرم [د].

قال لكم الحق^(١١٨٤) ﴿أَلَسْتُ بِرَبِّكُمْ﴾ قُلْتُمْ^(١١٨٥) ﴿بَلَىٰ شَهِدْنَا أَن تَقُولُوا يَوْمَ الْقِيَمَةِ إِنَّا كُنَّا عَنْ هَذَا غَافِلِينَ أَوْ يَقُولُوا إِنَّمَا أَشْرَكَ آبَاؤُنَا بِالْجِسْمَانِيِّينَ مِنْ قَبْلُ وَكُنَّا ذُرِّيَّةً مِنْ بَعْدِهِمْ﴾^(١١٨٦) جِرْمَانِيِّينَ فِي دَارِ الْغُرُورِ وَضَنُكَ الْقُبُورِ، اذْكُرُوا عَالَمَكُمْ الرُّوحَانِيَّ^(١١٨٧) وَدَارَكُمْ الْحَيَوَانِيَّ^(١١٨٨) وَمَحَلَّكُمْ النُّورَانِيَّ، وَتَشَوَّقُوا إِلَى آبَائِكُمْ وَأُمَّهَاتِكُمْ وَإِخْوَانِكُمْ^(١١٨٩) الرُّوحَانِيِّينَ الَّذِينَ هُمْ فِي أَعْلَى عِلِّيِّينَ، الَّذِينَ هُمْ مِنْ أَوْسَاخِ الْأَجْرَامِ بَرِئُونَ^(١١٩٠) وَمِنْ^(١١٩١) مُلَامَسَةِ الْأَجْسَامِ الطَّبِيعِيَّةِ مُتَنَزِّهُونَ^(١١٩٢). بَادِرُوا وَتَزَوَّدُوا وَارْحَلُوا مِنْ دَارِ الْفَنَاءِ إِلَى دَارِ الْبَقَاءِ^(١١٩٣)، قَبْلَ أَنْ يَبَادَرَ^(١١٩٤) بِكُمْ هُنَاكَ مُكْرَهِينَ مُجْبِرِينَ^(١١٩٥) غَيْرَ مُسْتَعْدِّينَ نَادِمِينَ خَاسِرِينَ.

ففي مثل هذه الأوصاف وما شاكل هذه المعاني كانت

(١١٨٤) الحق: الخلاق [أ].

(١١٨٥) قُلْتُمْ: فقلتم [أ، ك] قالوا [د، ط].

(١١٨٦) سقط من ع: من بعدهم. سقط من ف: من.

(١١٨٧) الروحاني: الروحانيين [ع].

(١١٨٨) الحيواني: الحيوانية [د، ط، ف، ك] سقط من ع: الحيواني.

(١١٨٩) وإخوانكم: وأخوانكم وإخوانكم [أ، ف] وأخوانكم [ك].

(١١٩٠) بريئون: برئون مقدسون [ف] مبرون [ك] مبرئون [ل] سقط من د، ط: بريئون.

(١١٩١) ومن: عن [ك].

(١١٩٢) الأجسام الطبيعية متنزهون: الطبيعة منزّهون [أ، ف] الأجسام الطبيعية منزّهون [ك].

(١١٩٣) سقط من ف: إلى دار البقاء.

(١١٩٤) يبادر: تبادر [ل].

(١١٩٥) مجبرين: مجبورين [د، ك، ل].

اللاهية في^(١١٦٦) رَقْدَة^(١١٦٧) الجهالة، لتشويقها^(١١٦٨) إلى عالمها
الروحاني^(١١٦٩) ومحلّها النوراني^(١١٧٠) ودارها^(١١٧١)
الحيواني^(١١٧٢)، ولإخراجها من عالم الكون والفساد^(١١٧٣)
[٢١٠] ولتخليصها^(١١٧٤) من غَرْقٍ بحر الهَيُولَى ونجاتها من أسر
الطبيعة، فهذه^(١١٧٥) معانيها^(١١٧٦):

يا أَيَّتْها النفسُ الغائصة^(١١٧٧) في قَعَرِ الأجسام^(١١٧٨)
المُدْلَهَمَّة، ويا أَيَّتْها^(١١٧٩) الأرواحُ الغريقة في ظُلمات الأجرام
ذات الثلاثة الأبعاد^(١١٨٠)، الساهية عن ذكر المَعاد^(١١٨١)،
المنحرفة عن سبيل^(١١٨٢) الرشاد، اذكروا^(١١٨٣) عهدَ الميثاق إذ

-
- (١١٦٦) في: من [د، ل].
(١١٦٧) رَقْدَة: سكر [أ، ف].
(١١٦٨) لتشويقها: وتشويقاً [أ، ف] تشويقاً [ل].
(١١٦٩) الروحاني: النوراني [أ].
(١١٧٠) النوراني: الروحاني [أ].
(١١٧١) ودارها: في دارها [ل].
(١١٧٢) الحيواني: الحيوانية [د] الحيوانة [ط: من فوق].
(١١٧٣) سقط من ف: والفساد.
(١١٧٤) تخليصها: تخريجها وتخليصها [أ] لتخليصها [ف] لتخليصها [د] وتخليصها [ل].
(١١٧٥) فهذه: فهي [ع] فهي ما هذه [ك] فهي ما هذا [د، ط] فهي التي [ل].
(١١٧٦) معانيها: معناه [د، ط] زيادة في أ: بالعربية. زيادة في ف: بالعربية نيوه
؟. زيادة في ل: مثل هذه.
(١١٧٧) النفس الغائصة: النفوس الفائضة [ف] النفوس الغائصة [د، ط].
(١١٧٨) الأجسام: الأجساد [ل، و] من فوق الدال: [م].
(١١٧٩) سقط من د، ط: يا أَيَّتْها.
(١١٨٠) الثلاثة الأبعاد: الأبعاد الثلاثة [ل].
(١١٨١) المَعاد: الميعاد [ع].
(١١٨٢) سبيل: سبل [ع] طريق [ف].
(١١٨٣) اذكروا: اذكري [ط] اذكرن [د].

وقول الآخر^(١١٤٨) بالفارسية:

بيا^(١١٤٩) تا دل وجانرا^(١١٥٠) بخداوند^(١١٥١) سپاريم
اندوه^(١١٥٢) درم^(١١٥٣) وغم^(١١٥٤) دينار نداريم
جانرا زبي^(١١٥٥) دين وهدارا^(١١٥٦) بفروشم
واين^(١١٥٧) عمر فنارا بره^(١١٥٨) غزو گذاريم^(١١٥٩)
فأما^(١١٦٠) الأشعارُ والأبياتُ^(١١٦١) التي كان الحكماء
الإلهيون^(١١٦٢) يُلحّنونها عند استعمالهم الموسيقي في
الهياكل وبيوت العبادات، لترقيق^(١١٦٣) القلوب القاسية
وتنبية^(١١٦٤) النفوس الساهية من نوم^(١١٦٥) الغفلة والأرواح

-
- (١١٤٨) قول الآخر: هي هذه الأبيات [أ، ف]. سقط من ك: الآخر.
(١١٤٩) بيا: بتا؟ [ط] هان [ع].
(١١٥٠) بيا تا دل وجانرا: بيا تا دل وجارا [ل] أي دوست جوماجان [ك] أي
دوست ماجان [د].
(١١٥١) بخداوند: بخداوندا [ل].
(١١٥٢) اندوه: وا[ن]لدوه [ف] ابذوه [ل].
(١١٥٣) درم: درم [ع].
(١١٥٤) وغم: يا عم [د، ك] با عم [ط].
(١١٥٥) جانرا زبي: جان از بي [أ] جهان از بي [ف] جان را زير [د، ط].
(١١٥٦) وهدارا: وهدى [أ، ف] هدى را [د، ط].
(١١٥٧) واين: وين [أ، ف، ك، ل].
(١١٥٨) بره: برهي [ف].
(١١٥٩) غزو گذاريم: عزم كه داريم [أ] عرف كذاريم [ف] غزو كذاريم [ل].
(١١٦٠) فأما: وأما [ع، ل].
(١١٦١) الأشعار والأبيات: الأبيات والأشعار [ط] الأشعار والألحان [ف] سقط
من د، ك: والأبيات.
(١١٦٢) سقط من ف: الإلهيون.
(١١٦٣) لترقيق: ل[ا]ت[ر]قق [ل] ليرقق [أ].
(١١٦٤) تنبيه: تنبه [ل].
(١١٦٥) نوم: نومة [ك].

الجِنَان تُشَوِّق^(١١٣٤) النفوسَ إلى هناك وتُشَجِّع^(١١٣٥) على^(١١٣٦)
الإقدام والحَمَلَة^(١١٣٧) أيضاً^(١١٣٨) بالعربية والفارسية نحو قول
الشاعر:

أَبَتْ لِي عِفَّتِي وَأَبَى بَلَائِي^(١١٣٩)
وَأَخْذِي^(١١٤٠) الْحَمْدَ بِالثَّمَنِ الرَّبِّيحِ
وإقدامي على المكروه نفسي
وَضَرَبِي^(١١٤١) هَامَةً الْبَطْلَ الْمُشِيحَ^(١١٤٢)
وَقَوْلِي كُلَّمَا جَشَأْتُ وَجَاشَتْ^(١١٤٣)
مَكَانَكَ^(١١٤٤) تُحَمِّدِي أَوْ تَسْتَرِيحِي^(١١٤٥)
لَأُذْفَعَ^(١١٤٦) عَنْ مَآثِرِ^(١١٤٧) صَالِحَاتٍ
وَأَحْمِي بَعْدُ عَنْ عَرُضٍ صَحِيحٍ

-
- (١١٣٤) تشوّق: مما يشوّق [أ، ط، ف، ك، ل].
(١١٣٥) وتشجّع: و[يشجّعها] [أ، ف] و[يشجّع] [ط، ك] ويشجّع [ل].
(١١٣٦) على: إلى [ع].
(١١٣٧) الحملة: الحملات [ل].
(١١٣٨) سقط من أ، ف: والحملة أيضاً. سقط من د، ط، ك، ل: أيضاً. سقطت
الآيات العربية من أ، ع، ف.
(١١٣٩) أبَتْ لي عفتي وأبى بلائي: أنت لي عفتي وأي بلالي [ك، ل] أنت لي عفتي
وَأَنْلِي بِلَاي [ط].
(١١٤٠) اخذي: أحدي [د، ك] أجدي [ل].
(١١٤١) ضربي: صبري [ك، ل] حري [د].
(١١٤٢) المشيح: المسيح [ط، ك، ل].
(١١٤٣) جاشت: جاست [ط، ك] حاست [د].
(١١٤٤) مكانك: مرو[يلكرك]؟؟ [ط].
(١١٤٥) تستريحي: تستريح [د، ك، ل].
(١١٤٦) لأذفع: يا دفع [ك] [يلدفع] [د] بادفع [ل].
(١١٤٧) مآثر: مآثر [ط].

مِثْلُ^(١١٢٠) قوله تعالى ﴿إِنَّ اللَّهَ اشْتَرَى مِنَ الْمُؤْمِنِينَ أَنْفُسَهُمْ وَأَمْوَالَهُمْ بِآتٍ لَهُمُ الْجَنَّةُ^(١١٢١) يَقْتُلُونَ فِي سَبِيلِ اللَّهِ فَيَقْتُلُونَ وَيُقْتَلُونَ وَعَدًا عَلَيْهِ^(١١٢٢) حَقًّا فِي التَّوْرَةِ وَالْإِنْجِيلِ وَالْفُرْآنِ وَمَنْ أَوْفَى بِعَهْدِهِ مِنَ اللَّهِ فَاسْتَبْشِرُوا بِبَيْعِكُمُ الَّذِي بَايَعْتُمْ بِهِ^(١١٢٣) وَذَٰلِكَ هُوَ الْفَوْزُ الْعَظِيمُ^(١١٢٤)﴾ وأخوات لها آخر من الآيات في^(١١٢٥) القرآن كثيرة^(١١٢٦)، ويُنشد^(١١٢٧) أيضاً^(١١٢٨) غزاة المسلمين^(١١٢٩) عند (٤٩ أ) اللقاء والحملات^(١١٣٠) في الحروب أبياتاً^(١١٣١) في صفة^(١١٣٢) الحُور العِين^(١١٣٣) ونعيم

ونعيم [ك] [ل] لترك القلوب وتشوق النفوس فيها إلى نعيم [ل] لترك القلوب وتتوق النفوس لما فيها إلى عالم الأرواح ونعيم [د].

(١١٢٠) سقط من ع: يشوق فيها... مثل.

(١١٢١) زيادة في ك: الآية.

(١١٢٢) عليه: عليهم [ل].

(١١٢٣) سقط من ك: يقاتلون في سبيل الله... الذي بايعتم به.

(١١٢٤) يقاتلون في سبيل الله... الفوز العظيم: الآية [د] سقط من أ، ف، ك، ل: وذلك هو الفوز العظيم.

(١١٢٥) لها آخر من الآيات في: لمثل هذه الآية من [أ، ف] اخواما من الآيات في [ك] لها آخر من آيات [ل] من هذه من آيات [د].

(١١٢٦) سقط من د، ط، ك: كثيرة.

(١١٢٧) ويُنشد: ويُشدون [أ، ف] وكما ينشدون [د، ك، ل].

(١١٢٨) سقط من د، ك: أيضاً.

(١١٢٩) سقط من د: غزاة المسلمين.

(١١٣٠) والحملات: أيضاً أو الحملة [د، ط] وأيضاً الحملة [ل].

(١١٣١) الحروب أبياتاً: في الهيجاء ما قيل من الشعر [د، ط] في الهيجاء أبيات أنشدت [ل].

(١١٣٢) والحملات في الحروب أبياتاً في صفة: والحملة في هيجاء أبيات أنشدت في صفة [ع] أيضاً أو الحملة في الهيجاء ما قيل من الشعر في وصف [ك].

(١١٣٣) العِين: والعين [ع].

الموسيقية^(١١٠٣) ونغم^(١١٠٤) الأوتار في الهياكل وبيوت العبادات
عند القرايين في^(١١٠٥) سَنَن النّواميس الإلاهية وخاصّة^(١١٠٦)
الألحان الحزينة^(١١٠٧) المُرَقَّقة للقلوب القاسية المذكّرة^(١١٠٨)
للنفوس الساهية والأرواح الإلاهية^(١١٠٩) الغافلة عن سرور عالمها
الروحانيّ ومحلّها النورانيّ ودارها الحيوانية، وكانوا^(١١١٠)
يلحّنون مع نقرات تلك^(١١١١) الأوتار كلماتٍ وأبياتاً^(١١١٢)
موزونةً [٢٠٩] قد أُلفت في هذا المعنى ووُصفَ فيها^(١١١٣) نعيمُ
عالم الأرواح ولذات أهله وسرورهم^(١١١٤)، كما يقرأ^(١١١٥)
غُزاة^(١١١٦) المسلمين عند النفير^(١١١٧) آياتٍ من^(١١١٨) القرآن
أُنزلت في هذا المعنى يشوّق فيها إلى نعيم^(١١١٩) الجنان،

(١١٠٣) الألحان الموسيقية: ألحان الموسيقى [د، ل].

(١١٠٤) نغم: نغمات [ك].

(١١٠٥) زيادة في ل: السنن أعني.

(١١٠٦) وخاصة: وبخاصة [أ، ف] وخاصة في [د، ط] بخاصة [ل].

(١١٠٧) الحزينة: المحزنة [د، ك، ل].

(١١٠٨) المذكّرة: المذكورة [ف].

(١١٠٩) الإلاهية: الإلاهية [ف] الداهية [د].

(١١١٠) الحيوانية، وكانوا: الحيواني فكانوا [ف].

(١١١١) سقط من أ، ف: تلك.

(١١١٢) أبياتاً: أبيات [أ، ف، ك، ل].

(١١١٣) وُصفَ فيها: وصف ما فيها من [ف].

(١١١٤) سقط من أ: وسرورهم.

(١١١٥) يقرأ: نقرأ [ل].

(١١١٦) غُزاة: غزات [ع].

(١١١٧) سقط من ك: عند النفير.

(١١١٨) من: في [ل].

(١١١٩) يشوّق فيها إلى نعيم: ليسرق القلوب ويشوق النفوس إلى عالم الأرواح

والْعُلَمَاء^(١٠٨٧) اشتياق^(١٠٨٨) إلى أحوال^(١٠٨٩) الملائكة
والتشبه^(١٠٩٠) بهم، كما ذُكر في حَدِّ الفلسفة أنها التشبه
بالإله^(١٠٩١) بحسبِ الطاقة^(١٠٩٢) الإنسانية^(١٠٩٣)،

ويُقال إن فيثاغورس الحكيم سَمِعَ بصفاء جَوْهر نفسه
وذكاء^(١٠٩٤) قلبه نغمات حركات الأفلاك والكواكب
فاستخرج^(١٠٩٥) بِجَوْدَةِ فكره^(١٠٩٦) أصولَ الموسيقى ونغماتِ
الألحان، وهو أوَّل من تكَلَّمَ في هذا العِلْم وخَبَّر^(١٠٩٧) عن هذا
السِّر من الحُكَماء، ثم بَعْدَهُ^(١٠٩٨) نيقوماخس وبطلميوس^(١٠٩٩)
وإقليدس^(١١٠٠) وغيرهم من الحكماء.

وهذا كان غرضاً^(١١٠١) من^(١١٠٢) استعمالهم الألحان

(١٠٨٧) والعلماء: الملوك [ل] سقط من أ، ع، ك: والعلماء. سقط من د: اشتياق
إلى العقلاء والعلماء، وفي طباع العقلاء والعلماء.

(١٠٨٨) اشتياق: اشتياقاً [أ، ف].

(١٠٨٩) سقط من ف: أحوال.

(١٠٩٠) التشبه: تشبهاً [أ، ف] تشبه [ع].

(١٠٩١) التشبه بالإله: لتشبه بالإله تعالى [أ] التشبه بالإله تعالى [ف].

(١٠٩٢) بحسب الطاقة: بحسب طاقة [أ، ط، ل] حسب طاقة [ف].

(١٠٩٣) الإنسانية: الإنسية [ك].

(١٠٩٤) ذكاء: زكا [د].

(١٠٩٥) فاستخرج: واستخرج [ل].

(١٠٩٦) فكره: فطرته [ك].

(١٠٩٧) خَبَّر: أَخْبِر [أ، د، ط، ك، ل].

(١٠٩٨) بَعْدَهُ: من بَعْدَهُ [ل].

(١٠٩٩) بطلميوس: بطليموس [د، ل].

(١١٠٠) زيادة في د: وارشميدس.

(١١٠١) غرضاً: غرض الحكماء [د، ل].

(١١٠٢) غرضاً من: غرض الحكماء في [أ، ف] غرض الحكماء من [ط، ك].

في رسالة الهَيُولَى ورسالة المبادئ العقلية^(١٠٧٢)، فلمّا^(١٠٧٣) وُجِدَ في عالم الكون حركاتٌ منتظمةٌ لها نغمات متناسبة، دلت^(١٠٧٤) على أن في عالم الأفلاك لتلك الحركات المنتظمة المتّصلة^(١٠٧٥) نغماتٌ متناسبة^(١٠٧٦) مُفرّحة لنفوسها ومشوّقة لها^(١٠٧٧) إلى ما فوقها^(١٠٧٨)، كما يوجد في طباع الصّبيان اشتياقٌ^(١٠٧٩) إلى أحوال الآباء والأمّهات، وفي طباع التلامذة والمتعلّمين اشتياقٌ إلى أحوال^(١٠٨٠) الأساتيد^(١٠٨١)، وفي طباع العامّة^(١٠٨٢) اشتياقٌ^(١٠٨٣) إلى أحوال الملوك^(١٠٨٤)، وفي طباع الملوك اشتياقٌ^(١٠٨٥) إلى العقلاء والعلماء^(١٠٨٦)، وفي طباع العقلاء

-
- (١٠٧٢) رسالة الهَيُولَى ورسالة المبادئ العقلية: رسالة المبادئ العقلية وفي رسالة الهَيُولَى [أ]، ف.].
- (١٠٧٣) فلمّا: فلو [ع].
- (١٠٧٤) دلت: دل [ل].
- (١٠٧٥) سقط من ل: المتّصلة.
- (١٠٧٦) سقط من ف: دلت على أن... نغمات متناسبة.
- (١٠٧٧) سقط من ل: لها.
- (١٠٧٨) سقط من ك: إلى ما فوقها.
- (١٠٧٩) اشتياق: اشتياقاً [أ]، ف.].
- (١٠٨٠) أحوال: حال [ك]. سقط من ع: أحوال.
- (١٠٨١) الأساتيد: الأساتذين [د، ف، ل].
- (١٠٨٢) زيادة في د، ك، ط [من فوق]: العقلاء.
- (١٠٨٣) اشتياق: اشتياقاً [ف].
- (١٠٨٤) اشتياق إلى أحوال الملوك: اشتياق إلى الملوك [ع] اشتياقاً إلى أحوال العقلاء والعلماء [أ] زيادة في ل: وأشباههم.
- (١٠٨٥) اشتياق: اشتياقاً [ف].
- (١٠٨٦) سقط من أ، ع، ك، ل: وفي طباع الملوك اشتياق إلى العقلاء والعلماء.

واحدة، والأخرى [٢٠٨] قولهم إن^(١٠٥٨) الأشخاص العالية^(١٠٥٩) عِلَلٌ وأوائل^(١٠٦٠) لهذه^(١٠٦١) الأشخاص التي في عالم الكون والفساد^(١٠٦٢)، وإن حركاتها عِلَّةٌ لحركات هذه، وحركات هذه تحاكي^(١٠٦٣) (٤٨ ب) حركاتها، فوجب أن تكون نغماتُ هذه تحاكي نغماتها.

والمثال في ذلك حركاتُ الصَّبيان في لعبهم، فإنهم يحاكون^(١٠٦٤) أفعالَ الآباء والأُمّهات، وهكذا التلامذة والمتعلِّمون يحاكون في أفعالهم وصنائعهم أفعالَ الأساتيد^(١٠٦٥) والمُعَلِّمين^(١٠٦٦) وأحوالهم^(١٠٦٧). وإن أكثرَ العقلاء^(١٠٦٨) يعلمون أن الأشخاصَ الفلكية وحركاتها المنتظمة متقدِّمة^(١٠٦٩) الوجود على الحيوانات التي تحت فلك القمر وحركاتها^(١٠٧٠)، وعالم النفوس متقدِّم الوجود على عالم الأجساد^(١٠٧١)، كما بيَّنا

(١٠٥٨) إن: في [ف].

(١٠٥٩) العالية: الفلكية [د، ك، ل].

(١٠٦٠) وأوائل: أوائل [د، ط، ك، ل] وأوایل [ف].

(١٠٦١) لهذه: هذه [د].

(١٠٦٢) سقط من د، ط، ع: والفساد.

(١٠٦٣) سقط من ف: وحركات هذه.

(١٠٦٤) زيادة في د: بها.

(١٠٦٥) الأساتيد: الأستاذين [أ، د، ف، ك، ل].

(١٠٦٦) المعلمين: المتعلمين [د].

(١٠٦٧) والمعلمين وأحوالهم: والمتعلمين وأفعالهم [أ].

(١٠٦٨) العقلاء: العلماء لا [أ] العلماء [ل، ومن فوق: العقلاء].

(١٠٦٩) متقدمة: مقدمة [د].

(١٠٧٠) زيادة في أ، د، ط، ف، ل: علة لحركات هذه.

(١٠٧١) الأجساد: الأجسام [ط، ف، ك].

التي^(١٠٤٣) جَوَاهِرُهَا أَشْرَفُ مِنْ جَوَاهِرِ^(١٠٤٤) عالم الأفلاك، وهو عالم النفوس ودار الحيوان التي نعيمُها^(١٠٤٥) كُلُّه^(١٠٤٦) «رَوْحٌ وَرِيحَانٌ فِي^(١٠٤٧) دَرَجَاتِ الْجَنَانِ»^(١٠٤٨) كما ذكر الله تعالى في القرآن، والدليل على صِحَّةِ مَا قُلْنَا والْبُرْهَانُ^(١٠٤٩) على حقيقة ما وصفنا أن^(١٠٥٠) نغمات حركات الموسيقى تذكّر^(١٠٥١) النفوس الجزئية التي في عالم الكون والفساد سُورَ عالمِ الأفلاك كما تُذكّر نغمات حركات^(١٠٥٢) الأفلاك والكواكب النفوس^(١٠٥٣) التي^(١٠٥٤) هناك سُورَ عالم الأرواح وهي النتيجة التي أُنتجت من المقدمات المقرون^(١٠٥٥) بها عند الحكماء، وهو قولهم بأن الموجودات المعلولات الثواني تُحاكي^(١٠٥٦) أحوالها أحوال الموجودات الأولى^(١٠٥٧) التي هي عِلَلٌ لها، فهذه مقدّمة

(١٠٤٣) سقط من ف: فوق الفلك التي.

(١٠٤٤) زيادة في ف: الأرواح.

(١٠٤٥) نعيمها: بعضها ؟ [ف].

(١٠٤٦) كله: كلها [ع].

(١٠٤٧) سقط من ع: في.

(١٠٤٨) سقط من أ، ف: في درجات الجنان.

(١٠٤٩) والبرهان: والبراهين [أ].

(١٠٥٠) أن: بأن [أ، ع، ف، ل].

(١٠٥١) تذكّر: تذكّر [أ، ف].

(١٠٥٢) نغمات حركات: حركات نغمات [أ].

(١٠٥٣) النفوس: للنفوس [د، ف] والنفوس [ل].

(١٠٥٤) زيادة في د، ع، ك: هي.

(١٠٥٥) المقرون: المقرّر [أ، ف] المقرّر [ط، ك].

(١٠٥٦) تحاكي: يحاكي [أ، ع].

(١٠٥٧) الأولى: الأول [أ، ف، ل].

عن^(١٠٢٩) الحرّ المُفْرِط والبرد المُفْرِط^(١٠٣٠) المهلكين لجثته،
فأمّا أهل السموات وسكّان الأفلاك فقد كُفّوا^(١٠٣١) هذه الأشياء
وهم غير محتاجين إلى أكل الطعام وشرب^(١٠٣٢) الشراب، بل
غذاؤهم التسبيحُ وشرابُهم التهليل وفاكهَتهم الفكرة^(١٠٣٣)
والروية^(١٠٣٤) والعِلْمُ والمعرفة^(١٠٣٥) والشعور^(١٠٣٦)
والإحساس^(١٠٣٧) واللذة والفرح والسرور والراحة.

فقد تبَيَّن إذا^(١٠٣٨) بما ذكرنا بأن لحركات الأفلاك
والكواكب^(١٠٣٩) نغماتٍ وألحاناً^(١٠٤٠) طيبةً لذيدة مفرّحة لنفوس
أهلها وأن تلك النغمات والألحان تُذَكِّر^(١٠٤١) النفوسَ
البسيطة^(١٠٤٢) التي هناك سُروَرَ عالم الأرواح الذي فوق الفلك

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- (١٠٢٩) جثته عن: جثته من [ل] جسمه من [أ، ف].
(١٠٣٠) الحرّ المفْرِط والبرد المفْرِط: الحار والبرد المفْرِط [ف] الحر والبرد
المفْرِطين [د، ط، ك] زيادة في أ، ف: الشديد.
(١٠٣١) كُفّوا: كفّوا [أ].
(١٠٣٢) سقط من ك، ل: شرب.
(١٠٣٣) الفكرة: الفكر [أ، د، ف، ك].
(١٠٣٤) الروية: الرؤية ؟ [ف] الرؤية [ل].
(١٠٣٥) والعلم والمعرفة: والمعرفة والعلم [أ، ف].
(١٠٣٦) المعرفة والشعور: الشعور والمعرفة [ك].
(١٠٣٧) زيادة في د: غايتهم.
(١٠٣٨) سقط من أ، د، ف: إذا.
(١٠٣٩) الأفلاك والكواكب: الفلكيات [د].
(١٠٤٠) ألحاناً: ألحان [أ].
(١٠٤١) زيادة في د: تلك.
(١٠٤٢) النفوس البسيطة: تلك النفوس البسيطة [أ، ط، ف] النفوس النشيطة [ع].

السموات وسكّان الأفلاك هم ملائكة الله^(١٠١٣) وخالصة^(١٠١٤)
عباده يسمعون ويُبصرون ويعقلون ويعلمون ويقرءون^(١٠١٥)
و﴿يُسَبِّحُونَ﴾^(١٠١٦) اللَّيْلَ وَالنَّهَارَ لَا يَفْتُرُونَ﴿﴾^(١٠١٧)، وتسبيحهم
ألحان^(١٠١٨) أطيّب من قراءة داود الزبور^(١٠١٩) في المحراب وألذّ
نغمات^(١٠٢٠) من نغمات أوتار^(١٠٢١) العيدان^(١٠٢٢) الفصيحة في
الإيوانات العالية.

فإن قال قائل بأنه^(١٠٢٣) ينبغي أن يكون لهم^(١٠٢٤) أيضاً شَمٌّ
وذوقٌ ولمسٌ، فليَعْلَم هذا القائل بأن الشمّ والذوق
واللمس^(١٠٢٥) إنما جُعِل^(١٠٢٦) للحيوان الآكل الطعام الشارب
الشراب^(١٠٢٧) ليميّز بها النافع من الضار^(١٠٢٨) ويحرز جُثته

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- (١٠١٣) زيادة في أ، د، ف: تعالى.
(١٠١٤) خالصة: خالص [أ، د، ط، ك، ل] خالصة [ف].
(١٠١٥) ويعلمون ويقرءون: ويقرءون ويعلمون [أ، ف].
(١٠١٦) يقرءون ويسبّحون: يقولون يسبّحون [د].
(١٠١٧) لا: ولا [ل].
(١٠١٨) وتسبيحهم ألحان: وأن لتسبيحهم ألحاناً [أ، ف].
(١٠١٩) الزبور: عليه السلام للزبور [ل].
(١٠٢٠) ألذّ نغمات: نغمات ألذّ [ل].
(١٠٢١) أوتار: الأوتار [أ، ف] سقط من ك: أوتار.
(١٠٢٢) سقط من أ، ف: العيدان.
(١٠٢٣) بأنه: فإنه [أ] فإنهم [ك] إنه [د].
(١٠٢٤) بأنه ينبغي أن يكون لهم: ينبغي لهم [ف].
(١٠٢٥) اللمس: المس [ف].
(١٠٢٦) جعل: جعل الحيوان الآكل والشرب وجعل [ل].
(١٠٢٧) الطعام الشارب الشراب: للطعام والشراب [ع] للطعام الشارب للشراب
[ف، ك] للطعام والشارب للشراب [د] للطعام والشرب للشراب [ل].
(١٠٢٨) النافع من الضار: المنافع من المضار: [ع].

من الياقوت^(١٠٠٠) وأصفى من الهواء وأشفت من البلور وأصقل من وجه المرأة، وأنها يُماس^(١٠٠١) بعضها بعضاً ويصطك ويحتك ويطن كما يطن الحديد والنحاس، وتكون^(١٠٠٢) نغماتها متناسبات^(١٠٠٣) مؤتلفات (٤٨ أ) وألحانها موزونات كما بينا مثالها^(١٠٠٤) في نغمات أوتار^(١٠٠٥) العيدان ومُناسباتها.

فصل [٩]

واعلم يا أخي أيّدك الله وإيانا بروح منه بأنه إن لم تكن^(١٠٠٦) لحركات أشخاص الأفلاك^(١٠٠٧) أصوات ولا^(١٠٠٨) نغمات لم تكن لأهلها فائدة في^(١٠٠٩) القوّة السامعة الموجودة فيهم، وإن لم يكن لهم سمع فهم إذن ﴿صُمُّ بَكْمٌ عُمِيٌّ﴾، وهذه حال الجمادات [٢٠٧] الجامدات^(١٠١٠) الناقصات الوجود، وقد^(١٠١١) قام الدليل وصحّ البرهان بطريق المنطق الفلسفي بأن^(١٠١٢) أهل

(١٠٠٠) سقط من ع: من الياقوت.

(١٠٠١) يُماس: تماس [ط، ف] ماس [د].

(١٠٠٢) وتكون: والبلور يكون [ل].

(١٠٠٣) متناسبات: مناسبات [أ].

(١٠٠٤) أمثالها: أمثالها [د].

(١٠٠٥) نغمات أوتار: أوزان [ف].

(١٠٠٦) إن لم تكن: إن لم يكن [ل] لو لم يكن [ط، ك] لو لم [ي] لكن [د].

(١٠٠٧) الأفلاك: الفلك [ف، ل].

(١٠٠٨) سقط من ل: لا.

(١٠٠٩) في: من [د، ك].

(١٠١٠) سقط من أ، ف، ل: الجامدات.

(١٠١١) وقد: فإذا قد [ل].

(١٠١٢) بأن: أن [أ، ك] إذ [ف].

يكون لأجسامه^(٩٨٥) أصوات ونغمات^(٩٨٦)، فليَعْلَم هذا القائل بأن الفلك، وإن كانت^(٩٨٧) طبيعة خامسة فليس بمخالف لهذه الأجسام في كل الصفات، وذلك أن منها ما هو مضيء كالنار^(٩٨٨) وهي الكواكب، ومنها ما هو مُشَفَّ كالبلّور وهي الأفلاك، ومنها ما هو^(٩٨٩) صقيلٌ كوجه المرآة وهو جِرْمُ القمر، ومنها ما^(٩٩٠) يقبلُ النور والظلمة مثل الهواء وهو فلكُ القمر^(٩٩١) وفلكُ عطارد. وبيان ذلك أن ظلَّ الأرض يبلغ مخروطه إلى فلك عطارد. وهذه كلّها أوصاف للأجسام^(٩٩٢) الطبيعية، والأجسام الفلكيّة يشاركها فيها^(٩٩٣)، فقد تبَيَّن^(٩٩٤) بأن الفلك وإن كان^(٩٩٥) طبيعة^(٩٩٦) خامسة فليس بمخالف للأجسام^(٩٩٧) الطبيعية في كل الصفات بل في بعضها دون بعض، وذلك أنها ليست بحارّة ولا باردة ولا رطبة بل^(٩٩٨) يابسة صُلْبة^(٩٩٩) أشدّ صلابة

(٩٨٥) لأجسامه: للأجسام [د].

(٩٨٦) نغمات: نغم [ط، ع، ل] نغمة [د، ك].

(٩٨٧) كانت: كان [ل].

(٩٨٨) كالنار: مثل النار [ك].

(٩٨٩) سقط من أ: ما هو.

(٩٩٠) سقط من أ: ما. زيادة في ف، ك، ل: هو.

(٩٩١) سقط من أ: القمر.

(٩٩٢) للأجسام: الأجسام [ف، ك، ل].

(٩٩٣) يشاركها فيها: يشارك فيها [د] تشاركها [ف].

(٩٩٤) تبَيَّن: بَيَّن [ل].

(٩٩٥) كان: كانت: [أ، د، ع، ك].

(٩٩٦) طبيعة: طبيعته [ف].

(٩٩٧) للأجسام: الأجسام [ف].

(٩٩٨) بل: ولا [أ، ف].

(٩٩٩) سقط من أ: صلبة.

ذلك تذكّرت النفوسُ الجزئية التي^(٩٧١) في عالم الكون
والفساد^(٩٧٢) سرورَ عالمِ الأفلاك^(٩٧٣) ولذاتِ النفوس التي^(٩٧٤)
هناك وعلمت وتبيّن لها بأنها هي في أحسن الأحوال^(٩٧٥)
وأطيب اللذات وأدوم السرور لأن تلك النعمات هي أصفى وتلك
الألحان^(٩٧٦) أطيّب لأن^(٩٧٧) تلك الأجسام أحسن تركيباً وأجود
[٢٠٦] هنداماً وأصفى جَوْهرًا، وحركاتها^(٩٧٨) أحسن نظاماً،
ومناسباتها^(٩٧٩) أجود تأليفاً، فإذا علمت النفوسُ الجزئية التي في
عالم الكون والفساد^(٩٨٠) أحوالَ عالمِ الأفلاك^(٩٨١) وتيقّنت
حقيقة^(٩٨٢) ما وصفنا تشوّقت عند ذلك^(٩٨٣) إلى الصعود إلى
هناك واللّٰحق بأبناء جنسها من النفوس الناجية في الأزمان
الماضية من الأمم الخالية،
فإن قال قائل بأن^(٩٨٤) الفلك طبيعةً خامسة لا يجوز أن

(٩٧١) زيادة في د، ط: هي.

(٩٧٢) سقط من ع: والفساد.

(٩٧٣) الأفلاك: الأرواح [ف].

(٩٧٤) زيادة في د، ط: هي.

(٩٧٥) الأحوال: الحالات [أ، ف].

(٩٧٦) زيادة في أ: هي.

(٩٧٧) لأن: لا من [ع].

(٩٧٨) حركاتها: حركتها [د، ط].

(٩٧٩) مناسباتها: مناسبتها [أ].

(٩٨٠) سقط من د، ط، ع: والفساد.

(٩٨١) الأفلاك: الفلك [د].

(٩٨٢) حقيقة: تحقيق [ع] لحقيقة [ك] بحقيقة [د، ط، ل].

(٩٨٣) سقط من أ: عند ذلك.

(٩٨٤) بأن: إن [ك] فإن [د، ط].

والمعاني المضمّنة^(٩٥٦) في تلك^(٩٥٧) النغمات والألحان بمنزلة^(٩٥٨) الأرواح المستودعة في الأجساد، فإذا أُوردت^(٩٥٩) تلك الألحان على^(٩٦٠) مسامع تلك^(٩٦١) النفوس^(٩٦٢) استلذّتها الطّباعُ وفرّحت بها الأرواح^(٩٦٣) وسُرّت بها النفوس^(٩٦٤) لأن تلك الحركات والسكونات التي تكون بينها^(٩٦٥) تصير عند ذلك مكيّالاً للزمان وأذرعاً^(٩٦٦) له^(٩٦٧) ومحاكيةً لحركات الأشخاص الفلكيّة، كما أن حركات الكواكب والأفلاك المتّصلات المتناسبات^(٩٦٨) هي أيضاً مكيّالٌ للدهور^(٩٦٩) وأذرعٌ لها، فإذا كيل بها^(٩٧٠) الزمان كيّلاً متساوياً متناسباً معتدلاً كانت نغماتها مماثلةً لنغمات حركات الأفلاك والكواكب ومناسبةً لها، فعند

(٩٥٦) المضمّنة: المتضمّنة [د] المتضمّنة لها [أ] المضمّنة لها [ف].

(٩٥٧) في تلك: بتلك [ط] لتلك [د].

(٩٥٨) سقط من ل: الألحان بمنزلة.

(٩٥٩) فإذا أُوردت: وإذا وردت [ف] فإذا وردت [ل]، وفي الهامش: المعاني

المضمّنة في تلك النغمات [و].

(٩٦٠) على: إلى [أ]، ف، ل.

(٩٦١) سقط من أ، ف، ل: تلك.

(٩٦٢) أُوردت تلك الألحان على مسامع تلك النفوس: وصلت المعاني المضمّنة

{د: التضمّنة} في تلك النغمات والألحان إلى المسامع [د، ط، ك].

(٩٦٣) بها الأرواح: الأرواح بها [ل].

(٩٦٤) بها النفوس: النفوس بها [ل].

(٩٦٥) بينها: بينهما [ط، ل].

(٩٦٦) أذرعاً: أذراعاً [ك].

(٩٦٧) له: لها [ع، ط، ك] بها [د].

(٩٦٨) المتصلات المتناسبات: المتناسبات المتصلات [أ، ف].

(٩٦٩) للدهور: لدهور [ف] للشهور [ع].

(٩٧٠) بها: بهذا [ع، ل].

نغمات^(٩٤٢) متواترة^(٩٤٣) متناسبة^(٩٤٤) خفيفات وثقيلات غليظات، فإذا ألّفت ضرباً^(٩٤٥) من التأليفات^(٩٤٦)، كما تقدّم ذكرها^(٩٤٧) في فصلٍ قبلَ هذا، صارت النغماتُ الغليظات الثِّقَالُ للنغماتِ الحادّاتِ الخِفافِ^(٩٤٨) كالأجساد وهي لها كالأرواح، واتّحدت^(٩٤٩) بعضها ببعض وامتزجت وصارت ألحاناً وغناءً، وكان مثل^(٩٥٠) نقرات تلك^(٩٥١) الأوتار عند ذلك بمنزلة الأقلام،

والنغمات الحادّات^(٩٥٢) منها^(٩٥٣) بمنزلة الحُرُوف،
والألحان بمنزلة الكلمات
والغناء بمنزلة^(٩٥٤) الأقاويل
والهواء (٤٧ ب) الحامل لها^(٩٥٥) بمنزلة القراطيس،

(٩٤٢) منها نغمات: نغمات منها [ل].

(٩٤٣) متواترة: متوازنة [د].

(٩٤٤) زيادة في ع: متناسبة.

(٩٤٥) ضرباً: ضرباً [ع] ضرورياً [د].

(٩٤٦) التأليفات: التأليف [ع، ف].

(٩٤٧) تقدم ذكرها: قد تقدم ذكره [ط] تقدم ذكره [د].

(٩٤٨) الخفاف: الخفيفات [أ، ف].

(٩٤٩) اتّحدت: اتّحد [ك، ل] انجذب [د].

(٩٥٠) كان مثل: كانت [د، ط، ك].

(٩٥١) نقرات تلك: نغمات [ع].

(٩٥٢) الحادّات: الحادّات [د، ط، ك].

(٩٥٣) منها: عنها [أ، د، ط، ف، ك، ل].

(٩٥٤) بمنزلة: كمثّل [أ، ف].

(٩٥٥) سقط من أ، ف، ك: لها.

ويوجد أيضاً نغمة سَبَابَة كلٌّ وترٍ مثل نغمة بنصره ومثل ثُمْنه سواء،

ويوجد أيضاً نغمة [٢٠٥] وسطى كلٌّ وترٍ مثل نغمة (٩٢٩) خِصْرَه ومثل ثُمْنه سواء (٩٣٠)،

وبالجُملة ما من وترٍ ولا دَسْتَان من هذه الأوتار والدَّسَاتين إلَّا ولنغماتها (٩٣١) نِسْبَةٌ بعضُها إلى بعض ولكن منها ما هي فاضِلَةٌ شريفة ومنها ما هي (٩٣٢) دون ذلك (٩٣٣)،

فمن النِّسْبَةِ (٩٣٤) الفاضِلَةُ (٩٣٥) أن تكون النغمة مِثْلَ الأخرى (٩٣٦) سواءً أو (٩٣٧) تكون النغمة الغليظة مِثْلَ الحادَّة ومِثْلَ ثُلثها أو تكون مِثْلَها (٩٣٨) ومِثْلَ نصفِها أو مِثْلَها ومِثْلَ رُبْعِها (٩٣٩) أو مِثْلَها ومِثْلَ ثُمْنِها،

فإذا استوت هذه الأوتار على هذه النِّسَبِ (٩٤٠) الفاضلة، وحُرِّكَت حركاتٍ متواترةً متناسِبةً، حدثت عند ذلك منها (٩٤١)

(٩٢٩) سقط من أ، ط، ف: نغمة.

(٩٣٠) سقط من د: ويوجد أيضاً نغمة وسطى... سواء.

(٩٣١) ولنغماتها: ولنغمتها [أ، ف].

(٩٣٢) سقط من ط، ع، ك: ما هي. سقط من ل: هي.

(٩٣٣) دون ذلك: دونها [أ].

(٩٣٤) النسبة: النسب [د، ط، ك، ل].

(٩٣٥) زيادة في ك: الشريفة.

(٩٣٦) الأخرى: أخرى [ل].

(٩٣٧) أو: و [د، ك، ل].

(٩٣٨) سقط من ك، وشطب في ل: أو تكون مثلها.

(٩٣٩) سقط من أ: أو مثلها ومثل رُبْعِها.

(٩٤٠) النسب: النسبة [ع، ل].

(٩٤١) سقط من أ، ف: منها.

المثلث فإذا^(٩١٣) سُمعت^(٩١٤) نغمتاهما^(٩١٥) متساويتين كأنهما
نغمة واحدة فقد استويا^(٩١٦)،

فإذا استوت هذه الأوتارُ على هذا الوصف وُجد مُطلق^(٩١٧)
كلٌّ وترٍ بالإضافة إلى نغمة مزموهه بالخنصر مثله ومثل ثلثه بالغَلظ
والثقل^(٩١٨)،

ويوجد أيضاً نغمة كلٍّ واحد أعني كلٌّ وترٍ^(٩١٩) مزموه^(٩٢٠)
بالخنصر مثل نغمة الوتر الذي^(٩٢١) تحته مُطلقاً بالسواء^(٩٢٢)،

ويوجد أيضاً نغمة مُطلق كلٍّ^(٩٢٣) وترٍ مثل نغمة مزموهه^(٩٢٤)
بالسبابة ومثل ثمنه^(٩٢٥) سواء،

ويوجد أيضاً مُطلق^(٩٢٦) كلٌّ وترٍ ضِعف نغمة الوتر الذي
تحته^(٩٢٧) الثالث منه مزموهاً^(٩٢٨) بالسبابة،

(٩١٣) فإذا: [ل].

(٩١٤) سُمعت: سمع [أ، د، ط، ع، ف].

(٩١٥) نغمتاهما: نغمتيهما [أ، ف].

(٩١٦) فقد استويا: قد استوتا [ع].

(٩١٧) مطلق: مطلقه [ك] نغمة [ع] مطلق نغمة [ل] نغمة مطلق [د].

(٩١٨) بالغَلظ والثقل: في الغَلظ [أ] في الغَلظ والثقل [د، ط، ف، ك].

(٩١٩) سقط من أ، د، ط، ف: اعني كل وتر.

(٩٢٠) سقط من أ، ف: مزموه.

(٩٢١) نغمة الوتر الذي: النغم التي [ع] نغمة الوتر التي [ف].

(٩٢٢) سقط من ك: ويوجد أيضاً نغمة... بالسواء.

(٩٢٣) سقط من ل: واحد أعني كل... مطلق كل.

(٩٢٤) مزموهه: مزموه [د، ط، ع، ل] من صوته [ك].

(٩٢٥) ثمنه: ثمنه [ف].

(٩٢٦) مطلق: نغمة مطلق [أ، ك، ل] نغمة [ف].

(٩٢٧) زيادة في أ، د، ط، ف، ك: وهو.

(٩٢٨) مزموهاً: مزموه [ل].

ثم يُمدّ المثنى فوق الزَّير ويُحزَق^(٨٩٩) ثم يُزَمُّ^(٩٠٠) بالخنصر
ويُنقَر مع مُطلق^(٩٠١) الزَّير^(٩٠٢)، فإذا سُمعت نغماتهما^(٩٠٣)
متساويتين فقد استويا^(٩٠٤)، وإلا يُزادُ^(٩٠٥) في حَزَقِ^(٩٠٦) المثنى
أو إرخائه حتى يستويا،
ثم يُمدّ المثلث ويُحزَق ويُزَمُّ^(٩٠٧) بالخنصر ويُنقَر مع مُطلق
المثنى ويُزاد في الحَزَق والإرخاء^(٩٠٨) حتى يستويا وتُسمع^(٩٠٩)
نغماتهما^(٩١٠) كأنهما نغمة واحدة.^(٩١١)
ثم يُمدّ البسم ويُحزَق^(٩١٢) ويُزَمُّ بالخنصر ويُنقَر مع مُطلق

(٨٩٩) يحزق: يخرق [ع] يحرق [ف].

(٩٠٠) يزَمُّ: ترم [ل].

(٩٠١) ينقر مع مطلق: تنقر طلق [ف].

(٩٠٢) الزير: المثنى [د، ط].

(٩٠٣) نغماتهما: نغمتيها [أ] نغمتيهما [ط، ف] نغمتهما [د، ك، ل].

(٩٠٤) استويا: استوتا [أ، ع].

(٩٠٥) يُزاد: فيزاد [أ، ف].

(٩٠٦) حَزَق: خرق [ع، و] وكذا فيما يلي [حرق [ف].

(٩٠٧) ويُحزَق ويُزَمُّ: سقط من أ، ف، ك: يُزَمُّ. سقط من د، ع: ويحزق.

(٩٠٨) سقط من ط: ويُزاد في الحزق والإرخاء.

(٩٠٩) يستويا وتُسمع: يستويا ويسمع [أ، ع، ك] يستويان أو [تأسمع [ل] يسمع [ط].

(٩١٠) نغماتهما: نغمتيهما [أ، ط، ف] نغماتهما [د] لهما نغمتان متساويتين [ل].

(٩١١) زيادة في ل: فقد استويا، وفي الهامش: كأنهما نغمة واحدة. ثم زيادة في هامش ل وفي د، ط، ع، ك: ثم يُمد المثلث ويُحزَق ويُزَمُّ بالخنصر وينقر مع مطلق المثنى حتى يُسمع نغماتهما متساويتين [د: نغماتها متساويتين. سقط من ل: متساويتين]. ثم زيادة في ك: كأنهما نغمة واحدة.

(٩١٢) سقط من أ: ويحزق.

ثم يُقسَم طولُ الوترِ^(٨٨٧) من الرأس بتسعةٍ أقسامٍ متساويةٍ
ويُشدُّ دَسْتَانِ السَّبَابَةِ على التَّسْعِ مما يلي عُتْقِ العودِ،
ثم يُقسَم طولُ الوترِ^(٨٨٨) من عند دَسْتَانِ السَّبَابَةِ إلى المُشْطِ
بتسعةٍ أقسامٍ متساويةٍ ويُشدُّ دَسْتَانِ الْبِنْصَرِ على التَّسْعِ منه، فإنه
يقع فوق دَسْتَانِ الْخِنْصَرِ مما يلي دَسْتَانِ السَّبَابَةِ،
ثم يُقسَم طولُ الوترِ من عند دَسْتَانِ الْخِنْصَرِ مما يلي المُشْطِ
بثمانيةٍ^(٨٨٩) أقسامٍ ويُزادُ^(٨٩٠) عليها جزءٌ مثلها مما (٤٧ أ)
بقي^(٨٩١) من الوترِ فوق، ويُشدُّ عند [٢٠٤] ذلك دَسْتَانِ الْوُسْطَى
فإنه يقع^(٨٩٢) بين دَسْتَانِ السَّبَابَةِ وَالْبِنْصَرِ،
فهذا هو إصلاحُ العودِ ونَسْبُ الأوتارِ ومواضعِ الدَّسَاتِينِ.
وأما^(٨٩٣) كَيْفِيَّةُ إِصْلَاحِ النِّغَمِ ومعرفة ما^(٨٩٤) يكون بينها^(٨٩٥)
من النَّسَبِ فهو أن يُمدَّ الزَّيْرُ ويُحزَقُ^(٨٩٦) بحسَبِ ما يحتمل
إلا^(٨٩٧) ينقطع^(٨٩٨)،

(٨٨٧) الوتر: العود والوتر [ف]. زيادة في ع: الواحد.

(٨٨٨) سقط من ل: من الرأس بتسعة أقسام... طول الوتر.

(٨٨٩) ثمانية: ثمانية [ف].

(٨٩٠) يُزاد: زاد [د].

(٨٩١) بقي: يلي [ك، ل، ع، ومن فوق: بقي].

(٨٩٢) زيادة في د، ط، ع: ما، وفي ل: مما.

(٨٩٣) سقط من ك: دستان الوسطى فإنه يقع... وأما.

(٨٩٤) معرفة ما: معرفتها [د].

(٨٩٥) بينها: بينهما: [د، ط، ع، ل].

(٨٩٦) يحزق: يخرقه [ع، ك، ل] يخرقه [ع] تحرقه [أ] [يا] حرفه [ف].

(٨٩٧) إلا: لا [ف] ان لا [ك، ل] إلا أن [د].

(٨٩٨) ينقطع: يقطع [ك].

وَعِلْظُ الْمَثْنَى مِثْلَ غِلْظِ الزَّيْرِ وَمِثْلَ ثُلْثِهِ،
وهو أن يكون^(٨٧٦) البَّمُ سد = أربعة وستين^(٨٧٧) طاقة
إبريسم،

والمثلث مح = ثمانية وأربعين طاقة^(٨٧٨)،
والمثنى لو = ستة وثلاثين طاقة،
وَالزَّيْرِ كز = سبعة وعشرين طاقة،

ثم^(٨٧٩) تُمدُّ^(٨٨٠) هذه^(٨٨١) الأوتارُ الأربعة على وجه العود
مشدودةً أسافلها في المُشْط ورؤوسها في الملاوي فوق عُقْ
العود^(٨٨٢)، فعند ذلك تكون أطوالها متساويةً وأغلاظها مختلفةً
على هذه النسبة^(٨٨٣): {سد مح لو كز}،

ثم يُقسَمُ^(٨٨٤) طولُ الوتر الواحد بأربعة^(٨٨٥) أقسام متساوية
ويُشَدُّ دَسْتَانُ الْخَنْصَرِ عند^(٨٨٦) الثلاثة الأرباع مما يلي عُقْ
العود،

(٨٧٦) زيادة في أ، ف: غلظ.

(٨٧٧) سد = أربعة وستين: في بعض المخطوطات سد [=٦٤] وفي بعضها الآخر
أربعة وستين، وكذلك فيما يلي.

(٨٧٨) زيادة في أ، ف، ك [هنا وفيما يلي]: إبريسم.

(٨٧٩) سقط من ع: ثم.

(٨٨٠) تُمد: يُمد [أ، ع].

(٨٨١) سقط من أ، ف: هذه.

(٨٨٢) العود: البنجق [أ] المسجيق [ف].

(٨٨٣) أغلاظها مختلفة على النسبة: غلظها مختلفاً على النسبة وهي هذه [أ، ف]
هي في دقتها وغلظها مختلفة على هذه النسبة [د، ط، ك، ل].

(٨٨٤) يُقسَم: ينقسم [ع].

(٨٨٥) بأربعة: أربعة [ل].

(٨٨٦) زيادة في أ، ف: آخر.

وَعُمُقُهُ ^(٨٦٣) عَلَى النَّسْبَةِ الشَّرِيفَةِ ^(٨٦٤)،

وَهُوَ أَنْ يَكُونَ طَوْلُهُ مِثْلَ عَرْضِهِ وَمِثْلَ نَصْفِهِ ^(٨٦٥)،

وَعُمُقُهُ ^(٨٦٦) مِثْلَ نِصْفِ الْعَرْضِ ^(٨٦٧)،

وَعُنُقُ الْعُودِ ^(٨٦٨) رِبْعُ الطَّوْلِ،

وَتَكُونُ أَلْوَاحُهُ ^(٨٦٩) رَقِيقَةً ^(٨٧٠) مُتَّخِذَةً مِنْ خَشَبِ صُلْبٍ ^(٨٧١)

خَفِيفٍ يَطْنُ ^(٨٧٢) إِذَا نُقِرَ ^(٨٧٣)، وَكَذَلِكَ الْوَجْهَ رَقِيقٌ صُلْبٌ

خَفِيفٌ ^(٨٧٤)،

ثُمَّ تَتَّخِذُ أَرْبَعَةً أَوْتَارٍ بَعْضُهَا أَغْلَظُ مِنْ بَعْضٍ عَلَى النَّسْبَةِ

الْأَفْضَلِ،

وَهُوَ أَنْ يَكُونَ غِلَظُ الْبَمِّ مِثْلَ غِلَظِ الْمَثَلَتِ وَمِثْلَ ثُلَاثِهِ

وَعِلَظُ الْمَثَلَتِ مِثْلَ غِلَظِ الْمَثْنَى وَمِثْلَ ^(٨٧٥) ثُلَاثِهِ

(٨٦٣) يكون طوله وعرضه وعمقه: طوله وعرضه وعمقه يكون [ع، ك، ل].

(٨٦٤) الشريفة: الأفضل [أ، د، ط، ف].

(٨٦٥) نصفه: نصف عرضه [أ، ف].

(٨٦٦) زيادة في أ: أيضاً. زيادة في ف: أيضاً يكون.

(٨٦٧) العرض: عرضه [أ، ف].

(٨٦٨) عنق العود: عنقه مثل [ط] عنق العود مثل [ل] عمق العنق [ف] عمقه مثل [د، ك].

(٨٦٩) تكون ألواحها: يكون الوجه [ك، ل].

(٨٧٠) رقيقة: رفاقاً [د، ط].

(٨٧١) سقط من د، ط: صلب.

(٨٧٢) صلب خفيف يطن: صلب ويطن [أ] صلب خفيف ويطن [ف].

(٨٧٣) سقط من د، ط: يطن إذا نُقِرَ.

(٨٧٤) سقط من أ، ف، ك: وكذلك الوجه رقيق صلب خفيف. زيادة في ل:

خاصة. زيادة في د، ط: جاف يطن إذا نُقِرَ.

(٨٧٥) ومثل: وغلظ [أ] وغلظ وغلظ [ف].

الرياضية، ويتبيّن^(٨٤٧) لهم دقائق الحكمة^(٨٤٨) وأسرار^(٨٤٩) الصنائع التي^(٨٥٠) كلّها دلالة^(٨٥١) على الصانع^(٨٥٢) الحكيم^(٨٥٣) الذي هو البارئ سبحانه وتعالى [٢٠٣] الله^(٨٥٤) الذي خلق الصُّنَاعَ وألهمهم الصنائع والحكم والعلوم والمعارف فتبارك الله أحسن الخالقين وأحكم الحاكمين.

ولكن نبداً^(٨٥٥) أولاً بذكر ما قال أهل هذه^(٨٥٦) الصناعة^(٨٥٧)، فإنه قد قيل^(٨٥٨) استعينوا على كل صناعة^(٨٥٩) بأهلها، فنقول إن أهل هذه الصناعة^(٨٦٠) قالوا إنه ينبغي أن تُتخذ^(٨٦١) الآلة التي تُسمّى^(٨٦٢) العود جسماً يكون طولُه وعرضُه

(٨٤٧) يتبيّن: تبيّن [ف] نبين [ل] يبين ؟ [د، ط].

(٨٤٨) الحكمة: الحكم [د، ط، ل].

(٨٤٩) أسرار: سرائر [أ، ف].

(٨٥٠) زيادة في د، ط، ك، ل: هي.

(٨٥١) دلالة: دالة [ل].

(٨٥٢) زيادة في د، ط: الأول.

(٨٥٣) زيادة في ع: العزيز العليم.

(٨٥٤) البارئ سبحانه وتعالى الله: الله جل ثناؤه وتقدست أسماؤه [ع] زيادة في د،

ط: وهو.

(٨٥٥) ولكن نبداً: وأن نبد [ل] فنبدأ [ك].

(٨٥٦) سقط من ع: هذه.

(٨٥٧) الصناعة: الصنعة [د].

(٨٥٨) زيادة في أ، ف: في المثل.

(٨٥٩) صناعة: صنعة [أ، ل].

(٨٦٠) سقط من ف: فإنه قد قيل في المثل... أهل هذه الصناعة.

(٨٦١) تُتخذ: نتخذ [أ].

(٨٦٢) تُسمّى: يقال لها [أ، ف].

والشَّبَابَات والصفَّارات^(٨٣١) والشِّلياق^(٨٣٢) والشُّوشك^(٨٣٣)
والعيْدَان والطَّنابِير^(٨٣٤) والجنك والرَّباب والمعازِف
والأُرْغُن^(٨٣٥) والأرْمُونِيْقِي وما شاكلها من الآلات
والأدوات^(٨٣٦) المصوِّتة، ولكن أتمَّ آلةً استخرجها الحُكَّماءُ
وأحسن ما صنعوا^(٨٣٧) الآلةُ المسماةُ العود، ونحتاج أن نذكر من
كيفية صنعتها وإصلاحها واستعمالها^(٨٣٨) وكَمِّيَّة نِسَب ما بين^(٨٣٩)
نغمات أوتارها^(٨٤٠) وطولها^(٨٤١) وغلظها وحزقها^(٨٤٢) ونقراتها
طرفاً^(٨٤٣) شِبه^(٨٤٤) المدخل والمقدِّمات، ليكون تنبيهاً لنفوس
الطالبين للعلوم^(٨٤٥) الفلسفيَّة والناظرين في الآداب^(٨٤٦)

(٨٣١) الشَّبَابَات والصفَّارات: الصفَّارات والشَّبَابَات [ع] السرنايات والصفَّارات [د]
ط، ك].

(٨٣٢) الشِّلياق: الشِّلياق [ع] السلباق [ك] الشلهاق [د، ط] السيليا [ف] سقط من
ل: والشلياق.

(٨٣٣) الشُّوشك: الشوشل [د، ط، ل] السوسك [أ، ع] السوسل [ف] الشواشل
[ك] زيادة في د: والسعائق والوتد.

(٨٣٤) سقط من ع: والطناير. زيادة في ط (فوق النص): والشغائق والوتد.
(٨٣٥) الأُرْغُن: الأراغن [ك، ل].

(٨٣٦) الآلات والأدوات: الأدوات [ع].

(٨٣٧) صنعوا: صنعته [أ، ف] صنعوها [د، ط، ك، وفي هامش ل] وضعوا [ل].

(٨٣٨) صنعتها وإصلاحها واستعمالها: صنعته وإصلاحه واستعماله [أ، ف].

(٨٣٩) نسب ما بين: ما بين نسب [أ] ما بين [ف].

(٨٤٠) أوتارها: أوتاره [أ، ف] زيادة في ف: من النسب.

(٨٤١) زيادة في د، ك، ل وفي هامش ط: وعرضها.

(٨٤٢) حزقها: دقها [ك، ل].

(٨٤٣) طرفاً: وطرفاً [ع].

(٨٤٤) شبه: يشبه [ط].

(٨٤٥) لنفوس الطالبين للعلوم: للنفوس الطالبة للعلوم [أ] للنفوس الطالبة العلوم
[ف] لنفوس الطالبين للعلوم [ك].

(٨٤٦) الآداب: الأدوات [ل].

الألف علامة الساكن والهاء علامة المتحرّك.

وإذ قد فرغنا من ذكر مقادير أزمان الحركات والسكونات وما بينهما من البعد والتناسب فنريد^(٨١٦) أن نذكر أيضاً طرفاً من الآلات^(٨١٧) المصنّوة^(٨١٨) وكيفيّة^(٨١٩) صنعها^(٨٢٠) وإصلاحها وما التّامُّ^(٨٢١) الكاملُ منها.

فصل [٨]

اعلم^(٨٢٢) يا أخي أيّدك الله وإيّانا بروح منه بأن الحكماء قد صنعوا آلات^(٨٢٣) وأدوات^(٨٢٤) كثيرة^(٨٢٥) لنغمات الموسيقى وألحان الغناء^(٨٢٦) مفتّنة^(٨٢٧) الأشكال كثيرة الأنواع مثل^(٨٢٨) الطُّبول والدُّفوف والصُّنوج والنايات^(٨٢٩) والمزامير^(٨٣٠) (٤٦ ب)

(٨١٦) فنريد: ونريد [ف] نريد [د، ك].

(٨١٧) الآلات: آلات [ف].

(٨١٨) زيادة في هامش ل: المصنوعات.

(٨١٩) كيفية: كيفيات [ف].

(٨٢٠) صنعها: صيغتها [ل].

(٨٢١) التام: التمام [ف].

(٨٢٢) اعلم: ايضلم [أ].

(٨٢٣) آلات: الآلات [د، ط، ل].

(٨٢٤) أدوات: الأدوات [د، ط].

(٨٢٥) آلات وأدوات كثيرة: الآلات والأدوات الكثيرة [أ، ف].

(٨٢٦) وألحان الغناء: ولألحان الغناء [ل] والألحان والغناء [ع] في الألحان [أ، ف].

(٨٢٧) مفتّنة: مفتّنة [أ، د، ك] مفتّنة [ل] متقنة [ف].

(٨٢٨) مثل: منها [أ، ف].

(٨٢٩) الصنوج والنايات: النايات والصنوج [ك].

(٨٣٠) المزامير: زيادة في ع: والطنابير. سقط من د: المزامير.

التي^(٨٠٠) بين النقرات وأنه إذا^(٨٠١) زاد^(٨٠٢) طولها على المقدار المذكور خرج من^(٨٠٣) الأصل والقانون. وعِلَّة أخرى أيضاً وهي أن النغمة الواحدة إذا وردت على^(٨٠٤) القوَّة السامعة لا تمكث^(٨٠٥) فيها صورتها^(٨٠٦) إلى أن تضمحلَّ إلا^(٨٠٧) بمقدار زمان ثلاثِ نقراتٍ أخرى من أخواتها^(٨٠٨) بين^(٨٠٩) كلِّ واحدة واحدة^(٨١٠) زمانُ سكونٍ إحداهما^(٨١١) فتكون جُمْلتها^(٨١٢) ثمانية أزمان حَسْبُ^(٨١٣) مثل هذا الشكل^(٨١٤):

(A10)

- (٨٠٠) السكونات التي: أزمان السكون الذي [أ] أزمان السكون التي [ف].
 (٨٠١) وأنه إذا: فإذا [ع].
 (٨٠٢) زاد: أراد [د].
 (٨٠٣) من: عن [أ، ف].
 (٨٠٤) على: إلى [أ، ف].
 (٨٠٥) تمكث: يمكث [أ، ع].
 (٨٠٦) صورتها: صوتها [ك] صُوتها [ل: بشطب الراء].
 (٨٠٧) سقط من ف: إلا.
 (٨٠٨) أخواتها: أخواتهما [أ] أجزائها [ع].
 (٨٠٩) بين: من [ف].
 (٨١٠) سقط من أ، ط، ف، ك، ل: واحدة.
 (٨١١) إحداهما: أحدهما [ل] إحداهما [د] واحد [أ].
 (٨١٢) فتكون جملة: فيكون حدها [د].
 (٨١٣) حسب: فحسب [ك، ل] زيادة في ع: ما.
 (٨١٤) سقط من د، ط: الشكل.
 (٨١٥) ٥ ١ ٥

٥ ا : ٥ ا ٥ ا ٥ ا ٥ ا ٥ ا [ع].

الهندسة^(٧٨٥) كالذراع والأشلي والباب والقَبْضة^(٧٨٦) والأصابع،
كما بيّنّا في رسالة الجومطريا، وهكذا أيضاً^(٧٨٧) إذا بُعد ما بين
أزمان الحركات بطول^(٧٨٨) أزمان السكونات فلا تقدر القوة
الذائقة^(٧٨٩) السامعة أن تدركها وتعرف البعد ما^(٧٩٠) بينها^(٧٩١)
إلا بآلات رَصْدِيَّة^(٧٩٢) كالطَرَجَهَارَات^(٧٩٣) والبناكين^(٧٩٤)
والأسطرلابات والدواريق^(٧٩٥) وما شاكلها من آلات
الرّصد^(٧٩٦)، فإذا^(٧٩٧) كانت [٢٠٢] قريبة أدركها السمع وميّزها
الذّوق كما هو معروف في العروض.

فقد تبين بما ذكرنا ما^(٧٩٨) العِلَّةُ في^(٧٩٩) السكونات

(٧٨٥) بآلات الهندسة: بآلات هندسية [أ، د، ك، ل] بآلات الهندسية [ط].

(٧٨٦) القبضة: القصة [أ، ط] القصة والقبضة [ف].

(٧٨٧) سقط من ك، ل: أيضاً.

(٧٨٨) بطول: يطول [ع].

(٧٨٩) الذائقة: الذاتية [ع] سقط من أ، ف: الذائقة.

(٧٩٠) ما: الذي ما [أ، ف].

(٧٩١) بينها: بينهما [ط].

(٧٩٢) بآلات رصدية: بالآلات الرصدية [د، ط، ل].

(٧٩٣) كالطرجهارات: كالطرجهالات [أ، ط، ف].

(٧٩٤) البناكين: الشاهين [ك] الشاهين ؟ [ل] الفياجيم [أ] سقط من ع: والبناكين.

(٧٩٥) الأسطرلابات والدواريق: الأسطرلابات والزواريق [د، ط] الدواريق

والأصطرلاب [ك] الزواريق والأصطرلاب [ل] سقط من ع: والدواريق.

(٧٩٦) شاكلها من آلات الرصد: شاكلها من الآلات الرصدية [د] شاكلها من

الآلات [الرصدية] [ط] شاكل ذلك [ع].

(٧٩٧) فإذا: فأما إذا [أ، ف، ل] وأما إذا [د، ط] فأما إن [ك].

(٧٩٨) سقط من أ، ك: ما.

(٧٩٩) في: من أزمان [ك] في أزمان [د، ط، ل].

الذَّوق^(٧٦٦) في المسامع هو معرفة كميّة الأزمان التي بين
 النغمات^(٧٦٧) وما بين أزمان^(٧٦٨) السكونات^(٧٦٩) وبين أزمان
 الحركات من التناسُب والمقدار، وعلى هذا المِثال يجري حُكمُ
 سائر^(٧٧٠) المحسوسات والقُوَى الحاسّة^(٧٧١) المُدرِكة لها،
 وكذلك^(٧٧٢) القوّة الباصرة^(٧٧٣) لا تقدر أن تعرف مقدارَ
 الأبعادِ^(٧٧٤) ما بين المرئيات إلا^(٧٧٥) إذا كانت مُتقاربةً في
 الأماكن، فإذا^(٧٧٦) بَعُدَ^(٧٧٧) ما بينها^(٧٧٨) من الأماكن^(٧٧٩) كما
 بَعُدَ^(٧٨٠) ما بين المسموعات بالأزمان فلا^(٧٨١) تَقْدِرُ القوّةُ أن
 تُدرِكها وتُميِّزَ البُعْدَ^(٧٨٢) ما^(٧٨٣) بينها^(٧٨٤) إلّا بآلات

-
- (٧٦٦) زيادة في د، ط: الذي.
 (٧٦٧) النغمات: النغمتين [أ، د، ط، ف، ك، ل].
 (٧٦٨) أزمان: زمان [ع].
 (٧٦٩) السكونات: السكون [أ، ف].
 (٧٧٠) حكم سائر: سائر حكم [د، ط].
 (٧٧١) الحاسّة: الحساسة [د، ع، ل] الخامسة [ك].
 (٧٧٢) وكذلك: وذلك أن [أ، د، ط، ف] وكذلك أن [ك، ل].
 (٧٧٣) زيادة في أ، ف، ك، ل: أيضاً.
 (٧٧٤) الأبعاد: أبعاد [ك، ل].
 (٧٧٥) زيادة في ع: أنه. زيادة في ل: أنها.
 (٧٧٦) فإذا: فأما إذا [د، ط، ف] وأما إذا [ك] أما إذا [ل].
 (٧٧٧) بعد: بعدت [ل].
 (٧٧٨) بينها: بينهما [أ، د، ط، ف].
 (٧٧٩) سقط من ع: فإذا بعد ما بينها من الأماكن.
 (٧٨٠) بعد: يبعد [ع].
 (٧٨١) فلا: ولا [ع].
 (٧٨٢) البعد: بعد [ك].
 (٧٨٣) سقط من د، ط: ما.
 (٧٨٤) بينها: بينهما [أ، د، ط].

تلك (٤٦ أ) الأصوات من^(٧٤٩) الهواء الحامل لها المؤدّي إلى
المسامع، كما بيّنا في فصلٍ قبلَ هذا، وهكذا أيضاً طنينُ
الأصواتِ^(٧٥٠) لا يمكُثُ^(٧٥١) في المسامع زماناً طويلاً إلا
ريثما^(٧٥٢) تأخذ^(٧٥٣) القوّة المتخيّلة رُسومها، ثم تضمحلّ من
المسامع تلك الطينيات، فإذا طالت أزمانُ السكونات بين^(٧٥٤)
النقرات والإيقاعات وزادت على المقدار الذي تقدّم ذكره
اضمحلت^(٧٥٥) النغمة الأولى وطنينها^(٧٥٦) عن المسامع قبل أن
تردّ^(٧٥٧) النغمة الأخرى، فلا تقدّر القوّة المفكّرة^(٧٥٨) أن
تعرف^(٧٥٩) مقدارَ الزمان^(٧٦٠) الذي بينهما^(٧٦١) فتُميّزهما^(٧٦٢)
وتعرف^(٧٦٣) التناسبَ الذي بينهما^(٧٦٤)، لأن^(٧٦٥) جُودة

-
- (٧٤٩) من: في [د].
(٧٥٠) هكذا أيضاً طنين الأصوات: هكذا طنين أيضاً لأصوات [ف].
(٧٥١) زيادة في أ: أيضاً.
(٧٥٢) ريثما: بين ما [ف] ريث ما [ط، ك].
(٧٥٣) تأخذ: تأخذه [د، ع].
(٧٥٤) بين: من [ك].
(٧٥٥) اضمحلت: اضمحلّ طنين [د، ط، ع] أصلحت [ف].
(٧٥٦) سقط من د، ط: وطنينها.
(٧٥٧) ترد: تُردّ [ع].
(٧٥٨) المفكّرة: المتفكّرة [ل].
(٧٥٩) تعرف: [ت]قدّر [أ، ف].
(٧٦٠) سقط من أ: الزمان.
(٧٦١) بينهما: بينها [ع].
(٧٦٢) فتُميّزهما: فتُميّزها [أ، د، ط، ع، ف، ل].
(٧٦٣) تعرف: يعرف [أ] [يُ]عرف [ف].
(٧٦٤) الذي بينهما: بينهما [أ، ف] الذي بينها [ع].
(٧٦٥) لأن: لأجل أن [د، ك] وفي ل: لأن، ثم تصحيح: لأجل أن.

وهو (٧٣٣) الذي ذكرنا ووصفنا (٧٣٤) على ما يُوجِبُه (٧٣٥) القياس والقانون.

فأما ما يعرفه (٧٣٦) أهل (٧٣٧) الزمان من المغنين وأصحاب الملاهي من الخفيف والثقيل (٧٣٨) فهو غير هذا، وسنذكره بعد هذا الفصل.

واعلم يا أخي بأنه إذا زادت أزمان السكونات (٧٣٩) التي بين (٧٤٠) النقرات [٢٠١] والإيقاعات على (٧٤١) هذا المقدار من الطول، خرج من (٧٤٢) الأصل والقانون والقياس (٧٤٣)، أعني من (٧٤٤) أن تُدركها وتُميّزها (٧٤٥) القوة الذائقة (٧٤٦) السمعية، والعلة في ذلك أن الأصوات لا تمكث في الهواء زماناً طويلاً إلا ريثما (٧٤٧) تأخذ المسامع حظها (٧٤٨) من الطنين، ثم تضمحلّ

(٧٣٣) هو: هذا [د، ط، ف، ك، ل].

(٧٣٤) ذكرنا ووصفنا: ذكرناه ووصفناه [د، ط، ك].

(٧٣٥) يوجب: يوجد [ل].

(٧٣٦) ما يعرفه: على معرفة [أ، ف] على ما يعرفه [د، ط، ك].

(٧٣٧) زيادة في ط، ف، ل: هذا.

(٧٣٨) الخفيف والثقيل: الثقيل والخفيف [ك].

(٧٣٩) السكونات: السكون [أ، ف].

(٧٤٠) بين: هي [ع].

(٧٤١) زيادة في د، ط: مثل.

(٧٤٢) زيادة في د: هذا.

(٧٤٣) والقياس: من المقياس [ط، ع].

(٧٤٤) أعني من: أعني [ك، ل] من [أ، ع، ف] وعن [ط] وعلى [د].

(٧٤٥) تدركها وتميّزها: تدرك و[ت]ميّزها [ف] يدرك ويميّزها [أ] تميّزها وتدركها [ع]

يدركه القياس و[ت]ميّزه [د، ط] يدركه القياس و[ت]ميّزه وتدركه [ل].

(٧٤٦) الذائقة: الواقعة [ع] الذاتية [ف].

(٧٤٧) ريثما: بين ما [ف] ريث ما [ط، ك].

(٧٤٨) حظها: حظوظها [ف].

فإن^(٧٢٣) كانت أزمان السكونات^(٧٢٤) مُساويةً^(٧٢٥) لأزمان الحركات في الطول ولا يُمكن أن يقع في تلك الأزمان حركةٌ أخرى سُمّيت تلك النغماتُ عند ذلك^(٧٢٦) العمودَ الأوّلَ، وهو الخفيف الذي لا يُمكن^(٧٢٧) أخفّ منه، لأنه إن وقعت في تلك الأزمان حركةٌ أخرى صارت نغمتها متّصلةً بنغمة النقرة التي قبلها والتي بعدها وصار الجميع صوتاً واحداً^(٧٢٨) متصلاً،

وإن كانت أزمان السكونات طولها بمقدار ما يُمكن أن يقع فيها حركةٌ أخرى سُمّيت تلك النغماتُ العمودَ الثاني والخفيف^(٧٢٩) الثاني،

وإن كانت أزمان تلك السكونات أطولَ من هذه^(٧٣٠) بمقدار ما يُمكن أن يقع فيها حركتان سُمّيت تلك النغماتُ الثقيلَ الأوّلَ، وإن كانت تلك الأزمان أطولَ من هذه بمقدار ما يُمكن أن يقع فيها^(٧٣١) ثلاث حركاتٍ سُمّيت تلك النغماتُ الثقيلَ الثاني^(٧٣٢)،

(٧٢٣) فإن: وإن [د، ف] فإذا [ل].

(٧٢٤) السكونات: السكون [أ، ف].

(٧٢٥) مساوية: متساوية [ف، ل].

(٧٢٦) تلك النغمات عند ذلك: عند ذلك تلك النغمات [ع].

(٧٢٧) زيادة في د، ط، ك: أن يكون. زيادة في ل: أن يكون أحد.

(٧٢٨) سقط من د، ط، ك، ل: واحداً.

(٧٢٩) والخفيف: وهو الخفيف [ع].

(٧٣٠) سقط من ل: من هذه.

(٧٣١) فيها: بينهما [ع].

(٧٣٢) الثقيل الثاني: ثاني الثقيل [أ، د، ط، ف، ل].

وَنَرْجِعُ الْآنَ^(٧٠٦) إِلَى مَا كُنَّا فِيهِ فَنَقُولُ إِنَّ كُلَّ نَقَرَتَيْنِ مِنْ
نَقَرَاتِ الْأَوْتَارِ وَإِيقَاعَاتِ^(٧٠٧) الْقُضْبَانِ فَلَا بَدَّ مِنْ^(٧٠٨) أَنْ يَكُونَ
بَيْنَهُمَا زَمَانٌ سَكُونٌ^(٧٠٩)، طَوِيلًا كَانَ^(٧١٠) أَوْ قَصِيرًا، وَأَنَّهُ^(٧١١)
إِذَا تَوَاتَرَتْ نَقَرَاتُ^(٧١٢) تِلْكَ الْأَوْتَارِ وَإِيقَاعَاتُ تِلْكَ الْقُضْبَانِ
تَوَاتَرَتْ أَيْضًا سَكُونَاتٌ بَيْنَهُمَا، ثُمَّ لَا تَخْلُو أَرْزَامُ^(٧١٣) تِلْكَ
السَّكُونَاتِ مِنْ أَنْ تَكُونَ^(٧١٤) مُسَاوِيَةً لِأَرْزَامِ^(٧١٥) تِلْكَ الْحَرَكَاتِ
أَوْ تَكُونَ أَطْوَلَ مِنْهَا، إِذْ^(٧١٦) كَانَ أَقْصَرُ مِنْهَا لَا يُمْكِنُ^(٧١٧)،
وَمُتَّفَقٌ^(٧١٨) عَلَيْهِ^(٧١٩) بَيْنَ^(٧٢٠) أَهْلِ هَذِهِ^(٧٢١) الصَّنَاعَةِ بِأَنَّ^(٧٢٢)
زَمَانَ الْحَرَكَةِ لَا يُمْكِنُ أَنْ يَكُونَ أَطْوَلَ مِنْ زَمَانِ السَّكُونِ الَّذِي
مِنْ جَنْسِهِ،

(٧٠٦) وَنَرْجِعُ الْآنَ: وَنَعُودُ [أ، ف].

(٧٠٧) إِيقَاعَاتٍ: إِيقَاعٌ [ل].

(٧٠٨) سَقَطَ مِنْ أ، د، ف، ل: مِنْ.

(٧٠٩) زَمَانٌ سَكُونٌ: سَكُونٌ زَمَانٌ [ل].

(٧١٠) سَقَطَ مِنْ ع: كَانَ.

(٧١١) وَأَنَّهُ: أَوْ أَنَّهُ [ع] فَإِنَّهُ [أ].

(٧١٢) سَقَطَ مِنْ ع: نَقَرَاتٍ.

(٧١٣) تَخْلُو أَرْزَامٌ: تَخْلُوا [أ] يَخْلُوا [ف] [يَخْلُو زَمَانٌ] [ك].

(٧١٤) سَقَطَ مِنْ ل: مِنْ أَنْ تَكُونَ.

(٧١٥) مُسَاوِيَةٌ لِأَرْزَامٍ: مُتَسَاوِيَةٌ لِأَنْ زَمَانٌ [ف].

(٧١٦) إِذْ: وَإِذَا [ل] وَإِذَا [د، ط، ك].

(٧١٧) إِذْ كَانَ أَقْصَرُ مِنْهَا لَا يُمْكِنُ: أَوْ أَقْصَرُ مِنْهَا [ع].

(٧١٨) وَمُتَّفَقٌ: فَمُتَّفَقٌ [د، ط، ك، ل].

(٧١٩) سَقَطَ مِنْ أ، ف: عَلَيْهِ.

(٧٢٠) بَيْنَ: مِنْ [أ، ع، ف].

(٧٢١) سَقَطَ مِنْ أ، ع، ف: هَذِهِ.

(٧٢٢) بِأَنَّ: أَنَّ [د، ط، ك].

وفي رسالة الهَيُولَى بَيَّنَّا بِأَنَّ الْجِسْمَ مَرْكَبٌ مِنَ الْجَوْهَرِ
وَالطُّولِ وَالْعَرْضِ وَالْعُمُقِ، وَسَائِرُ الْأَجْسَامِ مَرْكَبَةٌ مِنَ الْجِسْمِ
الْمُطْلَقِ.

وفي رسالة المبادئ بَيَّنَّا بِأَنَّ الْبَارِئَ عَزَّ اسْمُهُ نِسْبَتُهُ مِنَ
الموجودات كِنِسْبَةِ الْوَاحِدِ مِنَ الْعَدَدِ، وَالْعَقْلُ كَالثَّانِينَ وَالنَفْسُ
كَالثَلَاثَةِ وَالْهَيُولَى كَالْأَرْبَعَةِ، وَسَائِرُ الْخَلَائِقِ مَرْكَبَةٌ مِنَ^(٦٩٧)
الْهَيُولَى وَالصُّورَةِ.

وَعَرَضْنَا فِي هَذِهِ الرِّسَالِ^(٦٩٨) كُلَّهَا أَنَّ^(٦٩٩) نُبَيِّنُ^(٧٠٠) لِأَهْلِ
كُلِّ صِنَاعَةٍ وَحَدَانِيَّةٍ^(٧٠١) الْبَارِئَ عَزَّ وَجَلَّ مِنْ صِنَاعَتِهِ [٢٠٠]
لِيَكُونَ أَقْرَبَ إِلَى فَهْمِهِ وَأَبْيَنَ لِحُجَّتِهِ وَأَوْضَحَ^(٧٠٢) (٤٥ ب)
لِبُرْهَانِهِ، وَهَكَذَا فَعَلْنَا فِي سَائِرِ الرِّسَالِ، وَنُبَيِّنُ أَيْضاً كَيْفِيَّةَ^(٧٠٣)
حَدُوثِ الْمَوْجُودَاتِ^(٧٠٤) بَعْضُهَا عَنْ بَعْضٍ بِإِذْنِ بَارِئِهَا عَزَّتْ
أَسْمَاؤُهُ وَجَلَّ ثَنَاؤُهُ وَحُسْنُ عَنَايَتِهِ وَإِتْقَانُ^(٧٠٥) حِكْمَتِهِ وَدِقَّةُ صِنْعَتِهِ
فَتَبَارَكَ اللَّهُ رَبُّ الْعَالَمِينَ وَأَحْسَنُ الْخَالِقِينَ وَأَرْحَمُ الرَّاحِمِينَ
وَأَكْرَمُ الْأَكْرَمِينَ.

(٦٩٧) زيادة في ف: الأربعة.

(٦٩٨) الرسائل: المسائل [ك].

(٦٩٩) أن: بأن [أ، ع، ف].

(٧٠٠) في هذه الرسائل كلها بأن نبين: أن نبين في هذه الرسائل كلها [أ، ف].

(٧٠١) وحدانية: واحداً [أ].

(٧٠٢) وأبين لحجته وأوضح: وأظهر لحجته وأبين [أ، ف].

(٧٠٣) كيفية: كيف [ك].

(٧٠٤) حدوث الموجودات: الموجودات [ع] وجود الموجودات [ف].

(٧٠٥) إتقان: إيقان [أ] إيقاد [ف].

وفي رسالة الأسطرونوميا بيّنّا أن الشَّمس وأحوالها من بين الكواكب كالواحد في^(٦٨٦) العدَد والنُّقطة في صناعة الهندسة^(٦٨٧)، وفي رسالة النَّسَب العدديّة بيّنّا أن نسبة^(٦٨٨) المساواة^(٦٨٩) أصلٌ وقانونٌ في عِلْم النَّسَب كالواحد في^(٦٩٠) صناعة العدد،

وفي هذه الرسالة قد بيّنّا^(٦٩١) بأن الحركة كالواحد والسَّبب كالاثنين والوَتد كالثلاثة والفاصلة كالأربعة^(٦٩٢)، وسائر نغمات الألحان^(٦٩٣) والغناء مركّبة منها، كما أن سائر الأعداد من الآحاد والعشرات والمائين والألوف مركّبةٌ من الأربعة والثلاثة والاثنين والواحد.

وفي رسالة المنطق قد بيّنّا أيضاً بأن الجَوْهر كالواحد والتَّسع المقولات^(٦٩٤) الأُخَر كالسبعة الآحاد^(٦٩٥) وأربعة^(٦٩٦) منها متقدمة على باقيها وهي الجَوْهر والكَمُّ والكَيْف والمُضَاف، وسائرُها مركّبةٌ منها.

(٦٨٦) في: من بين [د].

(٦٨٧) سقط من ع: وفي رسالة الأسطرونوميا... الهندسة.

(٦٨٨) سقط من ف: نسبة.

(٦٨٩) المساواة: المتساوية [ع].

(٦٩٠) زيادة في ف: علم.

(٦٩١) قد بيّنّا: بيّنّا [أ].

(٦٩٢) سقط من ع: كالواحد والسبب كالاثنين والوتد كالثلاثة والفاصلة كالأربعة.

(٦٩٣) نغمات الألحان: ألحان النغمات [ف].

(٦٩٤) المقولات: كالمقولات [ل] مقولات [د].

(٦٩٥) كالسبعة الآحاد: تسعة آحاد [أ] كتسعة آحاد [ف، ك] كالسبعة آحاد [د، ل].

(٦٩٦) وأربعة: أربعة [د، ط، ف، ك].

والرملُ وخفيفُه^(٦٧٢)

والهزجُ وخفيفُه^(٦٧٣)

وهذه الثمانية الأجناس^(٦٧٤) هي الأصول^(٦٧٥) ومنها يتفرّع سائرُ أنواعِ الألحان^(٦٧٦) وإليها يُنسب، كما أن من^(٦٧٧) الثمانية المقاطع يتفرّع^(٦٧٨) سائرُ^(٦٧٩) ما^(٦٨٠) في دوائر^(٦٨١) العروض. فقد تبين^(٦٨٢) بما ذكرنا أن في^(٦٨٣) كلِّ صناعة من الرياضيات^(٦٨٤) أربعة أصولٍ منها يتركّب سائرُها، وتلك الأربعة أصلُها واحد، كما بيّنا في رسالة الأرثماطقي كيفية تركيب العدد من الواحد الذي قبلَ الاثنين،

وفي رسالة الجومطريا^(٦٨٥) بيّنا بأن النّقطة في صناعة الهندسة مماثلةٌ للواحد في صناعة العدد،

(٦٧٢) وخفيفه: خفيفه [ف].

(٦٧٣) وخفيفه: خفيفه [ف].

(٦٧٤) الثمانية الأجناس: الثمانية أجناس [ف] ثمانية أجناس [ك] الأربعة الأجناس [ل، وفي الهامش: ثمانية أجناس].

(٦٧٥) الأصول: الأصل [أ، ط، ك، ل].

(٦٧٦) أنواع: الأنواع من [ع] الأنواع [أ].

(٦٧٧) كما أن من: ومن [ع] سقط من ل: من. زيادة في د، ط: هذه.

(٦٧٨) زيادة في ل: منها.

(٦٧٩) سقط من ع: سائر.

(٦٨٠) ما: أنواع الألحان [ف].

(٦٨١) دوائر: دواوين [أ، ف] ذوايب [ع].

(٦٨٢) تبين: بيّنا [أ، ف].

(٦٨٣) سقط من ك، ل: في.

(٦٨٤) الرياضيات: الرياضات [د].

(٦٨٥) الجومطريا: جومطريا [د، ك] زيادة في ع: فقد.

[٣] نقرّة وثلاثُ نقراتٍ (٤٥ أ) ونقرتانِ

[٤] ثلاثُ نقراتٍ ونقرّةٌ ونقرتانِ

[٥] نقرتانِ وثلاثُ نقراتٍ ونقرّةٌ

[٦] ثلاثُ نقراتٍ ونقرتانِ ونقرّةٌ

[٧] نقرّةٌ وثلاثُ نقراتٍ ونقرّةٌ

[٨] نقرتانِ وثلاثُ نقراتٍ ونقرتانِ

[٨] ثلاثُ نقراتٍ ونقرّةٌ وثلاثُ نقراتٍ

[١٠] ثلاثُ نقراتٍ ونقرتانِ وثلاثُ نقراتٍ (٦٦٥)

فهذه جميعُ (٦٦٦) أنواع (٦٦٧) الإيقاع (٦٦٨) المركّبة من النقرات، ثلاثةٌ منها مُفردةٌ وتسعة (٦٦٩) ثنائية (٦٧٠) وعشرةٌ ثلاثية، فذلك اثنان وعشرون تركيباً. [١٩٩] والذي تركّب من هذه في

غناء العربية (٦٧١) ثمانية أنواع وهي:

الثقيلُ الأوّلُ وخفيفه

والثقيلُ الثاني وخفيفه

(٦٦٥) السلسلة التامة موجودة في أ و ع.

د: ١ - ٧، ثم ٧ على غير ترتيبه ثم ٩، ١٠ ثم تركيب إضافي.

ط: ١ - ٧ ثم ٣، ١٠، ٥.

ف: ٩، ٥، ٥، ٦، ٧، ٨، ٩، ١٠.

والسلسلة في ك و ل ناقصة، علاوة على أنهما يحتويان على تركيبات غير موجودة في المخطوطات الأخرى.

(٦٦٦) فهذه جميع: هذه جملة [ك].

(٦٦٧) أنواع: النغمات [ل].

(٦٦٨) الإيقاع: الإيقاعات [ع، ط].

(٦٦٩) تسعة: سبعة [ع].

(٦٧٠) ثنائية: ثنائية [أ].

(٦٧١) غناء العربية: الغناء العربي: [أ، ف].

[٨] ومنها نقرتانٍ ونقرةٌ مثلُ قولك^(٦٥٤) تننُ تننُ تن^(٦٥٥) وتُكرّر دائماً،

[٩] ومنها نقرةٌ وسكونٌ بعد^(٦٥٦) نقرةٍ وسكونٍ^(٦٥٧) وهي الأصلُ والعمودُ مثلُ قولك^(٦٥٨) تننُ تننُ تننُ تننُ وتُكرّر^(٦٥٩) دائماً^(٦٦٠)، فهذه جُملة^(٦٦١) النغمات الثنائية. ^(٦٦٢)

فأمّا الثلاثيّة فهي عشر^(*) مرّجات^(٦٦٣):

[١] نقرةٌ ونقرتانٍ وثلاثُ نقراتٍ^(٦٦٤)

[٢] نقرتانٍ ونقرةٌ وثلاثُ نقراتٍ

(٦٥٤) سقط من د: قولك.

(٦٥٥) مثل قولك تننُ تننُ تن: كقولك تننُ تن تننُ تن [ف].

(٦٥٦) بعد: قدر [أ، ع، ف، ك].

(٦٥٧) سقط من أ، د، ع، ف، ك: وسكون.

(٦٥٨) مثل قولك: كقولك [أ، ف].

(٦٥٩) سقط من د، ط: ويكرر.

(٦٦٠) سقط من ع: تن ويكرر دائماً.

(٦٦١) جملة: هي [د، ط] سقط من ع: جملة.

(٦٦٢) لا توجد هذه السلسلة بالتمام في أي مخطوط من المخطوطات السبعة. ومع

أنها تبدأ جميعاً بـ ١ وتنتهي بـ ٩، غير أن سياق ما بينهما من المحتويات كما

يلي:

أ: ٧، ٣، ٤، ٦، ٧، ٨.

د: ٨، ٢، ٥، ٤، ٦، ٧.

ط: ٤، ٢، ٣، ٥، ٧.

ع، ف: ٣، ٤، ٦، ٧، ٨.

ك: ٨، ٢، ٣، ٥، ٧.

ل: ٢، ٣، ٥، ٨، ٦، ٧، ٤.

(*) لعلّ الصواب: عشرة (المدقق).

(٦٦٣) مرّجات: تركيبات [أ، د، ط، ف].

(٦٦٤) زيادة في ف: ونقرتان.

كانت (٦٤٣) منها تسع (٦٤٤) نغماتٍ ثنائية (٦٤٥) وهي هكذا (٦٤٦):

[١] نقرةٌ ونقرتانِ مثلُ قولك (٦٤٧) تنُ تننُ وتُكرّر (٦٤٨) دائماً،

[٢] ومنها نقرةٌ وثلاثُ نقراتٍ مثلُ قولك تنُ تننُ وتُكرّر

دائماً،

[٣] ومنها نقرتانِ ونقرتانِ مثلُ قولك تننُ (٦٤٩) تننُ وتُكرّر

دائماً،

[٤] ومنها نقرتانِ وثلاثُ نقراتٍ مثلُ قولك تننُ تننُ وتُكرّر

دائماً، (٦٥٠)

[٥] ومنها ثلاثُ نقراتٍ وثلاثُ نقراتٍ مثلُ قولك تننُ تننُ

وتُكرّر دائماً،

[٦] ومنها ثلاثُ نقراتٍ ونقرتانِ مثلُ قولك (٦٥١) تننُ تننُ

وتُكرّر دائماً،

[٧] ومنها ثلاثُ نقراتٍ ونقرةٌ مثلُ قولك (٦٥٢) تننُ (٦٥٣) تنُ

وتُكرّر دائماً،

(٦٤٣) الأصول اثنتين اثنتين كانت: أصول اثنتين كان [ف].

(٦٤٤) تسع: سبع [ع].

(٦٤٥) ثنائية: ثنائية [ع].

(٦٤٦) سقط من أ، ف: هكذا.

(٦٤٧) مثل قولك: كقولك [أ، ف].

(٦٤٨) تكرر: يكرر [أ، ط، ك، ل، هنا وفيما يلي].

(٦٤٩) تن: تنا [ع].

(٦٥٠) سقط من ع: وتكرر دائماً.

(٦٥١) مثل قولك تننُ: كقولك تن [ف].

(٦٥٢) سقط من د: مثل قولك.

(٦٥٣) سقط من ف: تننُ تننُ وتكرر دائماً،

ومنها ثلاث نقرات ونقرة مثل قولك.

والوتدُ نَقْرَتَانِ^(٦٢٧) يتلوهُما سَكُونٌ، مِثْلُ قَوْلِكَ تَنْ تَنْ
تَنْ^(٦٢٨) تُكْرَرُ^(٦٢٩) دَائِماً،

وَالْفَاصِلَةُ ثَلَاثُ نَقْرَاتٍ^(٦٣٠) يَتْلُوها سَكُونٌ مِثْلُ
قَوْلِكَ^(٦٣١): تَنْ تَنْ تَنْ تَنْ^(٦٣٢)،

فَهَذِهِ الثَّلَاثَةُ هِيَ الْأَصْلُ وَالْقَانُونُ^(٦٣٣) فِي جَمِيعِ مَا
يَتَرَكَّبُ^(٦٣٤) مِنْهَا مِنْ^(٦٣٥) النِّعْمَاتِ، وَمَا يَتَرَكَّبُ^(٦٣٦) مِنْ
النِّعْمَاتِ^(٦٣٧) مِنَ الْأَلْحَانِ^(٦٣٨)، وَمَا يَتَرَكَّبُ^(٦٣٩) مِنْهَا مِنَ الْغِنَاءِ
فِي جَمِيعِ اللُّغَاتِ^(٦٤٠)،

فَإِذَا رَكَّبْتَ^(٦٤١) مِنْ هَذِهِ الثَّلَاثَةِ الْأَصُولِ اثْنَيْنِ اثْنَيْنِ^(٦٤٢)

(٦٢٧) زيادة في د، ك، ط [فوق النص]، ل [في الهامش]: متحركتان.

(٦٢٨) تَنْ: تَنْ تَنْ [د، ط، ك، ل].

(٦٢٩) تكرر: يكرر [أ، ط، ك، ل].

(٦٣٠) زيادة في د، ك، ط [فوق النص]، ل [في الهامش]: متحركة.

(٦٣١) مثل قولك: كقولك [أ، ف].

(٦٣٢) تَنْ تَنْ تَنْ تَنْ: تَنْ تَنْ تَنْ تَنْ [ك] زيادة في د، ط، ع: تَنْ.

(٦٣٣) الأصل والقانون: الأصول والقوانين [أ] الأصول والقانون [ف].

(٦٣٤) يتركب: يرَّكَّب: [ط، ع، ك] ركب [د].

(٦٣٥) سقط من أ، ف، ك: من.

(٦٣٦) يتركب: يركب [ك].

(٦٣٧) سقط من ع: وما يتركب من النعمات. زيادة في أ، ف، ك، وفي هامش ل:

في جميع اللغات.

(٦٣٨) من الألحان: والألحان [د، ل، وفي هامش ل: من الألحان].

(٦٣٩) يتركب: يرَّكَّب [ع].

(٦٤٠) سقط من أ، ف: في جميع اللغات.

(٦٤١) رَكَّبْتَ: تَرَكَّبْتَ [ل].

(٦٤٢) سقط من أ: اثْنَيْنِ.

قولك^(٦١٤) هل، بل، من^(٦١٥) وما شاكلها،
 والوتد ثلاثة أحرف، اثنان متحرّكان وواحد ساكن مثل
 قولك^(٦١٦): نَعَمْ، بَلَى، أَجَلٌ^(٦١٧)، وما شاكلها،
 والفاصلة أربعة أحرف، ثلاثة متحرّكة^(٦١٨) وواحد
 ساكن، مثل قولك^(٦١٩): عَلِمْتُ^(٦٢٠)، فَعَلْتُ وما شاكلها. ^(٦٢١)
 وأصل^(٦٢٢) هذه الثلاثة حرف ساكن وحرف متحرّك^(٦٢٣)، فهذه
 قوانين العروض وأصوله،
 وأمّا قوانين الغناء والألحان فهي أيضاً^(٦٢٤) ثلاثة أصول،
 وهي^(٦٢٥) السَّبَب [١٩٨] والوتد والفاصلة،
 فأما السَّبَب فنقرة متحرّكة يتلوها سكون، مثل قولك:
 تَنْ تَنْ تَنْ تَكَرَّر^(٦٢٦) دائماً،

-
- (٦١٤) مثل قولك: كقولك [أ، ف].
 (٦١٥) بل، من: وبل، مُر [ل] زيادة في أ، ف: قد.
 (٦١٦) مثل قولك: كقولك [أ، ف] مثل قولهم [ع، ف].
 (٦١٧) بلى، أجل: بلى وأجل [ل] وبلى وأجل [ك] بلى نحن أجل [أ، ف] بلى
 نحن [ط، ع] سقط من د: بلى.
 (٦١٨) ثلاثة متحرّكة: ثلاثة أحرف متحرّكات [ل]. سقط من أ: متحرّكة.
 (٦١٩) مثل قولك: مثل قولهم [ع، ف] كقولك [أ] سقط من د، ط: قولك.
 (٦٢٠) علمت: غلبت [د، ل].
 (٦٢١) سقط من ف: والفاصلة أربعة أحرف... فعلت وما شاكلها.
 (٦٢٢) سقط من د: وأصل.
 (٦٢٣) سقط من ط: وأصل هذه الثلاثة... متحرّك.
 (٦٢٤) سقط من ل: أيضاً.
 (٦٢٥) سقط من ل: وهي.
 (٦٢٦) تَنْ تَكَرَّر: تَنْ تَنْ يكرر [أ، ف] تَنْ تَنْ ويكرر [د، ك].

المتعلم والمبتدئ^(٦٠٠)، ونحتاج أن نذكرها هنا أصل
العروض^(٦٠١) وقوانينه، إذ^(٦٠٢) كانت قوانين الموسيقى مماثلةً
لقوانين^(٦٠٣) العروض،

فنقول إن العروض ميزان^(٦٠٤) الشعر يُعرف به^(٦٠٥) المستوي
منه^(٦٠٦) والمنزح^(٦٠٧).

وهي^(٦٠٨) ثمانية مقاطع^(٦٠٩) في الأشعار العربية^(٦١٠) وهي
هذه^(٦١١):

فُعُولُن مفاعِلُن مُتَفَاعِلُن مُسْتَفْعِلُن
فَاعِلَاتُن فاعِلُن مَفْعُولَاتُن مُفَاعِلَتُن^(٦١٢)،
وهذه الثمانية مركبة من ثلاثة أصول
وهي السبب والتود والفاصلة،

فالسبب حرفان واحد متحرك والآخر^(٦١٣) ساكن مثل

(٦٠٠) يحتاج إليه المتعلم والمبتدئ: يحتاج إليه المبتدئ والمتعلم [ك] يحتاج إليه
المبتدئ والمتد[يلن] [د] يحتاج المبتدئ والمتعلم إليه [ل].

(٦٠١) زيادة في ك: هو ميزان الشعر. زيادة في هامش ل: وهو ميزان الشعر.
(٦٠٢) إذ: إذا [أ، ف].

(٦٠٣) لقوانين: بقوانين [ع].

(٦٠٤) ميزان: هو ميزان [أ، د، ط، ف، ك] هي ميزان [ل].

(٦٠٥) يُعرف به: وبه يعرف [ل].

(٦٠٦) سقط من أ، د، ط، ف: منه.

(٦٠٧) المنزح: المنزح [د].

(٦٠٨) هي: هو [د، ل].

(٦٠٩) مقاطع: مقاطع [ف].

(٦١٠) سقط من ل: العربية.

(٦١١) سقط من ع: هذه.

(٦١٢) مفاعلتن: مفاعلتن [د].

(٦١٣) الآخر: آخر [ك].

والمصاريعَ مرَّبةً من الأفاعيل
والأفاعيل^(٥٨٧) مرَّبةً من الأسباب والأوتاد والفواصل
وأصلها كلها حروف متحرَّكات وسواكن^(٥٨٨)، كما بيِّن^(٥٨٩)
ذلك في كُتب العروض،
وكذلك الأقاويلُ كلها مرَّبةً من الكلمات،
والكلماتُ^(٥٩٠) من الأسماء والأفعال والأدوات،
وكُلُّها مرَّبةً من الحروف المتحرَّكات والسواكن^(٥٩١)، كما
بيِّن^(٥٩٢) ذلك في كُتب^(٥٩٣) المنطق،
وبالجُملة^(٥٩٤) (٤٤ ب) من يريد^(*) أن ينظر في هذا العلم
فليرتَض^(٥٩٥) أولاً في علم^(٥٩٦) النحو والعروض والمنطق بقدر
ما^(٥٩٧) لا بد منه.
وقد ذكرنا^(٥٩٨) في رسائلنا المنطقيَّات^(٥٩٩) ما يحتاج إليه

(٥٨٧) الأفاعيل والأفاعيل: المفاعيل والمفاعيل [أ، د، ط، ف، ك].
(٥٨٨) سواكن: ساكنات [أ، ف].
(٥٨٩) بيِّن: يبيِّن [ف] تبيِّن [ك، ل].
(٥٩٠) زيادة في د، ط: مركبة.
(٥٩١) السواكن: الساكنات [أ، ف].
(٥٩٢) بيِّن: نبيِّن [د، ط].
(٥٩٣) بيِّن ذلك في كتب: بيِّنا في كتاب [أ، ف، ك] نبين ذلك في كتاب [ل].
(٥٩٤) سقط من أ، ف، ك: بالجملة.
(*) الصواب: يُرد.
(٥٩٥) فليرتَض: أن يرتاض [ع] فيحتاج أن يرتاض [د، ط، ك، ل].
(٥٩٦) علم: علوم [ع].
(٥٩٧) بقدر ما: بقدر [أ، ف، ك] بما [ل] ويعرف منها ما [د، ط].
(٥٩٨) وقد ذكرنا: فقد بيِّنا [أ، ف].
(٥٩٩) رسائلنا المنطقيات: رسالة المنطق [ك].

والأزمان كما بيّنا طرفاً من ذلك^(٥٧٥) في رسالة الأخلاق.

فصل^(٥٧٦) [٧]

واعلم يا أخي أيّدك الله بروح منه بأن لكلّ أُمَّة من الناس ألحاناً من الغناء وأصواتاً^(٥٧٧) ونغمات لا يُشبه بعضها بعضاً، ولا^(٥٧٨) يُحصى عددها^(٥٧٩) إلا الله عزّ وجلّ الذي خلقهم وصوّرهم وطبّعهم على اختلاف أخلاقهم وألسنتهم^(٥٨٠) وألوانهم. ولكن نريد أن نذكر^(٥٨١) أصول الغناء وقوانين الألحان التي منها يتركّب^(٥٨٢) سائرُها،

وذلك أن الغناء مرّكّب^(٥٨٣) من الألحان،

واللحن مرّكّب^(٥٨٤) [١٩٧] من النغمات

والنغمات تحدّث^(٥٨٥) من النّقرات والإيقاعات

وأصلها كلّها حركات وسكونات^(٥٨٦)،

كما أن الأشعار مرّكّبة من المصارع

(٥٧٥) من ذلك: منه [د، ط].

(٥٧٦) سقط من ل: فصل.

(٥٧٧) من الغناء وأصواتاً: من الغناء وأصوات [د، ط، ل] وأصواتاً وغناء [أ، ف].

(٥٧٨) ولا: لا [أ، د، ط، ف].

(٥٧٩) زيادة في د، ط، ل: كثرة. زيادة في ك: كثيرة.

(٥٨٠) ألسنتهم: ألسنهم [ف].

(٥٨١) نذكر: نتبين [أ] نيين [ف].

(٥٨٢) منها يتركّب: نذكر فيها [ع].

(٥٨٣) مرّكّب: يتركّب [ف، ل].

(٥٨٤) اللحن مرّكّب: اللحن يتركّب [ل] الألحان مركبة [ع].

(٥٨٥) تحدّث: مرّكة [أ، ف، ك].

(٥٨٦) سكونات: سكون لها [ع] سكون [د، ك، ل].

الأمّة الواحدة من هذه الأمم^(٥٥٦) أقواماً يستلذّون^(٥٥٧) ألحاناً
ونغمات وتفرّح^(٥٥٨) نفوسهم بها ولا^(٥٥٩) يستلذّها غيرهم ولا
يُسَرُّ بها مَنْ سِوَاهُمْ، وهكذا أيضاً ربّما تجد^(٥٦٠) إنساناً
واحداً^(٥٦١) يستلذُّ وقتاً^(٥٦٢) ما لحناً^(٥٦٣) ويسرّه^(٥٦٤) ووقتاً
آخر^(٥٦٥) لا يستلذّه^(٥٦٦) بل ربّما يكرهه ويتألّم^(٥٦٧) منه،
وهكذا^(٥٦٨) تجد حُكمهم في المأكولات والمشروبات^(٥٦٩)
والمشمومات والملبوسات^(٥٧٠) وسائر الملاذّ والزّينات^(٥٧١)
والمَحاسِن، كلُّ ذلك بحسب تغييرات^(٥٧٢) أمزجة الأخلاط
واختلاف الطّباع^(٥٧٣) وتركيب الأبدان وحالات^(٥٧٤) الأماكن

(٥٥٦) سقط من د، ط، ع، ك: الأمم.

(٥٥٧) يستلذّون: يلتذّون [ل].

(٥٥٨) وتفرّح: يفرّح [أ، د، ف] يُفرّح [ع].

(٥٥٩) ولا: ما لا [ع، ل].

(٥٦٠) تجد: وجدت [أ، ف].

(٥٦١) سقط من ط: وهكذا أيضاً ربّما تجد إنساناً واحداً. سقط من د: واحداً.

(٥٦٢) وقتاً: في وقت [أ] في وقت واحد [ف].

(٥٦٣) زيادة في أ، ط: ما.

(٥٦٤) يسر: يسره به [أ، ف، ك].

(٥٦٥) وقتاً آخر: في وقت آخر [أ] وفي وقت [ف].

(٥٦٦) زيادة في ل: ولا يسره.

(٥٦٧) يكرهه ويتألّم: يكرهه وتألّم [أ] كرهه وتألّم [ف].

(٥٦٨) زيادة في أ، ف: أيضاً.

(٥٦٩) المأكولات والمشروبات: مأكولاتهم ومشروباتهم [د، ط، ك].

(٥٧٠) المشمومات والملبوسات: في مشموماتهم وملبوساتهم [أ، ل] مشموماتهم
وملبوساتهم [د، ط، ك].

(٥٧١) الزينات: الزينة [أ، د، ط، ك، ل].

(٥٧٢) تغييرات: تغيّرات [ك، ل].

(٥٧٣) الطّباع: الطّباع [ط، ك].

(٥٧٤) وحالات: في [د، ط، ع] سقط من ك، ل: حالات.

مزاج الأخلاط^(٥٤٦) وتُفَرِّح الطَّبَاعَ، وَتُسْتَلِذُّ بها الأرواحُ وتُسَرُّ بها النفوس.

فصل [٦]

[١٩٦] واعلم يا أخي أيَّدك الله وإيانا بروح منه بأن أمزجة الأبدان كثيرةُ الفنون وطباع الحيوانات كثيرةُ الأنواع، ولكلِّ مزاج وطبيعة^(٥٤٧) نغمة^(٥٤٨) تُشاكِلُها^(٥٤٩) ولحنٌ يلائمها لا يحصي^(٥٥٠) عددها إلا الله عزَّ وجلَّ. والدليل على حقيقة ما قلنا وصحة^(٥٥١) ما وصفنا أنك تجد إذا تأملت لكلِّ أمة من الناس ألحاناً ونغماتٍ يستلذُّونها ويفرحون بها لا^(٥٥٢) يستلذُّها غيرُهم ولا يفرح بها^(٥٥٣) سواهم، مثلَ غناء الدَّيلم والتُّرك والأكراد^(٥٥٤) والأرمن والزَّنج والفرس والروم^(٥٥٥) وغيرهم من الأمم المختلفة الألسن والطباع والأخلاق والعادات، وهكذا أيضاً إنك تجد في

(٥٤٦) زيادة في أ، ط، ف: الخارجة عن الاعتدال. زيادة في د: الخارجة عن حد الاعتدال.

(٥٤٧) طبيعة: كل طبيعة [د، ط، ك، ل].

(٥٤٨) نغمة: نغم [ل].

(٥٤٩) تشاكِلُها: يشاكِلها [أ، د، ط، ك، ل].

(٥٥٠) يحصي: يعلم [د، ك].

(٥٥١) وصحة: صحة حقيقة ما قلنا صحة [أ].

(٥٥٢) لا: ولا [أ، ف، ك، ل].

(٥٥٣) بها: لها [ط].

(٥٥٤) الترك والأكراد: الأتراك والأعراب [د، ك] الأتراك والأعراب والأكراد [ط، ل].

(٥٥٥) والترك والأكراد والأرمن والزنج والفرس والروم: والأتراك والفرس والروم والهند والعرب والأرمن والزنج [أ، ف].

على المسامح^(٥٢٩) دُفَعَةً واحدةً مفاجأةً^(٥٣٠) أفسدت المزاج
وأخرجته^(٥٣١) عن الاعتدال وربما^(٥٣٢) تُحدثُ^(٥٣٣) موتَ
الفَجأة^(٥٣٤)، ولها آلةٌ صناعيّةٌ يُقال لها^(٥٣٥) الأرغن^(٥٣٦)
كان^(٥٣٧) اليونانيون يستعملونها^(٥٣٨) (٤٤ أ) عند الحروب
يُفَزَّعون^(٥٣٩) بها نفوسَ^(٥٤٠) الأعداء مسدودةً^(٥٤١) آذانُ النافخين
فيها. (٥٤٢)

والأصوات المعتدلة المتزنة^(٥٤٣) المتناسبة^(٥٤٤) تُعدّل^(٥٤٥)

-
- (٥٢٩) زيادة في أ، ف: [بلغة].
(٥٣٠) سقط من أ، ف: مفاجأة.
(٥٣١) أخرجه: أخرجت [ع، ك].
(٥٣٢) سقط من د، ط، ك، ل: ربما.
(٥٣٣) تُحدث: يحدث [ع] أحدثت [ف].
(٥٣٤) الفجأة: المفاجأة [د].
(٥٣٥) صناعية يقال لها: متناهية يقال [ع].
(٥٣٦) الأرغن: الأرغن [ك] الأرغن [ل].
(٥٣٧) كان: والمقا/ التعا؟ كانت تسمى ارقا كانت [ف].
(٥٣٨) كان اليونانيون يستعملونها: كانوا يستعملونها اليونانيون [ع].
(٥٣٩) يَفَزَّعون: ويفزَّعون [د، ل] يربعون [أ، ف].
(٥٤٠) سقط من أ: نفوس.
(٥٤١) مسدودة: مسدودة [ع] ويسدون [ف].
(٥٤٢) مسدودة آذانُ النافخين فيها: يسدون النافخون فيها آذانهم عند استعمالها
والنفخ فيها مسدودة آذانُ النافخين فيها [ف] ويسدون النافخون فيها آذانهم
عند استعمالها وتحريكها [ك] ويسدون آذانهم عند استعمالها وتحريكها [ل]
ويسدون آذانهم عند استعمالها وتحريكها والنفخ فيها [ط] ويسدون آذانهم عند
استماعها وتحريكها والنفخ فيها [د].
(٥٤٣) المتزنة: المترتبة [ف، ك].
(٥٤٤) المتزنة المتناسبة: المتناسبة المتزنة [د].
(٥٤٥) تعدّل: يعدّل [أ، د].

وُسِّرَتْ بها النفوس، وإذا^(٥١٤) كانت على غير النسبة تنافرت وتباينت ولم تأتلف ولم تستلذّها المسامع بل تنفر عنها وتشمئزُّ منها النفوس وتكرهها^(٥١٥) الأرواح.

واعلم أن هذه^(٥١٦) الأصوات^(٥١٧) الحادة حارّة، تُسخن مزاجَ أخلاط^(٥١٨) الكيموسات^(٥١٩) الغليظة^(٥٢٠) وتلطّفها^(٥٢١)، والأصوات الغليظة باردة رطبة^(٥٢٢) تُرطب مزاجَ أخلاط الكيموس^(٥٢٣) الحارة اليابسة، والأصوات المعتدلة بين الحادة والغليظة تحفّظُ مزاجَ أخلاط الكيموس^(٥٢٤) المعتدل على حالته كيلا^(٥٢٥) يخرجَ عن^(٥٢٦) الاعتدال،

والأصوات العظيمة الهائلة الغير متناسبة^(٥٢٧) إذا وردت^(٥٢٨)

(٥١٤) وإذا: فإذا [ع] وإن [د، ط، ف، ك].

(٥١٥) تكرهها: نكرتها [ع] يكرهها [ط].

(٥١٦) واعلم أن هذه: و [أ، د، ط، ف، ك].

(٥١٧) أن هذه الأصوات: يا أخي بأن [ل].

(٥١٨) مزاج أخلاط: المزاج الأخلاط [أ] المزاج أخلاط [ل] مزاج [ع].

(٥١٩) الكيموس: والكيموس [أ] الكيموسات [د، ط، ك].

(٥٢٠) الغليظة: الغليظ [أ، ف، ل].

(٥٢١) وتلطّفها: ويلطفها [أ، د] فيلطفها [ل].

(٥٢٢) سقط من أ، ط، ك، ل: رطبة.

(٥٢٣) الكيموس: الكيموسات [د، ط، ك].

(٥٢٤) الكيموس: الكيموسات [ك] سقط من ف: الحارة اليابسة... أخلاط الكيموس.

(٥٢٥) حالته كيلا: حاله لكيلا [أ] حاله لالا [ف].

(٥٢٦) عن: من [ك، ل].

(٥٢٧) الغير متناسبة: الغير متناسبة [أ، ط، ك] غير متناسبة [د، ل].

(٥٢٨) وردت: أوردت [ل].

والطولِ والحَزَقِ^(٤٩٩) إذا نُقِرَتْ نَقْرَةً واحدةً كانت متساويةً،
فإن [١٩٥] كانت متساويةً في الطول مختلفةً في الغَلْظِ كانت
أصواتُ الغليظة^(٥٠٠) أغلَظَ وأصواتُ الدقيقة^(٥٠١) أحدًا،
فإن^(٥٠٢) كانت متساويةً في الطول والغَلْظِ^(٥٠٣) مختلفةً في
الحزقِ كانت أصواتُ المحزقة^(٥٠٤) أحدًا^(٥٠٥) وأصواتُ^(٥٠٦)
المسترخية أغلَظَ^(٥٠٧)،

فإن كانت متساويةً في الغَلْظِ والطول^(٥٠٨) والحزقِ مختلفةً
في النَّقْرِ كان^(٥٠٩) أشدها^(٥١٠) نَقْرًا أعلاها صوتًا.
واعلم بأن الأصوات الحادة والغليظة^(٥١١) متضاداتٌ ولكن
إذا كانت^(٥١٢) على نِسْبَةٍ تَأْلِيفِيَّةٍ ائْتَلَفَتْ وامتزجت واتَّحدت^(٥١٣)
وصارت لحنًا موزونًا، واستلذَّتْها المسامِعُ وفرحت بها الأرواحُ

(٤٩٩) حزق: خرق [ع، وكذا فيما يلي].

(٥٠٠) الغليظة: الغليظ [د، ط، ك].

(٥٠١) الدقيقة: الدقيق [د، ط، ك].

(٥٠٢) فإن: وإن [أ، د، ف، ك، ل].

(٥٠٣) سقط من أ: والغلظ.

(٥٠٤) المحزقة: الخرقه [ع] الحزقة [د، ط، ك، ل].

(٥٠٥) أحد: حادة [أ، د، ط، ف، ك، ل].

(٥٠٦) أصوات: الأصوات [ل].

(٥٠٧) أغلظ: غليظة [أ، د، ط، ف، ك، ل].

(٥٠٨) الغلظ والطول: الطول والغلظ [ف، ل].

(٥٠٩) النقر كان: النقرة كانت [د].

(٥١٠) أشدها: أشدهما [ل].

(٥١١) الحادة والغليظة: الغليظة والحادة [ل].

(٥١٢) زيادة في هامش ل: متساوية.

(٥١٣) زيادة في أ، ف: أصواتها.

سكونٍ محسوس مثل نقرات الأوتار وإيقاعات القُضبان،
وأما المُتَّصِلَةُ من الأصوات فهي مثلُ أصوات المزامير
والنايات^(٤٨٦) والربابات^(٤٨٧) والسرنايات^(٤٨٨) والدواليب
والنواعير وما شاكلها، والأصوات المتَّصلة^(٤٨٩) تنقسم إلى
نوعين^(٤٩٠)، حادَّةٌ وغلِيظَةٌ، فما كان من النايات والمزامير
أوسع^(٤٩١) تجويفاً وثَقْباً كان صوته^(٤٩٢) أغلَظَ، وما كان أضيقَ
تجويفاً وثَقْباً^(٤٩٣) كان^(٤٩٤) أحدَّ صوتاً^(٤٩٥)، ومن جهة
أخرى^(٤٩٦) ما كان من الثَّقْبِ إلى موضع النَّفْخِ أقربَ كانت نغمتهُ
أحدَّ وما كان أبعدَ كان أغلَظَ.

فصل [٥]

اعلمْ يا أخي بأن أصوات^(٤٩٧) الأوتار المتساوية^(٤٩٨) الغلَظِ

-
- (٤٨٦) سقط من ف: والنايات.
(٤٨٧) الربابات: الرباب [ل، ويُكتب فوقها: الدبادب].
(٤٨٨) النايات والربابات والسرنايات: النايات والرباب [ع] الربابات والسرنايات
[أ] النايات والدبادب [د، ط، ك].
(٤٨٩) المتصلة: المنفصلة [أ، ف، ع].
(٤٩٠) نوعين: نوعان [ط].
(٤٩١) أوسع: إن وسع [ل].
(٤٩٢) صوته: أصواتها [أ] أصواته [ك، ل].
(٤٩٣) سقط من ع: وثَقْباً.
(٤٩٤) زيادة في د: صوته أضيق تجويفاً وثَقْباً.
(٤٩٥) أحد صوتاً: أصواتها أحد [أ] صوته أحد [ك، ل].
(٤٩٦) زيادة في أ، د، ط، ف، ك، ل: أيضاً.
(٤٩٧) أصوات: صوت [أ، ف].
(٤٩٨) زيادة في د، ط: في.

بعضها إلى بعض^(٤٧٤) فهي كأصوات نَقَرَاتِ الزَّيْرِ^(٤٧٥) بالإضافة إلى نَقَرَاتِ المَثْنَى^(٤٧٦) ونَقَرَاتِ المَثْنَى إلى المَثَلَّث والمَثَلَّث إلى البَمّ فإنها تكون حادّة، فأما بالعكس فإن صوت البَمّ بالإضافة إلى المَثَلَّث والمَثَلَّث إلى المَثْنَى والمَثْنَى إلى الزَّيْرِ فغليظة.

ومن وجهٍ آخر^(٤٧٧) (٤٣ ب) فإن صوت كلِّ وترٍ مُطْلَق^(٤٧٨) غليظٌ بالإضافة إلى مَزْمومِهِ^(٤٧٩) أيّ مَزْموم كان، فعلى هذا القياس يُعتبر حِدَّةُ الأصوات وغلظُها بإضافة بعضها إلى بعض.

وأما الجهيرُ والخفيت^(٤٨٠) من الأصوات^(٤٨١) فقد تقدّم ذكرُ^(٤٨٢) علّتها في الفصل الأوّل.

والأصواتُ^(٤٨٣) تنقسمُ من جهة الكميّة نوعين^(٤٨٤)، مُتّصِلَةٌ ومُنْفَصِلَةٌ،

فالمُنْفَصِلَةُ هي التي بين أزمانِ حركاتٍ^(٤٨٥) نَقَرَاتِهَا زَمَانٌ

(٤٧٤) سقط من ف: وأما الحاد... إلى بعض. سقط من د: إلى بعض.

(٤٧٥) زيادة في د، ك وفي هامش ل: وحدته.

(٤٧٦) زيادة في ع، ل: وحدته.

(٤٧٧) زيادة في أ، د، ف، ك: أيضاً.

(٤٧٨) فإن صوت كل وتر مطلق: فإن صوتاً مطلقاً [ع] فإن صوت كل وتر مطلقاً [د، ك] فكل صوت وتر مطلق [ل].

(٤٧٩) مزموه: مزموه [ع] مزموه [د] موزونه [ف].

(٤٨٠) الجهير والخفيت: الخفيت والجهير [د، ط] الجهير والحفيف [أ، ف، ل] الحفيف والجهير [ك].

(٤٨١) زيادة في أ، ف: والحادة والغليظة.

(٤٨٢) تقدم ذكر: تقدم ذكرها وذكر [أ، ف] تقدمت إبانها عند ذكر [د، ط، ك].

(٤٨٣) والأصوات: فصل والأصوات [ف].

(٤٨٤) نوعين: نوعان [ط] قسمين [ع].

(٤٨٥) حركات: حركة [ك].

عظيمُ الأصوات وصغيرُها^(٤٥٨) بإضافة بعضها إلى بعض .

وأما السريعُ والبطيء من الأصوات بإضافة بعضها إلى بعض ، فهي التي تكون^(٤٥٩) أزمان^(٤٦٠) سكونات ما بين نَقراتها قصيرة^(٤٦١) بإضافة إلى غيرها^(٤٦٢) ، والمِثال في ذلك أصوات كذينات^(٤٦٣) القَصَّارين ومطارقِ الحدَّادين فإنها سريعة بإضافة إلى أصوات^(٤٦٤) مدَق^(٤٦٥) الرزَّازين^(٤٦٦) والجصَّاصين^(٤٦٧) ، وهي بطيئة بإضافة إليها^(٤٦٨) ، فأما^(٤٦٩) بإضافة^(٤٧٠) إلى أصوات مجاذيف الملاحين^(٤٧١) فهي سريعة ، وعلى هذا المِثال تُعتبر سُرعةُ الأصوات وبُطُوها بإضافة بعضها إلى بعض .

وأما الحادُّ والغليظ من [١٩٤] الأصوات^(٤٧٢) بإضافة^(٤٧٣)

(٤٥٨) عظيم الأصوات وصغيرها: عظم الأصوات وصغرها [أ، ف، ك] عظم الصوت وصغرها [د].

(٤٥٩) زيادة في د: لها .

(٤٦٠) أزمان: زمان [ع].

(٤٦١) سقط من د، ط: قصيرة .

(٤٦٢) زيادة في د، ط: تكون سريعة وبطيئة .

(٤٦٣) كذينات: كوذنيات [أ] كوذانات [ف].

(٤٦٤) زيادة في أ: إلى أصوات .

(٤٦٥) مدَق: مذاق [ل] دق [أ، ف، ك] كذينات [د].

(٤٦٦) الرزَّازين: اللار[ز]الين [ف] اللنلرارين [د].

(٤٦٧) سقط من أ: والجصَّاصين .

(٤٦٨) سقط من د: وهي بطيئة بإضافة إليها .

(٤٦٩) فأما: وأما [أ، د، ف، ك، ل].

(٤٧٠) إلى أصوات مدَق... فأما بإضافة: إلى أصوات كذينات النراريين

والجصَّاصين وأما بإضافة إلى أصوات [ط].

(٤٧١) زيادة من ع: إليها .

(٤٧٢) زيادة من ل: بإضافة أعني .

(٤٧٣) بإضافة: بإضافة [ع].

وإذ قد فرغنا من ذكر ما احتجنا أن نُبيِّنَه، فنقول الآن إن الأصوات تنقسم من جهة الكيفيَّة^(٤٤٦) ثمانية أنواع كلُّ نوعين منها متقابلان من جنس المُضَاف، فمنها العَظِيم والصَّغِير والسريع والبطيء والحادّ والغليظ والجهير والخفيت^(٤٤٧).

فأمَّا العَظِيم والصَّغِير من الأصوات فبإضافة^(٤٤٨) بعضها إلى بعض، والمِثَال في ذلك أصوات^(٤٤٩) الطبول بعضها إلى بعض^(٤٥٠)، وذلك أن أصوات طبول^(٤٥١) المواكب إذا أُضيفت إلى أصوات طبول المخانيث^(٤٥٢) كانت عظيمة، وإذا أُضيفت إلى أصوات طبول^(٤٥٣) الكُوس كانت صغيرة، وأصوات الكُوس إذا أُضيفت إلى صوت^(٤٥٤) الرَّعد والصَّوَاعِق كانت صغيرة، والكُوسُ هو طبلٌ عَظِيمٌ يُضْرَبُ به^(٤٥٥) في تُغُور خُرَاسان عند التَّنْفِير يُسَمَّعُ^(٤٥٦) صَوْتُهُ من^(٤٥٧) فَرَايِخ، فعلى هذا المِثَال يُعْتَبَرُ

(٤٤٦) الكيفية: الكمية [أ، ف].

(٤٤٧) الخفيت: الخفي [ع] الحفيف [أ، ف، ك].

(٤٤٨) فبإضافة: بالإضافة [ط، ع، ك] بإضافة [د].

(٤٤٩) سقط من أ: أصوات.

(٤٥٠) سقط من د: والمِثَال في ذلك... إلى بعض.

(٤٥١) وذلك أن أصوات طبول: ومِثَال ذلك في أصوات الطبول بعضها إلى بعض

وذلك أن أصوات طبول [ط] سقط من أ، ع: طبول.

(٤٥٢) طبول المخانيث: الطبول التي للمخانيث [ع].

(٤٥٣) سقط من د، ك: طبول.

(٤٥٤) صوت: أصوات [أ، ف، ك].

(٤٥٥) سقط من ع: به.

(٤٥٦) يسمع: ويسمع [د].

(٤٥٧) من: على [أ، ف].

مكان (ب ١٩٣) ثانٍ^(٤٢٩) في زمانٍ ثانٍ^(٤٣٠) وضِدُّها^(٤٣١) السكونُ وهو الوقوف في^(٤٣٢) المكان الأول في^(٤٣٣) زمانٍ ثانٍ^(٤٣٤)، والحركة^(٤٣٥) نوعان، سريعة وبطيئة، فالحركة^(٤٣٦) السريعة هي التي يقطع^(٤٣٧) المتحرِّكُ بها مسافةً بعيدة في^(٤٣٨) زمانٍ قصير، والبطيئة هي التي يقطع المتحرِّكُ بها مسافةً أقلَّ منها^(٤٣٩) في ذلك الزمان بعينه، والحركتان^(٤٤٠) لا تُعدَّان^(٤٤١) اثنتين^(٤٤٢) إلا أن يكون بينهما زمان سكون. والسكون هو وقوف المتحرِّك في مكانه الأول زماناً^(٤٤٣) ما كان يمكنه^(٤٤٤) أن يكون متحرِّكاً فيه^(٤٤٥).

-
- (٤٢٩) مكان أول إلى مكان ثان: مكان إلى مكان [أ، د، ط، ف، ك، ل].
 (٤٣٠) سقط من ع: في زمان ثان. سقط من ف: ثان.
 (٤٣١) زيادة في ف: وهو.
 (٤٣٢) في: على [د، ط].
 (٤٣٣) سقط من ل: الأول في.
 (٤٣٤) في زمان ثان: زماناً ثانياً [أ، ف] في الزمان الثاني [ك].
 (٤٣٥) زيادة في ل: هي.
 (٤٣٦) فالحركة: والحركة [ك، ل].
 (٤٣٧) هي التي يقطع: هي تقطع [أ].
 (٤٣٨) سقط من ف: سريعة وبطيئة، فالحركة... بعيدة في.
 (٤٣٩) منها: من تلك [أ، ف] من تلك المسافة [د، وفي هامش ط].
 (٤٤٠) الحركتان: الحركات [ل].
 (٤٤١) تعدَّان: يعدَّان [أ، ط، ك] [تب]عد ؟ [ف].
 (٤٤٢) اثنتين: اثنتين [ك] اثنان [د] سقط من ف: اثنتين.
 (٤٤٣) زماناً: زمان [ع].
 (٤٤٤) يمكنه: يمكن [د، ط].
 (٤٤٥) زيادة في د، ط، ك: حركة ما. وفي ل: حركتها.

وَعَلَّظَهَا، وَبِحَسَبِ فَنُون^(٤١٢) تَحْرِيكِ الْمَحْرُكِينَ لَهَا .
وَنَحْتَاجُ أَنْ نَذْكُرَ مِنْ هَذَا الْفَنِ طَرَفًا، إِذْ^(٤١٣) كَانَ أَحَدُ
أَغْرَاضِنَا مِنْ هَذِهِ الرِّسَالَةِ تَبْيَانُ^(٤١٤) مَا هِيَ الْمَوْسِيقِي الَّذِي هُوَ
أَلْحَانُ مُؤْتَلَفَةٍ وَنَغْمَاتٌ مُتَزَنَةٌ^(٤١٥) وَهُوَ^(٤١٦) الْمُسَمَّى الْغِنَاءُ^(٤١٧) .
وَلَمَّا تَبَيَّنَ بِمَا^(٤١٨) ذَكَرْنَا^(٤١٩) أَنَّ الْغِنَاءَ إِنَّمَا^(٤٢٠) هُوَ أَلْحَانٌ
مُؤْتَلَفَةٌ،

وَاللَّحْنُ^(٤٢١) هُوَ^(٤٢٢) نَغْمَاتٌ مُتَزَنَةٌ^(٤٢٣) ،
(٤٣ أ) وَالنَّغْمَاتُ الْمُتَزَنَةُ^(٤٢٤) لَا تَحْدُثُ إِلَّا مِنْ حَرَكَاتٍ
مُتَوَاتِرَةٍ بَيْنَهَا سَكُونَاتٌ^(٤٢٥) مُتَتَالِيَةٌ^(٤٢٦) ، احْتَجْنَا أَنْ نَذْكُرَ^(٤٢٧)
أَوَّلًا مَا الْحَرَكَةُ وَمَا السَّكُونُ .
فَنَقُولُ إِنْ الْحَرَكَةُ هِيَ النُّقْلَةُ لِلشَّيْءِ^(٤٢٨) مِنْ مَكَانٍ أَوَّلٍ إِلَى

-
- (٤١٢) زيادة في ف: تلك. سقط من ل: فنون.
(٤١٣) إذ: إذا [ك].
(٤١٤) تبيان: تبیان [ك] فصل في [أ، ف].
(٤١٥) متزنة: مرتبة [د].
(٤١٦) وهو: وهي [د، ط، ع، ك] الذي هو [ل].
(٤١٧) سقط من د، ك، ل: المسمى.
(٤١٨) تبين بما: [يلثيرها] [د] سقط من أ، ف: تبين بما.
(٤١٩) ذكرنا: ذكرناه [د].
(٤٢٠) سقط من أ: إنما.
(٤٢١) واللحن: وأن اللحن [ع].
(٤٢٢) سقط من د، ط: هو.
(٤٢٣) متزنة: مرتبة [د].
(٤٢٤) المتزنة: المرتبة [د] سقط من ل: والنغمات المتزنة.
(٤٢٥) سكونات: سوكنات [ف] سكنات [ك، ل].
(٤٢٦) متتالية: متوالية [ع].
(٤٢٧) نذكر: نبين [د، ط].
(٤٢٨) سقط من أ، د، ط، ف، ك، ل: للشئ.

اختلاف تلك الأصوات يكون بحسب شدة يَبْسِها وصلابتها وكمية مقاديرها^(٣٩٨) من الكبر والصغر والطول والقصر والسعة والضيق^(٣٩٩) وفنون أشكالها من^(٤٠٠) التجويف والتقيب^(٤٠١) وقوة الصدم^(٤٠٢) وما يعرض فيها من الأسباب، وسنبين^(٤٠٣) ذلك في موضعه.

وأما فنون أصوات الآلات المتخذة للتصويت كالطبول^(٤٠٤) والبوقات والدباب^(٤٠٥) والدُّفوف والنايات^(٤٠٦) والسراني^(٤٠٧) والمزامير^(٤٠٨) والعيدان^(٤٠٩) وما شاكلها^(٤١٠)، فهي بحسب أشكالها وجواهرها التي هي مُتَّخَذَةٌ^(٤١١) منها وكبرها وصغرها وطولها وقصرها، وسعة أجوافها وضيق ثقبها ودقة أوتارها

-
- (٣٩٨) مقاديرها: مقدارها [أ، ف، ك].
 (٣٩٩) القصر والسعة والضيق: القصر والضيق والسعة [أ، ف] العرض والعمق والسعة والضيق [ل].
 (٤٠٠) من: في [أ، ف] بين [ك].
 (٤٠١) التقيب: الثقب [أ، ف، ل] التفتيت [د] زيادة في هامش ل: التقيب.
 (٤٠٢) الصدم: الصدمة [د، ك].
 (٤٠٣) وسنبين: كما سنبين [د، ط، ك، ل].
 (٤٠٤) كالطبول: كالطنبور والطبول [ل].
 (٤٠٥) والدباب: والديادب [ك] الدبابات والدباب [ل] سقط من أ، ف، ل: والدباب.
 (٤٠٦) سقط من ط، ع، ك، ل: والنايات.
 (٤٠٧) النايات والسراني: السراني والنايات [د].
 (٤٠٨) السراني والمزامير: والمزامير والسرانيات [أ، ف، ل] السراني والمزامير [ك] السراني والنايات والمزامير [ط].
 (٤٠٩) زيادة في أ، ف: والمعازف.
 (٤١٠) سقط من د: وما شاكلها.
 (٤١١) هي متخذة: تتخذ [أ، ف].

والجَرَاد والصَّرَاصِر وما شاكلها، فإنها تُحرِّكُ الهواءَ بجناحين لها (٣٨٢) بِسُرْعَةٍ (٣٨٣) وَخِفَّةٍ، ويحدث (٣٨٤) من ذلك أصواتٌ (٣٨٥) مختلفة كما يحدث من تحريك أوتار العيdan، وتكون (٣٨٦) فنونها واختلاف أنواعها بحسب لطافة أجنحتها وغلظها وقصرها وطولها (٣٨٧) وسُرْعَة تحريك أجنحتها (٣٨٨).

وأما الحيواناتُ الخُرْسُ كالسَّمَك (٣٨٩) والسَّرَطَان والسَّلْحَفَة (٣٩٠) وغيرها (٣٩١) فهي خُرْسٌ (٣٩٢) لأن ليس لها رئة (٣٩٣) ولا جناحان (٣٩٤) فلا (٣٩٥) يكون لها أصوات.

وأما فنونُ أصواتِ الجواهر المعدنية والنباتية كالخشب (٣٩٦) والحديد والنحاس (٣٩٧) والزُّجاج والحجارة وما شاكلها، فإن

(٣٨٢) تحرك بجناحين لها الهواء: يحرك بجناحها الهواء [أ، ف].

(٣٨٣) بسرعة: سرعة [ك، ل].

(٣٨٤) ويحدث: فيحدث [ط، ك، ل].

(٣٨٥) ذلك أصوات: أجنحتها أصواتاً [ل].

(٣٨٦) تكون: يكون [ع] تكون [ط].

(٣٨٧) وقصرها وطولها: وطولها وقصرها [د، ل] وطولها وعرضها [ك].

(٣٨٨) وسرعة تحريك أجنحتها: وتحريك ذلك وسرعته [ل]: وسرعة تحريكها لها

[د، ك، وفي هامش ل]. سقط من ف: وغلظها وقصرها... أجنحتها.

(٣٨٩) زيادة في ف: والجراد.

(٣٩٠) السرطان والسَّلْحَفَة: السراطين والسلاحف [أ، ف] السرطان والسلاحف

[ط، ك] السَّلْحَفَة والسرطان [ع] السلاحف والسرطانات [د].

(٣٩١) وغيرها: وما شاكلها [د، ط، ك] سقط من ل: وغيرها.

(٣٩٢) سقط من ع، ف: خرس.

(٣٩٣) رئة: رئت [أ، ف].

(٣٩٤) جناحان: أجنحة: [أ، ف، ل].

(٣٩٥) فلا: ولا [ف] لا [أ، ع، ك، ل].

(٣٩٦) كالخشب: والخشب [ل].

(٣٩٧) الحديد والنحاس: النحاس والحديد [د].

وجنوباً وفوقاً وتحتاً، فإذا صَدَمَ في حركته وجريانه الجبالَ
والحَيِّطَانِ^(٣٧١) أو^(٣٧٢) الأشجار والنبات وتخلَّلَها^(٣٧٣)
حدثٌ^(٣٧٤) من ذلك فنونُ الأصوات والدويِّ والطنينِ مختلفة
الأنواع^(٣٧٥)، كلُّ ذلك بحسبِ كِبَرِ الأجسام المصدومة وصِغَرِها
وأشكالها وتجويفها يطول شرحُها^(٣٧٦).

وأما أصوات المياه في جريانها وتموُّجها وتصادمها
الأجسام^(٣٧٧) فإن الهواءَ لِلطَافَةِ جَوهره وسِيلانِ عُنُصره
يتخلَّلُها^(٣٧٨) كلَّها، ويكون حدوث تلك الأصوات وفنون أنواعها
بحسب تلك الأسباب^(٣٧٩) التي ذكرناها في أمر الرياح.

وأما أصوات الحيوانات ذواتِ الرِّئَةِ واختلافُ أنواعها وفنون
نغماتها، فهي بحسب طول أعناقها^(٣٨٠) وقِصَرها وسعة حلاقيما
وتركيب حناجرها وشِدَّة^(٣٨١) استنشاقها الهواء وقوَّة إرسال
أنفاسها من أفواهاها ومناخرها يطول [١٩٢] شرحُها.

وأما أصواتُ الحيوانات التي ليست لها رئة كالزَّنابيرِ

(٣٧١) والحيطان: أو الحيطان [ع].

(٣٧٢) أو: و [أ]، د، ف، ك، ل.

(٣٧٣) تخلَّلها: يخلَّلها [أ].

(٣٧٤) حدث: أحدث [ك].

(٣٧٥) سقط من ع: الأنواع.

(٣٧٦) سقط من ع، ك: وتجويفها يطول شرحها.

(٣٧٧) تصادمها الأجسام: تصادمها للأجسام [ط] تصادم الأجسام لها [أ]، ف.

(٣٧٨) تخلَّلها: يخلَّلها [ل].

(٣٧٩) الأسباب: الأنواع والأسباب [أ]، ف.

(٣٨٠) أعناقها: عناقها [ع].

(٣٨١) شدة: لشدة [ع].

ذلك^(٣٥٥) البخار الرطب شيء^(٣٥٦) في^(٣٥٧) جوف السحاب
 فيصير^(٣٥٨) ريحاً ويدور^(٣٥٩) في خلل السحاب وجوف الغيوم
 يطلب^(٣٦٠) الخروج فيسمع^(٣٦١) له دويٌّ وتقرقر^(٣٦٢) كما يسمع
 الإنسان من^(٣٦٣) جوفه إذا كان يعرض له^(٣٦٤) ريحٌ وانتفاخٌ،
 وربما ينشق^(٣٦٥) السحابُ دفعةً واحدةً مفاجأةً فتخرج^(٣٦٦) تلك
 الريحُ ويكون منها صوتٌ هائلٌ يُسمَّى صاعقةً، (٤٢ ب) فهذه علّةُ
 صوتِ^(٣٦٧) الرعد وكيفية حدوثه.

وأما^(٣٦٨) أصواتُ الرياحِ وعلّةُ حدوثها فهي^(٣٦٩) أن
 الرياح^(٣٧٠) ليست شيئاً سوى تموجِ الهواءِ شرقاً وغرباً وشمالاً

(٣٥٤) يدور من: يدور [ع] يذوب [أ].

(٣٥٥) ذلك: تلك [ك].

(٣٥٦) سقط من أ، ع: شيء. سقط من ف: من جوف السحاب ضوء يسمّى
 البرق... شيء.

(٣٥٧) في: من [ط، ك، ل].

(٣٥٨) فيصير: فيصير [ع] ويصير [أ، د، ط، ف].

(٣٥٩) ويدور: ويدور وربما يدور [ع].

(٣٦٠) يطلب: ويطلب [د، ط، ك].

(٣٦١) فيسمع: ويسمع [د، ط، ك].

(٣٦٢) دوي وتقرقر: دويّاً وتقرقراً [أ، ف].

(٣٦٣) من: في [ع].

(٣٦٤) كان يعرض له: كان يعترض له [ع] عرض له [أ، ف].

(٣٦٥) ينشق: انشق [أ] استشق ؟ [ف].

(٣٦٦) فتخرج: وتخرج [أ، ع، ف].

(٣٦٧) صوت: لصوت [أ].

(٣٦٨) وأما: فأما [أ، ط، ف، ك].

(٣٦٩) فهي: فهو [أ، ط، ع، ف، ل].

(٣٧٠) سقط من ع: الرياح.

صوت الرّعد، وقد بيّنا علّة حدوثه في رسالة الآثار العلويّة، ولكن نذكر ها هنا^(٣٤٢) ما لا بدّ منه.

أمّا علّة حدوثه فهو أن البخارين الصاعدين في الجوّ من البحار والبراري إذا ارتفعا في الهواء [١٩١] واختلطا واحتوى البخار الرّطب على اليباس الذي هو الدخان واحتوى برد^(٣٤٣) الرّمهرير على البخارين الرّطب واليباس وحصرهما، انضغَط البخار اليباس في جوف^(٣٤٤) البخار الرطب والتهب وطلب الخروج^(٣٤٥) فدفع البخار الرطب وخرقه، فيتفرّق^(٣٤٦) البخار الرطب من حرارة ذلك الدخان اليباس^(٣٤٧) كما تتفرّق الأشياء الرطبة إذا احتوت عليها حرارة النار دفعة واحدة، ويحدث^(٣٤٨) من ذلك قرع في الهواء^(٣٤٩) ويتدافع إلى^(٣٥٠) جميع الجهات، وينقلح من خروج ذلك الدخان اليباس من^(٣٥١) جوف السحاب ضوء يُسمّى البرق، كما يحدث من دخان السراج المنطفئ إذا أُذني من سراج^(٣٥٢) يشتعل^(٣٥٣) ثم ينطفئ. وربما يدور من^(٣٥٤)

(٣٤٢) ها هنا: فيها [ع].

(٣٤٣) سقط من د، ك: برد.

(٣٤٤) جوف: جوهر [ع].

(٣٤٥) زيادة في د: وتفرّق اليباس.

(٣٤٦) فيتفرّق: تفرّق [أ، د، ط، ك].

(٣٤٧) سقط من أ: البخار الرطب من حرارة ذلك الدخان اليباس.

(٣٤٨) ويحدث: فيحدث [د، ط].

(٣٤٩) قرع في الهواء: في الهواء قرع [ع].

(٣٥٠) ويتدافع إلى: يندفع إلى [أ، ف] ويندفع في [ك].

(٣٥١) من: في [أ، ك].

(٣٥٢) زيادة في أ: آخر.

(٣٥٣) يشتعل: مشتعل [أ، ف، ك، ل].

يتردد^(٣٢٧) ويصدمها مرةً بعد مرةً وتارةً بعد^(٣٢٨) أخرى إلى أن يسكن، فما كان منها^(٣٢٩) أوسع كان صوته أعظم لأنه يصدم هواءً كثيراً داخلًا وخارجاً.

والبوقات الطوال أصواتها تكون^(٣٣٠) أعظم لأن الهواء المتموج^(٣٣١) فيها يصدمها^(٣٣٢) في مروره مسافةً بعيدة.

الحيوانات^(٣٣٣) الكبيرة الرثة^(٣٣٤) الطويلة الحلقوم^(٣٣٥) الواسعة المناخر والأشداق تكون جهيرة^(٣٣٦) الأصوات لأنها تستنشق هواءً كثيراً وترسله^(٣٣٧) بشدة وقوة^(٣٣٨).

وقد تبين بما ذكرنا بأن علةً عظم^(٣٣٩) الأصوات إنما هي بحسب عظم الأجسام المصوتة وشدة^(٣٤٠) صدمها وكثرة تموج الهواء في الجهات عنها^(٣٤١)، فنقول الآن إن أعظم الأصوات

(٣٢٧) في جوفها يتردد: يتردد في جوفها [أ، ف].

(٣٢٨) سقط من أ: وتارة. سقط من د، ط، ف: بعد مرة وتارة. سقط من ع: بعد مرة وتارة بعد.

(٣٢٩) سقط من أ، ف: منها.

(٣٣٠) أصواتها تكون: أصواتها يكون [أ] كان صوتها [ك] يكون صوتها [د، ط].

(٣٣١) المتموج: الممتزج [ع].

(٣٣٢) فيها يصدمها: بصدمها [أ، ف].

(٣٣٣) الحيوانات: والحيوانات [د، ط].

(٣٣٤) الرثة: الرثاء [د، ط، ك].

(٣٣٥) الحلقوم: الحلاقيم [د، ط، ك].

(٣٣٦) جهيرة: جهرة [د].

(٣٣٧) كثيراً وترسله: كثيرة ويرسله [د].

(٣٣٨) سقط من أ، د، ط، ف، ك: وقوة.

(٣٣٩) سقط من ع: عظم.

(٣٤٠) وشدة: وصلته [أ].

(٣٤١) عنها: كلها [أ، ف].

وَاحِدٌ وَشَكْلُهُمَا وَاحِدٌ نُقِرَا^(٣١٣) نَقْرَةً وَاحِدَةً مَعاً فَإِنَّ
صَوْتَيْهِمَا^(٣١٤) يَكُونَانِ مُتَسَاوِيَيْنِ، فَإِنْ كَانَ أَحَدُهُمَا أَجَوْفَ كَانَ
صَوْتُهُ أَعْظَمَ لِأَنَّهُ يَصْدِمُ هَوَاءً كَثِيراً^(٣١٥) (٤٢ أ) دَاخِلاً وَخَارِجاً.
وَالْأَجْسَامُ الْمُلْسُ^(٣١٦) أَصْوَاتُهَا تَكُونُ^(٣١٧) مَلْسَاءَ^(٣١٨) لِأَنَّ
السُّطُوحَ الْمُشْتَرَكَةَ الَّتِي بَيْنَهَا^(٣١٩) وَبَيْنَ الْهَوَاءِ مَلْسَاءَ^(٣٢٠)،
وَالْأَجْسَامُ الْخَشِنَةَ تَكُونُ^(٣٢١) أَصْوَاتُهَا خَشِنَةً لِأَنَّ
السُّطُوحَ^(٣٢٢) الْمُشْتَرَكَةَ بَيْنَهَا وَبَيْنَ الْهَوَاءِ^(٣٢٣) خَشِنَةً^(٣٢٤)،
وَالْأَجْسَامُ الصُّلْبَةَ الْمَجُوفَةَ كَالْأَوَانِي وَالطَّرْجَهَاتِ^(٣٢٥)
وَالْجِرَارِ^(٣٢٦) إِذَا نُقِرَتْ طُنَّتْ زَمَانًا طَوِيلًا لِأَنَّ الْهَوَاءَ فِي جَوْفِهَا

(٣١٣) نقرا: ونقرا [د، ف، ك، ل].

(٣١٤) صوتيهما: صوتهما [ع].

(٣١٥) كثيراً: أكثر [د].

(٣١٦) المُلس: الأملس [أ].

(٣١٧) أصواتها تكون: تكون أصواتها [د] سقط من ك: تكون.

(٣١٨) ملساء: مُلْساً [ط، ف].

(٣١٩) التي بينها: التي بينه [ع] بينهما [أ، ف].

(٣٢٠) ملساء: ملس لينة والهواء الذي بينهما المشترك فهو أملس أيضاً [ع] ملس

والهواء المشترك الذي بينهما أيضاً ملس [ط] ملس والهواء التي بينهما أيضاً

ملسا [د] ملساً [ف].

(٣٢١) سقط من أ، ف: تكون.

(٣٢٢) السطوح: سطوح الهواء [ف].

(٣٢٣) الهواء: الجسم [ف].

(٣٢٤) تكون أصواتها خشنة... الهواء خشنة: بالعكس من ذلك يكون المضرس

الخشن [ع] أصواتها خشنة لأن سطوح الهواء المشتركة بينها وبين الجسم

خشنة [أ] خشنة: خشن [د].

(٣٢٥) الطرجهات: الطرجهات [ل] الطرجهات [أ، ف].

(٣٢٦) زيادة في هامش ل: والجرات.

فصل (٢٩٩) [٤]

وإذ قد فرغنا من ذكر ماهية الأصوات وكيفية حمل الهواء لها^(٣٠٠) وكيفية إدراك القوة السامعة لها، فنذكر^(٣٠١) الآن كيفية^(٣٠٢) حدوث أنواعها من تصادم الأجسام بعضها ببعض.

فنقول إن كل جسمين تصادما برفقٍ ولينٍ لا يُسمع لهما^(٣٠٣) صوتٌ لأن الهواء ينسل^(٣٠٤) من بينهما قليلاً قليلاً^(٣٠٥) [١٩٠] فلا يحدث صوتاً^(٣٠٦)، وإنما يحدث الصوت من تصادم الأجسام متى كان صدمتها^(٣٠٧) بسرعة وشدة^(٣٠٨)، لأن الهواء عند ذلك يندفع^(٣٠٩) مفاجأةً ويتموج بحركته إلى الجهات الست بسرعة فيحدث الصوت ويُسمع كما بيّنا في فصل^(٣١٠) قبل هذا.

والأجسام العظيمة إذا تصادمت كان صوتها^(٣١١) أعظم لأن تموج الهواء^(٣١٢) أكثر، وكل جسمين من جوهري واحد مقدارهما

(٢٩٩) سقط من د، ط، ع، ك، ل: فصل.

(٣٠٠) سقط من ع، ف: لها.

(٣٠١) فنذكر: فإننا نذكر [ع].

(٣٠٢) كيفية: كيف [ع].

(٣٠٣) لهما: لها [د، ع].

(٣٠٤) ينسل: انسل [د] زيادة في ل: تصادما.

(٣٠٥) سقط من أ، ط: قليلاً.

(٣٠٦) صوتاً: لصوت [أ] صوت [ف].

(٣٠٧) صدمتها: صدمتها [د].

(٣٠٨) بسرعة وشدة: بشدة وسرعة [ك، ل].

(٣٠٩) لأن الهواء عند ذلك يندفع: فينضغط الهواء ويندفع عند ذلك [أ، ف].

(٣١٠) سقط من أ، ف: في فصل.

(٣١١) صوتها: أصواتها [ل].

(٣١٢) لأن تموج الهواء: لأنها تموج هواء [أ، د، ط، ف، ك] لأن تموج هوائها [ل].

فُتِحَسَّ عند ذلك^(٢٨٣) القوَّة السامِعة بتلك الحركة وذلك التغيير .
 واعلم^(٢٨٤) أن^(٢٨٥) كلَّ صوتٍ له^(٢٨٦) نغمة وصيغة^(٢٨٧)
 وهيئة روحانية خلاف صوت آخر، وأن^(٢٨٨) الهواء من شرف
 جوهره ولطافة عُنُصره يحمل كلَّ صوت بهيئته وصيغته
 ويحفظه^(٢٨٩)، لئلا يختلط بعضها^(٢٩٠) ببعض فيفسد هيأتها^(٢٩١)،
 إلى أن يبلغها^(٢٩٢) إلى^(٢٩٣) أقصى غاياتها ومدى نهاياتها^(٢٩٤)
 عند القوَّة السامِعة^(٢٩٥) ليؤدِّيها إلى القوَّة المتخيِّلة التي مَسْكُنُها
 مُقدِّم الدِّماغ^(٢٩٦)، وذلك تقدير العزيز العليم^(٢٩٧) الذي ﴿جَعَلَ
 لَكُمْ^(٢٩٨) السَّمْعَ وَالْأَبْصَرَ وَالْأَفْئِدَةَ قَلِيلًا مَّا تَشْكُرُونَ﴾.

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- (٢٨٣) عند ذلك: تلك [ل].
 (٢٨٤) زيادة في أ: أيها الأخ أيُّدك الله .
 (٢٨٥) سقط من ف: القوة السامعة... واعلم أن .
 (٢٨٦) له: فله [د، ط، ك، ل].
 (٢٨٧) وصيغة: وضعية [أ] وصيغة وصغية [ك].
 (٢٨٨) آخر، وأن: الآخر فإن [د].
 (٢٨٩) ويحفظه: ويحفظها [أ، ع، ك].
 (٢٩٠) بعضها: بعضه [د، ط].
 (٢٩١) هيأتها: هيئته [د، ط].
 (٢٩٢) يبلغها: يبلغ [ل] يبلغه [د].
 (٢٩٣) سقطت من أ، ف: إلى .
 (٢٩٤) أقصى غاياتها ومدى نهاياتها: أقصى مدى غاياتها [ف، ك، ل] أقصى غاياته
 [د] سقط من أ، ط: ومدى نهاياتها .
 (٢٩٥) زيادة في أ، ف: التي مسكنها صماخا الأذنين .
 (٢٩٦) سقط من ع، ط: التي مسكنها مقدِّم الدماغ .
 (٢٩٧) العليم: الحكيم [ل].
 (٢٩٨) سقط من ع: لكم .

وكلُّ هذه الأصوات إنّما هي قَرَعٌ يحدث في الهواء من تصادم الأجرام، وذلك أن الهواء لشِدَّة لَطافته وخِفَّة جَوهره وسُرعة حركة^(٢٧٠) أجزائه يتخلَّل الأجسامَ كُلَّها، فإذا صدم جِسْمٌ جِسْماً آخرَ انسلَّ ذلك الهواءُ من بينهما^(٢٧١) بسرعة^(٢٧٢) وتدافع^(٢٧٣) وتموَّج إلى جميع^(٢٧٤) الجهات. وحدث^(٢٧٥) من حركته شكلٌ كرويٌّ^(٢٧٦) واتَّسع كما تتَّسع القارورة من نفخ^(٢٧٧) الزجاج فيها، وكلِّما اتَّسع ذلك الشكل ضعُفت حركته وتموَّجه إلى أن يسكُن ويضمحلَّ. فمن كان حاضراً من الناس وسائر الحيوان الذي له أذن^(٢٧٨) بالقرب من ذلك المكان، تموَّج ذلك^(٢٧٩) الهواءُ بحركته ودخل في أُذنيه وبلغ إلى صِماخيه في^(٢٨٠) مؤخَّر الدِّماغ، وتموَّج^(٢٨١) ذلك^(٢٨٢) الهواء الذي هناك

(٢٧٠) حركة: حركته وحركة [أ، ف].

(٢٧١) سقط من ع: من بينهما.

(٢٧٢) بسرعة: وتراقى [د، ل]. سقط من أ، ط، ف، ك: بسرعة.

(٢٧٣) تدافع: زيادة في ط من فوق: وتراقى.

(٢٧٤) جميع: بعض [د].

(٢٧٥) حدث: حدثت [ع] أحدث [د، ط].

(٢٧٦) شكل كروي: شكل كري [ك، ل] شكل كري مجسم [أ، ف] شكلاً كرياً [د، ط].

(٢٧٧) من نفخ: بنفخ [ل].

(٢٧٨) الحيوان الذي له أذن: الحيوانات التي لها آذان [أ، ف] الحيوانات التي له أذن [ك]: الحيوان الذي أذن [ع].

(٢٧٩) تموَّج ذلك: يتموَّج ذلك [ك، ل] سقط من ع: ذلك.

(٢٨٠) في: من [د، ف].

(٢٨١) زيادة في أ، د، ط، ف، ك: أيضاً.

(٢٨٢) سقط من ع: ذلك.

كصوت^(٢٥٢) الطَّبل والبُوق^(٢٥٣) والزَّمر^(٢٥٤) والأوتار وما شاكلها^(٢٥٥). والحيوانية^(٢٥٦) نوعان، منطقية^(٢٥٧) وغير منطقية^(٢٥٨)، فغير^(٢٥٩) المنطقية^(٢٦٠) [١٨٩] هي أصوات سائر الحيوانات^(٢٦١) (٤١ ب) الغير الناطقة^(٢٦٢).

وأما المنطقية فهي أصوات الناس، وهي^(٢٦٣) نوعان، دالة وغير دالة، فغير الدالة^(٢٦٤) كالضحك^(٢٦٥) والبكاء والصياح^(٢٦٦)، وبالجمله^(٢٦٧) كل صوت لا هجاء له، وأما الدالة فهي الكلام والأقاويل^(٢٦٨) التي لها هجاء^(٢٦٩).

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- (٢٥٢) كصوت: صوت [د، ط].
 (٢٥٣) الطبل والبوق: البوق والطبل [أ، ف].
 (٢٥٤) زيادة في ف: والعود.
 (٢٥٥) شاكلها: شاكل ذلك [أ، ف]. وغير الحيوانية أيضاً نوعان... وما شاكلها: لا يوجد هنا في ط، بل نُقل إلى ما بعد: الأقاويل التي لها هجاء.
 (٢٥٦) والحيوانية: والحيوان [ك] فالحيوانية [د].
 (٢٥٧) منطقية: منطقية [ل: هنا وفيما يلي].
 (٢٥٨) منطقية وغير منطقية: منطقي وغير منطقي [ع].
 (٢٥٩) فغير: فالغير [أ، ف] وغير [ك].
 (٢٦٠) المنطقية: المنطقي [ع] منطقية [ف].
 (٢٦١) هي أصوات سائر الحيوانات: أصوات سائر الحيوان [ع] هي أصوات الحيوانات [أ، ف، ك].
 (٢٦٢) الغير الناطقة: التي هي غير ناطقة [ل] غير الناطقة [أ، د، ف].
 (٢٦٣) زيادة في أ، ف: أيضاً.
 (٢٦٤) فغير الدالة: فالتى هي غير دالة [د] سقط من أ: فغير الدالة. سقط من ل: دالة، فغير الدالة.
 (٢٦٥) فغير الدالة كالضحك: والتي هي غير دالة فكالضحك [ط].
 (٢٦٦) زيادة في هامش ل: والصراخ.
 (٢٦٧) سقط من ع، ك: بالجمله.
 (٢٦٨) سقط من ك: وهي نوعان دالة وغير دالة... والأقاويل.
 (٢٦٩) معظم النص في بداية هذا الفصل معكوس في د، حيث يقدم النوع الحيواني ويؤخر غير الحيواني.

والصوت هو^(٢٣٨) قَرَعٌ يحدث في الهواء من تصادم الأجسام بعضها بعضاً^(٢٣٩)، كما بيَّنا في رسالة الحاسِّ والمحسوس، لكن نحتاج أن نذكر^(٢٤٠) من ذلك في هذه الرسالة ما^(٢٤١) لا بدّ منه.

فصل [٣]

في كَيْفِيَّةِ إدراك القوَّة السامِعة للأصوات^(٢٤٢)

فأمَّا كَيْفِيَّةُ إدراك القوَّة السامِعة^(٢٤٣) لِمَحْسُوسَاتِهَا^(٢٤٤) التي هي الأصوات^(٢٤٥) فاعلم^(٢٤٦) يا أخي أن الأصوات نوعان، حيوانية وغير حيوانية، وغير الحيوانية أيضاً^(٢٤٧) نوعان، طبيعيَّة وآليَّة^(٢٤٨)، فالطبيعيَّةُ كصوت^(٢٤٩) الحجر والحديد والخشب والرعد والريح وسائر الأجسام التي لا روح لها^(٢٥٠) من الجَمادات^(٢٥١)، والآليَّةُ

(٢٣٨) سقط من د، ط: هو.

(٢٣٩) بعضاً: لبعض [د، ط، ل] ع (في الهامش): إلى بعض.

(٢٤٠) زيادة في أ، ف: فصلاً. زيادة في ع: طرفاً.

(٢٤١) ما: إذ [أ، ف].

(٢٤٢) للأصوات: لمحسوساتها التي هي الأصوات [أ، ف].

(٢٤٣) سقط من ل: للأصوات فأمَّا... السامعة.

(٢٤٤) لمحسوساتها: للمحسوسات [د، ط].

(٢٤٥) سقط من ك: فأمَّا... الأصوات.

(٢٤٦) فاعلم: اعلم [ع].

(٢٤٧) سقط من ع، ف: أيضاً.

(٢٤٨) وآليَّة: وغير طبيعيَّة [أ].

(٢٤٩) كصوت: هي كصوت [ك].

(٢٥٠) لها: فيها [أ، د، ط، ك].

(٢٥١) سقط من د: من الجمادات.

الأمم^(٢٢٤) وَيَسْتَلِذُّهَا جَمِيعُ الْحَيَوَانَاتِ الَّتِي لَهَا^(٢٢٥) حَاسَّةُ السَّمْعِ، وَأَنَّ لِلنَّغْمَاتِ^(٢٢٦) تَأْثِيرَاتٍ فِي النُّفُوسِ رُوحَانِيَّةً كَمَا أَنَّ لِسَائِرِ الصَّنَاعَاتِ^(٢٢٧) فِي الْأَجْسَامِ^(٢٢٨) تَأْثِيرَاتٍ جِسْمَانِيَّةً^(٢٢٩)،
فَنَقُولُ الْآنَ^(٢٣٠)

إِنَّ الْمَوْسِيقِيَّ هُوَ^(٢٣١) الْغِنَاءُ
وَالْمَوْسِيقَارُ^(٢٣٢) هُوَ الْمُغَنِّي
وَالْمَوْسِيقَانُ^(٢٣٣) هُوَ^(٢٣٤) آلَةُ الْغِنَاءِ،
وَالْغِنَاءُ هُوَ^(٢٣٥) أَلْحَانُ مُؤَلِّفَةٍ
وَاللَّحْنُ هُوَ^(٢٣٦) نَغْمَاتٌ مُتَوَاتِرَةٌ
وَالنَّغْمَاتُ هِيَ أَصْوَاتٌ مُتَرَنِّمَةٌ^(٢٣٧)

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- (٢٢٤) يستعملها كل الأمم: يستعملها كل أحد من الأمم [ك، ل] كل الأمم يستعملونها [أ] سقط من ف: كل الأمم.
(٢٢٥) الحيوانات التي لها: الحيوانات الذي له [أ] الحيوان التي له [ف].
(٢٢٦) للنغمات: لنغماتها [ط، ع].
(٢٢٧) الصناعات: الصناع [أ، ط] الصنائع [ك]. يبدأ [د] هنا: لسائر الصناعة وكما أن لسائر الصناع.
(٢٢٨) الأجسام: الهيولات [د].
(٢٢٩) في الأجسام تأثيرات جسمانية: تأثيرات في الأجسام جسمانية [أ، ط، ل] تأثيرات في الهيولات الجسمانية [د، ك].
(٢٣٠) الآن: الا [ف] سقط من ع: الآن.
(٢٣١) هو: هي [أ، ف، ل].
(٢٣٢) الموسيقار: الموسيقان [ع] سقط من أ، ف: هو الغناء والموسيقار.
(٢٣٣) الموسيقان: الموسيقار [ع، ك، ل] إن الموسيقار [أ، ف].
(٢٣٤) سقط من أ، ع، ف: هو.
(٢٣٥) سقط من أ، ف، ل: هو.
(٢٣٦) سقط من ع: هو.
(٢٣٧) مترنمة: مترنة [أ، ط] مترتبة [د، ل] مترنية [ك] موزونة [ف].

الصَّفير^(٢٠٩) ترغيباً لها^(٢١٠) في الشُّرب. ^(٢١١)

ويستعملون لها أيضاً^(٢١٢) ألحاناً آخرَ عند هَيَجانها للنَّزْوِ
والسَّفاد^(٢١٣) وألحاناً آخرَ عند حَلْبِ ألبانها لتدِيرَ، ^(٢١٤)
ويستعمل^(٢١٥) صيادو^(٢١٦) الغِرْلان وحُمُر الوحش
وصيادو^(٢١٧) الدَّرَاج^(٢١٨) والْقَطَا^(٢١٩) وغيرها من الطيور ألحاناً
في ظَلَم الليل يُوقِفونها بها^(٢٢٠) حتى تُؤَخِّذ باليد^(٢٢١)،
وتستعمل النساءُ للأطفال ألحاناً تُسَكِّن البُكاءَ^(٢٢٢) وتَجَلِب
النوم^(٢٢٣).

فقد تبَيَّن بما ذكرنا أن صناعة الموسيقى يستعملها كلُّ

(٢٠٩) من الصفير: بالصفير [ل].

(٢١٠) ترغيباً لها: عند ترغيبها إياها [أ، ف].

(٢١١) الشرب: شرب الماء [أ، ف، ط، ك].

(٢١٢) ويستعملون لها أيضاً: ويستعملون أيضاً [ل] ويستعملون لها [ع] وقد
يستعملون أيضاً [أ] وقد يستعملون لها أيضاً [ف].

(٢١٣) للنزو والسفاد: النزو والسفاد [ل] للبرور الفساد [ف] للنزو والسقاية [ك].

(٢١٤) لتدير: ليدر [ط] باليدتين لتدور [ف].

(٢١٥) زيادة في أ، ف: أيضاً.

(٢١٦) صيادو: صياد [ك، ل].

(٢١٧) سقط من ع، ط، ك، ل: وحمُر الوحش وصيادو.

(٢١٨) الدَّرَاج: الدَراريج [أ، ف، ل].

(٢١٩) زيادة في أ، ف: والقباج.

(٢٢٠) يوقفونها بها: يوقفها بها [ط، ك] يو[قف]انها [ف] يوقفها [ل] يؤثفها بها
[ع].

(٢٢١) زيادة في أ، ف: ويستعمل أيضاً صيادوا السمك (السموك [أ]) ألحاناً
للصيد.

(٢٢٢) البكاء: بكاءها [أ] بكاءها [ف].

(٢٢٣) النوم: النوم بها [أ] بها النوم [ف].

واستخرجوا أيضاً لحناً آخر يُستعمل^(١٩٣) عند الفرح واللذة
والسرور^(١٩٤) وفي^(١٩٥) الأعراس والولائم، وهي المعروفة
المُستعملة في زماننا هذا.

وقد^(١٩٦) تُستعمل [١٨٨] هذه الصناعة للحيوانات
أيضاً^(١٩٧)، مثل^(١٩٨) ما يستعمله^(١٩٩) الجمالون من الحذاء^(٢٠٠)
في الأسفار وفي ظلم الليل^(٢٠١) حتى ينشط الجمال^(٢٠٢) في
السير^(٢٠٣) ويخفّ عليها^(٢٠٤) ثقل الأحمال^(٢٠٥)، ويستعملها^(٢٠٦)
أيضاً^(٢٠٧) رعاة الغنم والبقر والخيل عند ورودها الماء^(٢٠٨) من

(١٩٣) لحناً آخر يُستعمل: أَلْحَاناً أُخَرُ تُسْتَعْمَلُ [ك] أَلْحَاناً أُخَرُ يُسْتَعْمَلُ [ط، ع].

(١٩٤) اللذة والسرور: السرور واللذة [ل].

(١٩٥) وفي: وعند [ف] في [ط، ك، ل].

(١٩٦) سقط من ع: قد.

(١٩٧) سقط من ع: أيضاً.

(١٩٨) مثل: في مثل [ط].

(١٩٩) يستعمله: يستعملها [ط، ع].

(٢٠٠) الجمالون من الحذاء: الجمالون من الحدو [أ، ف].

(٢٠١) ظلم الليل: ظلمة الليل [ف] ظلمة الليالي [أ].

(٢٠٢) حتى ينشط الجمال: لينشط الجمال [ف] لتنشط الجمال [أ] لينشط الجمال

[ع].

(٢٠٣) في السير: للسير [ط] على السير [أ] زيادة في أ، ف: والخيل عند ورودها
الماء.

(٢٠٤) ويخف عليها: ليخف عنها [ل] ويخف أيضاً على الجمال [أ] ويخف على
الجمال أيضاً [ف].

(٢٠٥) ثقل الأحمال: الحمل وثقله [ط].

(٢٠٦) ويستعملها: وقد يستعملها [أ، ف].

(٢٠٧) سقط من أ، ط، ف، ك: أيضاً.

(٢٠٨) الخيل عند ورودها الماء: غيرهما [أ، ف].

وَقَتَّ الْأَسْحَارَ يُخَفِّفَ أَلَمَ الْأَسْقَامِ (٤١ أ) والأمراض^(١٧٨) عن المرضى وَيَكْسِرُ^(١٧٩) سَوَرَتَهَا وَيَشْفِي كَثِيراً مِنْ^(١٨٠) الأمراض والأعلال.

واستخرجوا أيضاً لِحناً آخَرَ^(١٨١) يُسْتَعْمَلُ عِنْدَ الْمَصَائِبِ والأحزان والغُمووم والهُموم^(١٨٢) وفي^(١٨٣) المآتِمِ^(١٨٤) يُعْزِي النفوسَ^(١٨٥) وَيُخَفِّفُ عَنْهَا أَلَمَ الْمَصَائِبِ^(١٨٦) وَيُسَلِّي عَنْ الاشتياق وَيُسَكِّنُ الْحُزْنَ.^(١٨٧)

واستخرجوا أيضاً لِحناً آخَرَ يُسْتَعْمَلُ عِنْدَ الْأَعْمَالِ الشَّاقَّةِ والصَّنَائِعِ^(١٨٨) الْمُتْعَبَةِ مِثْلَ مَا يَسْتَعْمَلُهُ^(١٨٩) الْحَمَّالُونَ وَالْبَنَّاوُونَ وأَصْحَابُ الْمَرَائِبِ وَمَدَّادُ^(١٩٠) الزَّوَارِقِ^(١٩١) يُخَفِّفُ عَنْهُمْ كَدَّ الأبدانِ وَتَعَبَ النفوسِ.^(١٩٢)

(١٧٨) يخفف ألم الأسقام والأمراض: ليخفف الألم والأسقام [أ، ف].

(١٧٩) يكسر: يسر [ع] يكسب [ك].

(١٨٠) كثيراً من: في كثير من [أ] من كثير من [ط، ف، ل] من كثير [ك].

(١٨١) سقط من أ، ف: آخر.

(١٨٢) زيادة في أ، ف: والهجوم.

(١٨٣) وفي: ومن [ف] في [ط، ك، ل].

(١٨٤) المآتم: المواثيم [أ، ف، ك] المواسم [ل].

(١٨٥) النفوس: النفس [ط] النفس به [أ].

(١٨٦) سقط من ع: والأحزان والغمووم... ألم المصائب.

(١٨٧) الحزن: الأحزان [أ، ف].

(١٨٨) الصنائع: الصناعات [أ، ف].

(١٨٩) يستعمله: يستعملها [ع]. زيادة في ل: الملاحون.

(١٩٠) مدّادو: مداد [ع].

(١٩١) أصحاب المراكب ومدّادو الزوارق: مدّادو الزوارق وأصحاب المراكب

[ل] مدّادوا السفن وأصحاب المراكب [أ] مدّادون السفن وأصحاب المراكب

[ف] مدّاد الزوارق وأصحاب المراكب [ط، ك].

(١٩٢) عنهم كد الأبدان وتعب النفوس: عن أبدانهم الكد وعن نفوسهم التعب [ع].

مُبْتَلُونَ^(١٦٤) وَيَتُوبَ^(١٦٥) عَلَيْهِمْ وَيَغْفِرَ لَهُمْ وَيُجِيبَ دُعَاءَهُمْ وَيُعْطِيَهُمْ سُؤْلَهُمْ.

وكانوا^(١٦٦) يستعملون عند الدُّعاء والتَّسْبِيح والقِرَاءَة أَلْحَاناً من الموسيقى^(١٦٧) تُسَمَّى الْمُحْزَنُ وهي التي تُرَقِّق القُلُوبَ إذا سُمِعَتْ وتُبْكِي العِیُونَ وتُكْسِبُ النُّفُوسَ النَّدَامَةَ على سَالِفِ^(١٦٨) الذُّنُوبِ، وإِخْلَاصِ الْأَسْرَارِ وإِصْلَاحِ الضَّمَائِرِ^(١٦٩)، فهذا كان أحد أسباب استخراج الحُكَمَاءِ صِنَاعَةَ^(١٧٠) الموسيقى واستعمالها في الهياكل وعند القرايين والدُّعاء^(١٧١) والصَّلوات.

وكانوا قد استخرجوا أيضاً^(١٧٢) لَحْنًا آخَرَ^(١٧٣) يقال له الْمُشْجَع كان يَسْتَعْمَلُهُ^(١٧٤) قَادَةُ الْجِيُوشِ فِي الْحُرُوبِ^(١٧٥) وَالْهَيْجَاءِ يُكْسِبُ النُّفُوسَ^(١٧٦) شَجَاعَةً وإِقْدَاماً^(١٧٧).

واستخرجوا أيضاً لَحْنًا آخَرَ كانوا يستعملونه في المَارِسَاتِ

(١٦٤) به مبتلون: مبتلون به [ك، ل] زيادة في ل: أن يصرف عنهم ما يخافون.

(١٦٥) ويتوب: فيتوب [ع].

(١٦٦) وكانوا: فكانوا [أ، ط].

(١٦٧) من الموسيقى: حساناً موسيقية [أ، ف].

(١٦٨) سالف: ما أسلفت من [أ، ف].

(١٦٩) سقط من أ، ف: وإصلاح الضمائر.

(١٧٠) سقط من أ، ف: صناعة.

(١٧١) الدعاء: الأدعية: [أ، ف].

(١٧٢) قد استخرجوا أيضاً: أيضاً قد استخرجوا [ك].

(١٧٣) آخر: أيضاً [أ]. سقط من ف: آخر.

(١٧٤) كان يستعمله: كانت تستعمله [ط، ل] يستعمله [أ، ف، ك].

(١٧٥) الحروب: الحرب [ط، ل].

(١٧٦) النفوس: النفس [ك].

(١٧٧) شجاعة وإقداماً: الشجاعة والإقدام [أ، ط، ف] زيادة في ط: معاً.

حَظَّهِمْ مِنْهَا^(١٤٦) إِنْ كَانَ خَيْرًا فَلَمْ يَجِدُوا حِيلَةَ أَنْجَى وَلَا شَيْئًا^(١٤٧) أَنْفَعَ مِنْ اسْتِعْمَالِ سَنَنِ^(١٤٨) النَّوَامِيسِ الْإِلَاحِيَةِ الَّتِي هِيَ الصَّوْمُ وَالصَّلَوَاتُ^(١٤٩) وَالْقَرَابِينُ^(١٥٠) وَالِدُّعَاءُ عِنْدَ ذَلِكَ بِالتَّضَرُّعِ إِلَى اللَّهِ جَلَّ وَعَزَّ وَالْخُضُوعِ^(١٥١) وَالْخُشُوعِ^(١٥٢) وَالْبُكَاءِ وَالسُّؤَالَ إِيَّاهُ^(١٥٣) أَنْ يَصْرِفَ عَنْهُمْ ذَلِكَ وَيَكْشِفَ^(١٥٤) مَا قَدْ [١٨٧] أَوْجَبَتْهُ أَحْكَامُ النُّجُومِ^(١٥٥) مِنَ الْمَنَاجِسِ وَالْبَلَاءِ، وَكَانُوا لَا يَشْكُونُ^(١٥٦) أَنَّهُمْ إِذَا دَعَوْا اللَّهَ عَزَّ اسْمُهُ بِالنِّيَّةِ^(١٥٧) وَالْإِخْلَاصِ وَرِقَّةَ الْقَلْبِ وَالْبُكَاءِ^(١٥٨) وَالتَّضَرُّعِ^(١٥٩) وَالتَّوْبَةِ وَالْإِنَابَةِ^(١٦٠) أَنْ يَصْرِفَ عَنْهُمْ مَا يَخَافُونَ^(١٦١) وَيَكْشِفَ عَنْهُمْ^(١٦٢) مَا هُمْ بِهِ^(١٦٣)

(١٤٦) منها: فيها [ك، ل] سقط من أ: منها.

(١٤٧) شيئاً: شيء [ك] سقط من ع: شيئاً.

(١٤٨) استعمال سنن: الاستعمال لسنن [ط].

(١٤٩) الصلوات: الصلات [أ، ط، ف، ك].

(١٥٠) القرابين: القران [أ، ف].

(١٥١) والخضوع: وبالخضوع [ع] بالخضوع [ك] سقط من ط: والخضوع.

(١٥٢) والخشوع: وبالخشوع [ط] سقط من ل: إلى الله جل وعز والخضوع والخشوع.

(١٥٣) إياه: له [أ، ف].

(١٥٤) ويكشف: أو يكشف [ع].

(١٥٥) أحكام النجوم: النجوم بأحكامها [أ، ف].

(١٥٦) كانوا لا يشكون: كانوا لم يكونوا يشكون [ط، ع].

(١٥٧) زيادة في أ، ف: الصادقة.

(١٥٨) القلب والبكاء: القلوب والبكاء [ع، ك] البكاء [ف].

(١٥٩) سقط من ع، ل: والتضرع.

(١٦٠) زيادة في ل: والتضرع.

(١٦١) سقط من ل: أن يصرف عنهم ما يخافون.

(١٦٢) سقط من ف: ما يخافون ويكشف عنهم. سقط من أ: ما يخافون ويكشف.

(١٦٣) به: فيه وبه [ط] سقط من ع: به.

والرُّجوع إلى الله تعالى باستعمال سَنَنِ النواميس على ما (١٣٢) رُسِمَت.

واعلم يا أخي أَيَدُكَ الله وإِيَّانا بروحٍ منه بأن (١٣٣) أحدَ الأسباب التي دعت الحُكَماء إلى وضع النواميس (١٣٤) واستعمال سَنَنِها هو (١٣٥) ما قد لاح لهم من مُوجِبَات (١٣٦) أحكام النجوم من (١٣٧) السعادات والمناجِس عند ابتداء (١٣٨) القِرانات، وتحاوِيل السَّنين من (١٣٩) الغلاء والرُّخْص والجَدْب والخِصْب والقَحْط والطاعون والوباء (١٤٠) وتسلُّط (١٤١) الأشرار والظالمين وما شاكلها من تغيّيرات (١٤٢) الزمان وحوادث الأيام. فلما تبيَّن لهم ذلك (١٤٣) طلبوا حيلةً تُنْجِيهم منها (١٤٤) إن كان شراً وتوفَّر (١٤٥)

(١٣٢) على ما: كما [ط، ع، ك].

(١٣٣) بأن: زيادة في أ، ل: لوضع النواميس علل وأسباب شتى وأن. زيادة في ف: لوضع النواميس.

(١٣٤) سقط من ف: بأن أحد الأسباب التي دعت الحُكَماء إلى وضع النواميس.

(١٣٥) سقط من ع: هو.

(١٣٦) من موجبات: بموجبات [ل] زيادة في أ، ف: الفلك و.

(١٣٧) من: ومن [ف] سقط من ل: من.

(١٣٨) ابتداء: ابتدأت [ع].

(١٣٩) من: ومعرفة [أ، ف].

(١٤٠) والجذب والخصب والقحط والطاعون والوباء: أو الجذب أو الخصب أو

القحط أو الطاعون والوباء [ك] أو الجذب أو الخصب أو القحط أو الطاعون

أو الوباء [ط] والجذب والخصب أو القحط والوباء والطاعون [أ، ف].

(١٤١) وتسלט: أو تسلط [ط، ك].

(١٤٢) تغيّيرات: تغيّير [ع] تغيّيرات [ك] تغيّر [ل].

(١٤٣) لهم ذلك: ذلك لهم [ع].

(١٤٤) سقط من ل: منها.

(١٤٥) وتوفّر: أو توفير [ع] ويوفّر [أ، ف].

بِحِكْمَتِهِمْ^(١١٧) وَتَعَلَّمَهَا^(١١٨) النَّاسُ مِنْهُمْ وَاسْتَعْمَلُوهَا كَسَائِرِ
الصَّنَائِعِ فِي أَعْمَالِهِمْ وَمَتَصَرَّفَاتِهِمْ بِحَسَبِ أَغْرَاضِهِمْ^(١١٩)
الْمُخْتَلِفَةِ، فَأَمَّا اسْتِعْمَالُ أَصْحَابِ النُّوَامِيسِ الْإِلَاحِيَةِ^(١٢٠) لَهَا فِي
الْهَيْكَلِ وَبُيُوتِ الْعِبَادَاتِ وَعِنْدَ الْقِرَاءَةِ فِي الصَّلَاةِ^(١٢١) وَعِنْدَ
الْقِرَائِينَ وَالذُّعَاءِ وَالتَّضَرُّعِ وَالْبُكَاءِ، كَمَا كَانَ يَفْعَلُ دَاوُدُ النَّبِيُّ عَلَيْهِ
السَّلَامُ^(١٢٢) عِنْدَ قِرَاءَةِ مَزَامِيرِهِ^(١٢٣)، وَكَمَا يَفْعَلُهُ الْآنَ^(١٢٤)
النَّصَارَى فِي كُنَائِسِهِمْ^(١٢٥) وَالْمُسْلِمُونَ فِي مَسَاجِدِهِمْ، مِنْ طِيبِ
النَّعْمَةِ وَتَلْحِينَ الْقِرَاءَةِ^(١٢٦)، فَإِنْ كُلٌّ ذَلِكَ يُسْتَعْمَلُ^(١٢٧) لِرِقَّةِ
الْقُلُوبِ^(١٢٨) وَخُضُوعِ^(١٢٩) النُّفُوسِ^(١٣٠) وَخُشُوعِهَا وَالانْقِيَادِ
لِأَوَامِرِ اللَّهِ عَزَّ وَجَلَّ وَنَوَاهِيهِ وَالتَّوْبَةِ إِلَيْهِ^(١٣١) مِنَ الذُّنُوبِ

(١١٧) بِحِكْمَتِهِمْ: بِحِكْمَتِهَا [ط] سَقَطَ مِنْ ل: بِحِكْمَتِهِمْ.

(١١٨) وَتَعَلَّمَهَا: ثُمَّ تَعَلَّمَهَا [ع].

(١١٩) زِيَادَةٌ فِي أ، ف: وَأَرَاءَهُمْ.

(١٢٠) الْإِلَاحِيَّةُ: أ [ف].

(١٢١) الصَّلَاةُ: الصَّلَوَاتُ [أ، ط، ف].

(١٢٢) كَانَ يَفْعَلُ دَاوُدُ النَّبِيُّ عَلَيْهِ السَّلَامُ: كَانَ يَفْعَلُ ذَلِكَ دَاوُدُ النَّبِيُّ عَلَيْهِ السَّلَامُ

[أ، ف] كَانَ دَاوُدُ النَّبِيُّ عَلَيْهِ السَّلَامُ يَفْعَلُ [ع].

(١٢٣) مَزَامِيرُهُ: الْمَزَامِيرُ [ع].

(١٢٤) يَفْعَلُهُ الْآنَ: يَفْعَلُ [ع] كَانَ يَفْعَلُ [ك، ل] كَانَ يَفْعَلُهُ [ط].

(١٢٥) كُنَائِسِهِمْ: يَبْعُهُمْ [أ، ف، ل].

(١٢٦) تَلْحِينُ الْقِرَاءَةِ: لَحْنُ الْقُرْآنِ [ل، ث] شَطِبَتْ.

(١٢٧) سَقَطَ مِنْ أ، ط، ف، ك، ل: يُسْتَعْمَلُ.

(١٢٨) الْقُلُوبُ: الْقُلُوبُ [أ، ف].

(١٢٩) وَخُضُوعٍ: وَلِخُضُوعٍ [ط، ك، ل].

(١٣٠) النُّفُوسُ: النَّفْسُ [أ، ف].

(١٣١) سَقَطَ مِنْ ع، ل: إِلَيْهِ.

وفي الأسفار وفي الحضر^(١٠٣)، وعند الراحة والتعب، وفي مجالس الملوك ومنازل^(١٠٤) الشُّوقَة^(١٠٥)، ويستعملها الرجال والنساء^(١٠٦)، والصُّبَّيان والمشايخ، والعُلماء والجُهَّال، والصُّنَّاع والتُّجار^(١٠٧)، وجميع^(١٠٨) طبقات الناس.

[١٨٦] فصل^(١٠٩) [٢]

اعلم يا أخي أيَّدك الله وإيَّانا بروحٍ منه بأن الصنائع كلّها استخرجها الحكماء بحِكمَتهم^(١١٠)، ثم تعلّمها^(١١١) الناسُ منهم وتعلّم^(١١٢) بعضُهم من بعض، وصارت وراثَةً^(١١٣) من الحكماء للعامة^(١١٤) ومن العُلماء (٤٠ ب) للمتعلّمين ومن الأساتِيز^(١١٥) للتلامذة^(١١٦)، فصناعة الموسيقى استخرجها الحكماء

(١٠٣) وفي الأسفار وفي الحضر: وفي الأسفار والحضر [ط] وتارة في الحضر وتارة في الأسفار: [أ، ف].

(١٠٤) زيادة في أ، ف: العلماء والجهال و.

(١٠٥) زيادة في أ، ف: والصنائع والتجار.

(١٠٦) ويستعملها الرجال والنساء: وعند النساء: [أ، ف].

(١٠٧) سقط من أ، ف: والعلماء والجهال والصنائع والتجار.

(١٠٨) سقط من أ، ف: جميع.

(١٠٩) سقط من أ، ع، ل: فصل.

(١١٠) بحِكمَتهم: بحِكمَتها [ط، ف، ك، ل].

(١١١) تعلّمها: تعلم [ع].

(١١٢) سقط من ط، ع، ك، ل: تعلم.

(١١٣) وراثَة: وارثَة [ع].

(١١٤) للعامة: العامة [ف].

(١١٥) الأساتِيز: الأساتِيز [ط].

(١١٦) للتلامذة: للمتلمِذين [أ] للمتلمِذين [ف].

تحريكاً آخر فأبكاهم^(٨٨) كلَّهم من رِقَّة النعمة^(٨٩) وحُزن القلوب،
ثم قلبها^(٩٠) وحركها تحريكاً^(٩١) نوَّهم كلَّهم وقام وخرج فلم
يُعرف له خبر^(٩٢).

فقد تبَيَّن بما ذكرنا^(٩٣) أن لصناعة الموسيقى تأثيراتٍ في نفوس
المستمعين مختلفةً كاختلاف تأثيرات صناعات الصُّناع في
الهَيُولات^(٩٤) الموضوعَة في صناعاتهم، فمن أجلها يستعملها كلُّ
الأُمم من بني آدم وكثيرٌ من الحيوانات^(٩٥) أيضاً. ومن الدليل على
أن لها^(٩٦) تأثيرات في النفوس استعمالُ الناس لها تارةً عند^(٩٧)
الفرح والسرور في^(٩٨) الأعراس والولائم والدعوات، وتارةً عند
الحُزن والغَم^(٩٩) والمصائب وفي المآتم^(١٠٠)، وتارةً في بيوت
العبادات وفي^(١٠١) الأعياد، وتارةً في الأسواق والمنازل^(١٠٢)،

(٨٨) فأبكاهم: أبكاهم [أ، ط، ف، ك].

(٨٩) النعمة: نعمة [أ، ف، ك].

(٩٠) قلبها: قلبها قلبياً [ع] أقلبها [ل].

(٩١) زيادة في أ، ف: آخر.

(٩٢) زيادة في أ، ف: بعد ذلك.

(٩٣) بما ذكرنا: بذلك [ف].

(٩٤) الهَيُولات: الهَيُولى [أ، ف] الهَيُوليات [ك، ل].

(٩٥) الحيوانات: الحيوان [أ، ف].

(٩٦) على أن لها: أن لها [أ، ل] لها [ف] زيادة في ط: أيضاً.

(٩٧) عند: في [ع].

(٩٨) في: عند [ع] وعند [ل].

(٩٩) الغم: الهم [ل].

(١٠٠) وفي المآتم: في المآتم [ع] وفي المواثيم [ك] والمواثيم [أ، ف، ل].

(١٠١) وفي: في [ع، ف] سقط من ط، ل: في.

(١٠٢) الأسواق والمنازل: المنازل وتارةً في الأسواق: [أ، ف].

ومن الألحان والنغمات^(٧٦) ما ينقل النفوسَ من حال إلى حال ويغيّر أخلاقها من ضدّ إلى ضدّ. ومن ذلك ما يُحكى^(٧٧) أن جماعة من أهل هذه الصناعة كانت^(٧٨) مجتمعة في دعوة رجل رئيس كبير مرتّبين في^(٧٩) مراتبهم في مجلسه^(٨٠) بحسب حذقهم في صناعتهم، إذ دخل عليهم إنسان رثُ الحال عليه ثياب النَّسَاك^(٨١)، فرفعه صاحبُ المجلس عليهم كلّهم فتبيّن إنكارُ ذلك في وجوههم، فأراد أن يُبيّن فضله ويسكّن عنهم غضبهم، فسأله أن يُسمعهم^(٨٢) شيئاً من صناعته فأخرج الرجل خشبات كانت^(٨٣) معه فركّبتها^(٨٤) ومدّ عليها أوتاراً^(٨٥) وحركّها تحريكاً فأضحك كلّ من كان في المجلس من الطّيبة واللذة والفرح والسرور^(٨٦) الذي داخل^(٨٧) نفوسهم، ثم قلبها وحركّها

(٧٦) سقط من ع: والنغمات.

(٧٧) يحكى: حكى [ط].

(٧٨) جماعة من أهل هذه الصناعة كانت: جماعة كانت من أهل هذه الصناعة [ك] جماعة كانت من أهل هذه الصنعة [ل].

(٧٩) مرتّبين في: رتّب [أ، ف] فرتّب [ك، وفي هامش ل].

(٨٠) في مجلسه: ومجلسهم [ط].

(٨١) النساك: رثة [ع، ف، ك، وزيادة في هامش ل].

(٨٢) أن يُسمعهم: من حضر أن يسمع [أ] أن يُسمع من حضر [ف].

(٨٣) خشبات كانت: خشبتين كانتا [ف].

(٨٤) فركّبتها: وركّبتها [ع] فركّبتها [ف].

(٨٥) عليها أوتاراً: عليها أوتار [ف] عليها الأوتار [ل].

(٨٦) من الطيبة واللذة والفرح والسرور: طيبة ولذة وسروراً [أ] طيبة ولذة وفرحاً وسروراً.

(٨٧) داخل: أدخلها على: [أ، ف].

فمن ذلك ما يُحكى أن في^(٥٨) بعض مجالس الشرب^(٥٩) اجتمع^(٦٠) رجلان مُتغاضبان^(٦١) وكان بينهما ضِغْنٌ قديم وحِقْدٌ^(٦٢) كامن^(٦٣)، فلَمَّا أَثَّرَ الشَّرَابُ فيهما^(٦٤) ثار الحقد والتهبت نيرانُ الغضب [١٨٥] وَهَمَّ كُلُّ واحدٍ منهما بقتل صاحبه.^(٦٥) فلَمَّا أَحَسَّ الموسيقارُ^(٦٦) ذلك منهما^(٦٧)، وكان ماهراً في صناعته^(٦٨)، غَيَّرَ^(٦٩) أوتارَ الآلة^(٧٠) وضرب اللحن اللين^(٧١) المسكِّن للغضب^(٧٢) وأسمعهما ودوَمَ ذلك^(٧٣) حتى سَكَنَ سَوْرَةَ^(٧٤) الغضب عنهما فقاما وتعانقا وتصالحا^(٧٥).

(٥٨) سقط من ط، ك: في.

(٥٩) الشرب: الشراب [ل].

(٦٠) زيادة من ط، ع، ك: فيه.

(٦١) متغاضبان: مغضبان [ل].

(٦٢) زيادة في أ، ف: سالف.

(٦٣) ضِغْنٌ قديم وحقد كامن: حقد كامن وضِغْنٌ قديم [ط]. كامن: كامد [ك].

(٦٤) أثر الشراب فيهما: دارت الشراب فيهما [ل] دار الشراب بينهما [ك] دارت

الكأس بينهما [أ، ف].

(٦٥) صاحبه: الآخر [ل].

(٦٦) الموسيقار: الموسيقان [ع] الموسيقي [أ، ف].

(٦٧) ذلك منهما: بذلك منهما [أ، ف] منهما ذلك [ل].

(٦٨) ماهراً في صناعته: ماهراً في صناعاته [ل] ماهراً بصناعته [ط] ماهر الصناعة

[أ، ف].

(٦٩) غَيَّرَ: فغَيَّرَ [ع].

(٧٠) أوتار الآلة: نغمات الأوتار [أ، ط، ف، ك، ل].

(٧١) اللين: الملين [ل] سقط من ع: اللين.

(٧٢) سقط من أ، ط، ف، ك، ل: للغضب.

(٧٣) ودوَمَ ذلك: وداوم [ط، ك] وأدام الضرب [ل].

(٧٤) سَوْرَةَ: فورة [أ] قوة [ف].

(٧٥) فقاما وتعانقا وتصالحا: فقاما واعتنقا واصطلحا [أ، ف] وقاما فتعانقا.

وتصالحا [ط، ك] فقاما فتعانقا فتصالحا [ل].

ومن الأبيات الموزونة أيضاً ما يثير الأحقاد الكامنة ويحرك النفوس الساكنة ويلهب^(٤٦) فيها نيران الغضب كقول^(٤٧) القائل:

وَأَذْكُرُوا مَضْرَعَ الْحُسَيْنِ وَزَيْدٍ
وَقَتِيلًا^(٤٨) بجانِبِ الْمِهْرَاسِ

فإن^(٤٩) هذه الأبيات وأخواتها أيضاً^(٥٠) أثارت الأحقاد^(٥١) أعني أحقاد قوم^(٥٢) وحرّكت نفوسهم وألهمت فيها نيران الغضب وحثّتهم على قتل بني الأعمام والأقرباء والعشائر حتى قتلوهم بذنوب آبائهم (٤٠ أ) ووّرر أجدادهم فلم يرحموا منهم أحداً. ومن الألحان والنغمات أيضاً^(٥٣) ما يُسكّن^(٥٤) سَوْرَةَ الغضب ويحلّ^(٥٥) الأحقاد^(٥٦) ويوقع^(٥٧) الصّلح ويكسب الألفة والمودة.

(٤٦) يلهب: تلهب [أ، ع].

(٤٧) كقول: مثل قول [ع، ك، ل].

(٤٨) قتيلاً: قتيل [أ، ط، ع، ف].

(٤٩) فإن: كانت [ل].

(٥٠) وأخواتها أيضاً: أيضاً وأخواتها [ل].

(٥١) الأحقاد: أحقاداً بين [ك].

(٥٢) الأحقاد أعني أحقاد قوم: أحقاد قوم [أ، ط، ف، ك].

(٥٣) سقط من ع: أيضاً.

(٥٤) يسكّن: تسكّن [ع]. زيادة في ف: فورة.

(٥٥) يحل: يجلي [ل].

(٥٦) يحل الأحقاد: يُحلّ بالأحقاد [ع]. سقط من ط: الكامنة ويحرك النفوس... الأحقاد.

(٥٧) ويوقع: ويقع [ل].

ومديح^(٣٥) الشجعان مثل^(٣٦) قول القائل^(٣٧):

لو كنتُ من مازن^(٣٨) لم تستبحِ إبلي
بنو اللَّقيطة من ذُهلِ بن شيبانا

ومثل قول البسوس المنقرية:

لَعَمْرِي لو أصبحْتُ في دارٍ منقرٍ
لما ضيمَ سعدٌ وهو جارٌّ لأبياتي
ولكنني أصبحْتُ في دارٍ غربةٍ
متى يعدُّ فيها الذئبُ يعدو على شاتي
فيا سعدُ لا تغرُرْ بنفسِكَ وارتحلْ
فإنَّكَ في قومٍ عن الجارِ أمواتٍ^(٣٩)

فإن^(٤٠) هذه الأبيات^(٤١) وأخواتها يقال إنها كانت^(٤٢) سبباً
لنفير^(٤٣) أقوام^(٤٤) إلى الحروب والقتال بين قبيلتين^(٤٥) من قبائل
العرب سنيين متواترة.

(٣٥) مديح: مدح [ع].

(٣٦) أ: ك.

(٣٧) القائل: الشاعر [ل].

(٣٨) مازن: زمان [ك].

(٣٩) سقط من ط، ع، ك، ل: ومثل قول البسوس... أموات.

(٤٠) زيادة في ع: مثل.

(٤١) زيادة في أ: كلها. زيادة في ط: كانت.

(٤٢) سقط من ط: يقال إنها كانت.

(٤٣) لنفير: لتنفير [أ، ف] لنصر [ع] لتثير [ك، وفي هامش ل].

(٤٤) أقوام: أقواماً [ك، وفي هامش ل] زيادة في ف: على.

(٤٥) قبيلتين: القبيلتين [ع، ك، ل].

فإن الهَيُولَى الموضوع^(١٩) فيها كلها جواهر روحانية وهي نفوس المستمعين^(٢٠) وتأثيراتها^(٢١) فيها كلها روحانية أيضاً، وذلك أن الألحان^(٢٢) الموسيقية^(٢٣) أصوات ونغمات ولها في النفوس تأثيراتٌ كتأثيرات صناعات الصُّنَّاع^(٢٤) في الهَيُولَاتِ الموضوعة^(٢٥) في صناعاتهم^(٢٦).

فمن تلك [١٨٤] النغماتِ والأصواتِ ما يُحرِّك النفوس^(٢٧) نحو الأعمالِ الشاقَّةِ والصنائعِ المُتعبَةِ، وينشِّطُها ويقوِّي عزماتها على الأفعال الصعبة المُتعبَةِ للأبدان^(٢٨) التي تُبذل منها^(٢٩) مُهَج^(٣٠) النفوس^(٣١) وذخائر الأموال، وهي الألحان المشجَّعة التي تُستعمل في الحروب^(٣٢) وعند القتال في الهَيَجاء، وخاصة^(٣٣) إذا غُنِّيَ معها بأبياتٍ موزونة في وصف الحروب^(٣٤)

-
- (١٩) سقط من ع: الموضوع.
 (٢٠) زيادة في أ، ف: لها.
 (٢١) وتأثيراتها: وتأثيرها [ع].
 (٢٢) الألحان: ألحان [ط، ك].
 (٢٣) الموسيقية: الموسيقىات [أ، ف] الموسيقار [ط، ك].
 (٢٤) الصنائع: الصنائع [ع].
 (٢٥) الهيولات الموضوعة: الهيولات الموضوعات [أ] الهيول الموضوعات [ف] الهيوليات الموضوعة [ل].
 (٢٦) صناعاتهم: صناعتهم [ط، ف].
 (٢٧) النفوس: النفس [ط] للنفس [ف].
 (٢٨) الأفعال الصعبة المتعبة للأبدان: الأفعال المتعبة للأبدان الصعبة [ل].
 (٢٩) منها: فيها [ك].
 (٣٠) سقط من أ: مهج.
 (٣١) منها مهج النفوس: فيها النفوس [ف].
 (٣٢) الحروب: الحروف [ك].
 (٣٣) وخاصة: وبخاصة [ف] ولا سيما [ط، ك].
 (٣٤) الحروب: الحروف [ك].

فصل [١]

وإذ قد فرغنا^(٦) من ذكر الصنائع العلمية الروحانية التي هي أجناس العلوم ومن ذكر الصنائع العملية^(٧) الجسمانية التي هي أجناس الصنائع^(٨)، وبيننا ماهية كل واحدة منهما وكمية أنواعها^(٩) وما الأغراض المطلوبة^(١٠) منها^(١١) في رسالتين لنا، فنريد أن نذكر في هذه الرسالة الملقَّبة بالموسيقى^(١٢) الصناعة المركَّبة بين الجسمانية والروحانية^(١٣) التي هي صناعة التأليف ومعرفة النَّسَب، وليس غرضنا في^(١٤) هذه الرسالة تعليم الغناء وصنعة الملاهي، وإن كان لا بد من ذكرها، بل غرضنا^(١٥) معرفة النَّسَب وكيفية التأليف اللذين بهما وبمعرفتهما يكون الحِذْق في الصنائع كلها.

اعلم يا أخي أيَّدك الله وإيانا بروح منه أن كل صناعة تُعْمَل باليدين فإن الهيولى^(١٦) الموضوع فيها^(١٧) إنما هي أجسام طبيعية ومصنوعاتها كلها أشكال جسمانية إلا الصناعة الموسيقية^(١٨)،

(٦) فرغنا: عَرَفْنَا [ك].

(٧) العملية: العلمية [ف].

(٨) أجناس الصنائع: أجناس وذكر الصنائع العلمية الروحانية [ف].

(٩) أنواعها: أنواعهما [ط، ك، ل].

(١٠) الأغراض المطلوبة: الغرض المطلوب [ل].

(١١) منها: منهما [ط، ك، ل].

(١٢) زيادة في ك: فاعلم الآن بأن الموسيقى هو.

(١٣) زيادة في ك: الصناعة المركبة بين الجسمانية والروحانية.

(١٤) في: من [ف، ك، ل].

(١٥) زيادة في ط، ف، ك: هو.

(١٦) فإن الهيولى: فالهيولى [ل].

(١٧) فيها: فيهما [ط، ف].

(١٨) الصناعة الموسيقية: صناعة الموسيقى [أ] الصناعة الموسيقية [ف].

(٣٩ أ) [١٨٣] (*) الرسالة الخامسة^(١) مِنَ الْقِسْمِ الْأَوَّلِ
فِي الْعُلُومِ الرِّيَاضِيَّةِ التَّعْلِيمِيَّةِ^(٢) (٣)

(**) (٤) فِي الْمَوْسِيقِيِّ

(٣٩ ب) بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ^(٥)

(*) وردت تفاصيل المخطوطات والرموز المعتمدة في منهج تحقيقها في توطئة نادر البزري في هذا الكتاب (Foreword, pp. xxii-xxiii).

(١) الرسالة الخامسة: الرسالة الرابعة [ع].

(٢) زيادة في ع: ضمن جملة إحدى وخمسين رسالة لإخوان الصفاء. سقط من أ: إحدى وخمسين. سقط من ط: القسم الأول... إحدى وخمسين.

(٣) زيادة في ع، ك: في تهذيب النفس وإصلاح الأخلاق من كلام الصوفية. زيادة في أ: رسائل إخوان الصفاء في تهذيب النفس وإصلاح الأخلاق. زيادة في ط: رسائل إخوان السعادة صان الله أقدامهم. سقط من ل: الرسالة الخامسة... إخوان الصفاء.

(٤) في الموسيقى: الموسومة بالموسيقى [أ]. زيادة في ف: والبيان في ذلك أن للنغم والألحان الموزونة تأثيرات في القلوب كتأثيرات الأدوية والأشربة والترياقات في الأجسام الحيوانية وأن للأفلاك في احتكاك بعضها ببعض نغمات وألحان لذیذة كنغمات أوتار العيdan والغرض هو التشويق إلى الصعود إلى هناك بعد مفارقة الجسد وإلى هناك يُعرج بأرواح النبين والصدّيقين كما بيّنا في رسالة الحشر والقيامة.

(**) استُخدم مصطلح «الموسيقى» لأنه الأقرب إلى المخطوطات وإلى الأصل اليوناني القديم من كلمة «موسيقى» المتداولة في اللغة العربية المعاصرة.

(٥) يبدأ ط بالبسملة. سقط من ف: من القسم الأول... الرحيم. سقط من أ: من كلام... الرحيم. سقط من ط: البسملة. زيادة في ع: رب يسر. رسالة الموسيقى من جملة إحدى وخمسين رسالة لإخوان الصفاء في تهذيب النفس وإصلاح الأخلاق. سقط من ك: الرسالة... الرحيم. زيادة من ل: الحمد لله أهل الحمد والثناء والصلوة على محمد سيد الأنبياء وعلى آله الكرماء.

رَسَائِلُ إِخْوَانِ الصَّفَاءِ وَخُلَايَا الْوَفَاءِ (٥)

الرسالة الخامسة
في الموسيقى
مِن الْقِسْمِ الْأَوَّلِ فِي الْعُلُومِ الرِّيَاضِيَّةِ التَّعْلِيمِيَّةِ

حَقَّقَهَا وَتَرَجَمَهَا
أَوْنُ رَايْتُ

دَقَّقَهَا وَضَبَطَ شَكْلَهَا صَالِحُ الْأَشْمَرِ
نَقَّحَهَا وَقَابَلَهَا عَلَى أَصُولِهَا نَادِرُ الْبِزْرِي

دار نشر جامعة أكسفورد
بالتعاون مع مَعْهَدِ الدِّرَاسَاتِ الْإِسْمَاعِيلِيَّةِ فِي لَنْدَنَ