

# Musical Syncretism in the Greek Orientalizing Period

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## ZUSAMMENFASSUNG

Die Legende, nach der Terpander die „Vierton“-Lieder zugunsten neuer Gesänge mit der siebensäitigen Leier fallen ließ, skizziert die Konfrontation von zwei Musiktraditionen in der orientalisierenden Periode (ca. 750 – 650 v. Chr.) Griechenlands, ausgelöst durch die Expansion des assyrischen Reiches nach Westen. Die siebensäitige Leier entspricht klar der Heptatonie, wie sie im alten vorderen Orient weithin praktiziert wurde, von Keilschrifttafeln bekannt, auf denen der Gebrauch des diatonischen Stimmsystems dokumentiert ist. „Vierton“-Lieder müssen als Erbe der melodischen Praxis des epischen Sängers in Griechenland verstanden werden. – Die Hypothese vom synchronen Vorkommen beider Richtungen kann anhand der genannten griechischen Theoretiker und Schreiber über Musik überprüft werden. Hier finden sich grundlegende Unterschiede zwischen mesopotamischen und hellenistischen Traditionen. Obgleich diatonische Skalen auch in Griechenland bekannt waren, erinnern sogar späte Theoretiker daran, dass anderen Formen der Heptatonie der Vorzug gegeben wurde, den chromatischen und enharmonischen Genera, Klangstrukturen, die nicht nur durch die konsonanten Intervalle des diatonischen Systems errichtet werden konnten. Diese Stimmungen wurden indes durchgehend als Modifizierungen des diatonischen gesehen, nach Aristoxenos „das älteste und natürlichste der Tongeschlechter“, und sie hatten wenigstens minimal den Bedingungen der Diatonie zu entsprechen. So mögen die Genera wenigstens zum Teil als regionale mikrotonale Abweichungen gelten, die einem übernommenen diatonischen Substrat angepasst wurden, um ausgeprägt hellenistische Formen der heptatonischen Musik zu schaffen.

*I doubt if anyone has ever completed a book upon Greek music without feeling acute dissatisfaction both with his subject and with himself ... Yet com-*

*plete despondency is as unnecessary as it is ignoble. Every student of the subject must from time to time have the feeling that there is a certain amount of evidence, particularly concerning the earlier stages of Greek music, that is still unrelated together.*<sup>1</sup>

With these words Winnington-Ingram concluded his magisterial *Mode in Ancient Greek Music*. Despite the recent spate of excellent general studies which have greatly facilitated research on the subject, this work has remained the forward limit of certainty in reconstructing the history of Greek tone systems. Though Winnington-Ingram maintained that “in all probability Greek music was closely related to that of the contemporary Orient”,<sup>2</sup> it was twenty five years before Anne Kilmer published the first of the now well-known cuneiform musical tablets.<sup>3</sup>

Although many details of this system remain obscure, it is clear that by the Old Babylonian period at the latest – and probably before, given that many Akkadian terms find Sumerian equivalents, as in the lexical text U.3011 – the Mesopotamian cultures knew a system of interrelated heptatonic scales as highly refined as that attested so much later in Greece. It is especially exciting to find ‘middle’ used as a technical term (Sumerian MURUB, Akkadian *qablītu*), since it prefigures the Greek μέση, which acted as a sort of tonal, or perhaps organizational, center on the Greek lyre.<sup>4</sup>

<sup>1</sup> Winnington-Ingram 1936, viii; 83.

<sup>2</sup> Winnington-Ingram 1936, vii.

<sup>3</sup> Kilmer 1960; for an introduction to the subject, an overview of the central texts, and further bibliography, see Kilmer 1994.

<sup>4</sup> See first Winnington-Ingram 1936, 4ff.; cf. West 1992, 219. But the evidence for μέση has not yet been adequately discussed. Relevant sources include Plato *Republica* 443d–e; Aristotle *Metaphysica* 1018b26ff.; Aristoxenus *Elementa Harmonica* 47 (58.11ff. Da Rios); Ps.-Aristotle *Problemata* 19.20; 25, 19.33, 19.36; 19.44; Plutarch *Quaestiones Conviviales* 9.4 (*Moralia* 745B); Plutarch *Platonicae Quaestiones* 9.2 (*Moralia* 1008e); Dio Chrysostomum 68.7; Cleonides *Isagoge* 11 201.16ff.

Moreover, the Old Babylonian ‘Retuning Text’ (UET 7/74), with its seven tunings arranged in a cyclical scheme, seems to predict the Perfect System (σύστημα τέλειον) documented in the *Elementa Harmonica* of Aristoxenus, Aristotle’s cantankerous colleague and in-house musicologist.<sup>5</sup>

Despite a number of generalities about probable Eastern influence on Greek music, we are still lacking a satisfactory explanation of these parallels.<sup>6</sup> A detailed correlation is beyond the scope of this paper; I hope rather to clarify the historical background against which a Greco-Mesopotamian musical relationship may be understood, prefatory to a larger study in preparation.

Many scholars accept intuitively some connection between the two traditions. It is certain however that the Perfect System was a relatively recent invention, pioneered in the later fifth century by harmonists like Eratocles whose works are lost, but whose contributions were still clearly recalled by Aristoxenus.<sup>7</sup> Any relationship between Greek music and the Mesopotamian system will have been more remote, and such evidence as there might be should be sought in much earlier sources. The problem here is that, the farther one retreats from the Classical period – itself all too murky – into the Archaic, there is less and less evidence. The material that we do have is badly jumbled and contradictory.

Yet one figure who stands out is Terpander, the gleeman of Lesbos who flourished in the early seventh century.<sup>8</sup> This four-time victor at the Pythian festival was associated with a number of changes in the stringing of the Greek lyre, the most famous of which was to increase its strings from four to seven. This well-attested tradition is best known from a song attributed to Terpander himself and now generally accepted as authentic:

Τέρπανδρον ... τὸν πρῶτον ἀντὶ τῆς τετρα-  
χόρδου λύρας ἑπταχόρδῳ χρησάμενον, κα-  
θάπερ καὶ ἐν τοῖς ἀναφερομένοις ἔπεσιν εἰς  
αὐτὸν λεγεται·

ἡμεῖς τοι τετράγαρον ἀποστρέξαντες αἰοιδὰν  
ἑπτατόνῳ φόρμιγγι νέους κελαδήσομεν  
ὕμνους.<sup>9</sup>

Terpander ... the first to use a seven-stringed lyre instead of a four-stringed one, exactly as it is said in the verses ascribed to him:

Let us put aside four-voiced song and  
Sing new hymns to the “heptatonic” phor-  
minx.<sup>10</sup>

It is very attractive to connect the ἑπτάτονος φόρμιγξ with the heptatony of the Near East, since it is exactly at this time that ‘Asian’ culture was saturating Greece. The Orientalizing Period

was catalyzed by the westward expansion of the Assyrian empire to the Mediterranean under Tiglathpileser III (c. 744–727) and Sargon II (c. 722–705). Phoenician trading and colonial activity of the ninth and eighth centuries had reinvigorated, after the so-called Dark Age, the influx to Greece of West Semitic cultural elements, some of which were Mesopotamian in origin. But Assyrian expansionism now brought the Greeks much more directly within the Mesopotamian cultural sphere. In particular the policy of systematic deportation, whereby conquered and insurgent peoples were shuffled between the provinces of the empire in hundreds of thousands, must have done much to establish an Assyrian cultural koine. The Greeks themselves were not so absorbed by the Assyrians; even the marginal Cyprus, which paid tribute on occasion, was never officially incorporated into the political structure. All the same, a sharp spike of Orientalizing interest is evident in Greek culture at this time – not only in Cyprus, but in most parts of the Aegean itself.<sup>11</sup>

Based on parallels in the other arts and sciences now documented,<sup>12</sup> it is only to be expected that

<sup>5</sup> The seven tunings are shown as subsequent permutations of each other, effected by “clearing” the tritonic interval in each case. See Gurney 1968; Wulstan 1968; Gurney 1994; Crocker 1997; Gurney/West 1998, 223–224 with contribution from Th. Krispijn. It remains a matter of controversy whether the text is to be restored through seven phases of this cycle, or to an eighth which would duplicate the first at a semitone higher or lower (see Gurney 1994, 104 and Crocker 1997, 193–194). In either case there are only seven distinct pitch structures. The arguments of Ptolemy 2.9 for only seven species are relevant here.

<sup>6</sup> Discussions of a potential Greco-Mesopotamian connection include Farmer 1957, who collected testimonia in Greek sources about East-West musical contact; Duchesne-Guillemin 1967 sought a relationship between the Greek and Mesopotamian string arrangements; Wulstan 1968, 217, 220–3, 228 has some observations about the central string and the doctrine of the Harmony of the Spheres; Picken 1975, 601ff. argues well for a common heptatonic tradition between Greece and China; Lasserre 1988 attempted a more detailed correlation of the tablets but is generally unconvincing; West 1993/4, 162 questions any specific connection between the tablets and the Greek evidence, but accepts more generally the transfer of Oriental musical elements to Greece: see West 1992, 386–90; 1997, 31–2.

<sup>7</sup> On the predecessors of Aristoxenus, see Burkert 1972, 372 n. 12; Barker 1978.

<sup>8</sup> See first the discussion of Athenaeus 14.635e–f. All told the early seventh-century floruit is best attested, and is adopted by Gostoli 1990 IX–XI.

<sup>9</sup> Terpander fragment 4 Gostoli = Strabo 13.2.4; other sources recorded by Gostoli (1990), 51f. The tradition is recorded more generally by other authorities: see Gostoli’s testimonia 11, 24, 49, 52, 53a, 53b.

<sup>10</sup> All translations are my own.

<sup>11</sup> For the affairs of this period see Braun 1982; Culican 1991; Aubet 1993, 43–49.

<sup>12</sup> See especially Burkert 1992; West 1997.

this movement will have had a musical aspect. We need look no further than the alphabet for an example of the Greek adaptation, requiring close bilingual contact, of a complex and detailed Oriental art. More suggestive still is the strong resonance between the Archaic poetic traditions of Greece and the Near East, which has now been established beyond any lingering doubt. Many of these elements are due to gradual absorption and exchange over centuries of East-West relations. Others however seem to derive specifically from the Neo-Assyrian age.<sup>13</sup> The westward movement of this poetic material must have been accompanied to some extent by musical ideas. As I see it, then, the sudden explosion of the so-called lyric or melic music in the Greek Archaic period, and the ‘invention’ of the seven-stringed lyre, represents the fruit of an Orientalizing musical movement.

It is important to remember that within the larger Mesopotamian musical culture the tonal system documented in the tablets was proper to only a few of many known musical genres, as seen from the Middle Assyrian song catalogue VAT 10101.<sup>14</sup> It may be necessary then to distinguish between the general and extensive presence of West Semitic and Mesopotamian literary elements in Archaic Greek poetry, and that aspect of Greek Orientalizing music which may be connected specifically with the seven-stringed lyre. Naturally there would have been some common ground, but the two phenomena are not strictly coterminous.

We must also question the relationship between the tuning system as documented in the tablets, and the musical realities of practicing musicians, for it is the business of theory to reduce the complex and subtle to the logical and systematic. There can be little doubt that where heptatonic music was practiced throughout the ancient Near East, many intonational differences would have been introduced at different times and places.

But we should not let our own long familiarity with heptatonic scales blind us to the fact that there are many ways to articulate the frequency continuum musically. Not all employ resonant intervals, nor even static pitches. The seven-fold division of the octave, its many variations notwithstanding, is peculiar to a single method, namely the alternation of consonant fifths and fourths. This is the process which underlies the Retuning Text, as shown by the names of the seven tunings (which were named after the interval on which the process was begun in order to achieve the desired pitch-set)<sup>15</sup> and by the very mechanism which enables the progression from one tuning to the next, the ‘clearing’ of the tritone to a consonant fourth or fifth.

The basic process of alternating fifths and fourths was known in Greece as ἡ λῆψις διὰ

συμφωνίας, “taking [sc. the tuning] through consonance”, creating what Aristoxenus called the ‘diatonic genus’ (γένος διάτονον).<sup>16</sup> The term ‘diatonic’ should not then be applied loosely to any roughly stepwise arrangement of pitches, whether heptatonic or not, but must be used in this strict ancient sense. The word may however be extended beyond the Greek sphere to describe the system of the Retuning Text, without yet implying an historical connection between the two traditions.

The diatonic scales of the Retuning Text might be seen as providing a finite set of templates for the creation of heptatonic music, without recording any of the innumerable pitch shadings which doubtless existed. Yet it also seems probable that diatonic tunings were used in pure unshaded form, not merely in theory but practice. This may be deduced from the fact that the interval names, defined within the diatonic system by CBS 10996, were used as a means of notating actual music.<sup>17</sup> Moreover the love songs listed in VAT 10101 occur in all seven tunings, yet the identity of these as a mutually coherent set depends on the interconnectivity granted by the pure diatonic tuning documented in the Retuning Text. Likewise it is certain that the Greeks practiced diatonic music in a pure form: the very fact that scales were classified into genera (γένη) serves to isolate the diatonic in its pure form from the chromatic and enharmonic.<sup>18</sup> Even Ptolemy, so insistent on refinements of intonation, admits that “this is how the kitharodes tune” (οὕτω γὰρ ἀρμόζονται οἱ κιθαρωδοί).<sup>19</sup>

The system of diatonic music documented by the tablets would be easily exportable across national boundaries. Consistent over fifteen hundred years or more, the standardized Mesopotamian vocabulary indicates a formal tradition of music – we may call it a classical practice – which, while doubtless growing and changing over the centuries, retained certain essential and identifiable features across the continually changing political map of second and first millennia Mesopotamia.

<sup>13</sup> West 1997, 375–80, 587.

<sup>14</sup> Kilmer 1994, 475.

<sup>15</sup> Kümmel 1970; Kilmer 1994, 472.

<sup>16</sup> Aristoxenus *Elementa Harmonica* 55.2ff.; Euclid *Sectionis Canonis* Proposition 17; Ptolemy 1.16 (39.14ff. During).

<sup>17</sup> Kilmer 1960, 298ff.; Kilmer 1994, 477.

<sup>18</sup> Note that even within the diatonic genus there were two shades: the pure or ‘tense’ diatonic (διάτονον σύντονον), and the ‘slack’ (διάτονον μαλακόν): see Aristoxenus *Elementa Harmonica* 51.

<sup>19</sup> Ptolemy 2.1 (44.1ff.); cf. 1.16 (39.17–18) δύο γὰρ ποιοῦσι τοὺς ἡγουμένους τόνους καὶ τὸ λοιπὸν, ὡς μὲν αὐτοὶ νομίζουσιν, ἡμιτόνιον (“for they make the leading intervals two tones and the remainder, as they consider it, a semitone”).

Such an artform, being less idiomatic and culture-specific than regional folk traditions, could serve as a musical lingua franca, jumping easily from court to court as a mark of high culture. Indeed the history of the diatonic system is characterized throughout by such movement, being handed on from Sumer (presumably) to Babylon to Assyria. The constant nature of resonance would allow the diatonic scales to be readily reproduced by anyone anywhere, even beyond the bounds of Mesopotamia proper. The actual music created using such a 'metric' system, with all the heptatonic variation wrought by time and place, might not be equally exportable in every case. But in its pure form the diatonic tuning method could provide malleable raw material for the creation of new syncretic traditions.

We are fortunate to have an example of this process in the Hurrian hymns found at Ugarit, a melting pot of cultures with seven attested languages and five scripts.<sup>20</sup> Here, by the middle of the second millennium BC, the Mesopotamian system had been taken over across a linguistic barrier with Akkadian terms being pressed into service in an undoubtedly different musical environment, as shown by Hurrian musical vocabulary which has no Akkadian counterpart.<sup>21</sup> Ugarit's situation on the Phoenician coast made it an important crossroads for goods, news and knowledge coming from and going to all parts of the Eastern Mediterranean. For even if the diatonic art subsequently disappeared from Ugarit, it surely returned to the Levant with the Neo-Assyrian conquests. We might seek a point of contact in a city like Sidon, which was first in music according to the Phoenician History written by Philo of Byblos, who drew on the ancient writings of Sanchuniathon.<sup>22</sup>

Now, it is clear from scattered musical references in Homer as well as geometric vase-painting that, prior to the period in question, the Greeks enjoyed a rich and varied musical life. Epic song, to which belong our only documents illustrative of this period, was but part of this tradition. Conversely we may assume that Near Eastern musical influence would not have been limited to any one instrument or genre. Yet this is not as crippling as it may seem. For the Homeric poems, though they too show a certain amount of Asiatic influence, derive principally from an art of oral performance which had for centuries occupied a high station in Greek culture,<sup>23</sup> descending ultimately from the Indo-European poetic tradition – of which they preserve clear traces as regards metrics, diction and theme.<sup>24</sup> A diatonicizing musical movement would mean a juxtaposition or even confrontation with this tradition, all the more since both were intimately concerned with stringed instruments.

One might well imagine this situation in Terpander's exhortation to "put aside four-voiced song" in favor of new songs on the heptatonic phorminx.

The attempt to understand τετράγαρον αοιδῶν in light of Homeric musical practice goes back to Ludwig Deubner who, after a careful survey of the available ceramic evidence, argued that the ancient interpretation of these verses, seen for example in Strabo, should be upheld, that they bear witness to an historical change in the Greek lyre from four to seven strings.<sup>25</sup> The objection that ceramic and plastic evidence is unreliable for determining number of strings is certainly valid in some circumstances,<sup>26</sup> but for the Geometric and Archaic Greek material has been sufficiently countered by West.<sup>27</sup> On the whole subsequent scholars have upheld the thesis that seven-stringed lyres, last seen in the Mycenaean period, reappear at the end of the eighth century.<sup>28</sup> Whether "four-voiced song" necessarily implies a four-stringed instrument is in any case unimportant, for τετράγαρον αοιδῶν can only mean song using four pitches, whatever the configuration of Homer's lyre.<sup>29</sup>

Any attempt to reconstruct the Indo-European basis of Homeric melodic practice can only

<sup>20</sup> Morris 1992, 107.

<sup>21</sup> On the adaptation of the Akkadian terminology, see Laroche 1973. For the Hurrian terms, Kilmer 1971, 144f.; West 1993/4 171f.

<sup>22</sup> Philo of Byblos FGrH 790 F 2.

<sup>23</sup> See the paper of M. Schuol in this volume.

<sup>24</sup> On the status of the Indo-European singer and for the poetics of this tradition, see Watkins 1995; for the professionalism of the Greek epic singer, Parry 1987, 329, 360.

<sup>25</sup> Deubner 1929; Deubner 1930.

<sup>26</sup> See for example Maas/Snyder 1989, 203.

<sup>27</sup> West 1992, 52 with n.15: "Certainly in some cases we may say that a painter or the maker of a small model had room for only three or four strings in the space available, given the thickness of his brushstrokes or the metal strands he could make. But in other cases more strings could easily have been accommodated; and in view of the quantity of the evidence, besides the existence of a literary tradition ... Perhaps some [lyres] had only three, but as between three and four the artistic evidence does not have the same probative value as it has between four and seven, and we should expect there to be a standard number corresponding to the requirements of a particular type of singing".

<sup>28</sup> Cf. Gombosi 1939, 48ff., with further examples; Picken 1975, 597–8; Barker 1984–1989 vol. 1, 43 n.18; West 1981, 115; Gostoli 1990 XXXIX–XLI; Anderson 1994, 61–3. The problem of the Mycenaean seven-stringed lyre, which has always been the chief obstacle to crediting Terpander or his age with the invention of a ἑπτάτονος φόρμιγξ (see e.g. Maas and Snyder 1989, 203), may be readily explained as a trapping of high culture that disappeared, like literacy, with the collapse of the palaces.

<sup>29</sup> Τετράγαρον αοιδῶν finds clear parallels in Bacchylides fragment 20B (Snell/Maehler) ἑπτάτονον ... γάρου ("seven-stringed voice" or "heptatonic voice"), and Euripides Rhesus 548 πολυχορδοτάτα γῆρου ("many-stringed voice").

be reductive and conjectural.<sup>30</sup> As Stravinsky said of the ancient traditions generally, “we lack an indispensable element of investigation: namely, the sensation of the music itself”.<sup>31</sup> Nevertheless we can safely say that the Greek epic τέχνη was not the diatonic art of the Near East. For this required in the first instance an instrument with a minimum of seven strings, in the second upon the deliberate concatenation of seven resonant fifths and fourths. Despite its broad diffusion in antiquity, diatony should be seen as a culture-specific creation – presumably that of Mesopotamia where it is first attested, but at any rate not original to Greece. Terpander’s ἑπτάτονος φόρμιγξ, the “heptatonic” lyre, was the necessary instrument, appearing in the right place and at the right time. Thus, according to a Pythagorean tradition preserved by Nicomachus, the seven-stringed lyre was a gift of the ‘Phoenicians’ – the conventional bearers of Oriental culture:

Τέρπανδρος μὲν οὕτω λέγεται τὴν λύραν εὐρηκέναι, Ἀχαιοὺς δὲ ὑπὸ Κάδμῳ τοῦ Ἀγήνορος παραλαβεῖν.<sup>32</sup>

So Terpander is said to have invented the [sc. seven-stringed] lyre, though the Achaeans received it by the grace of Cadmus [ὑπὸ Κάδμῳ], the son of Agenor.

Yet though the orientalizing epoch is fairly described as a cultural revolution, we cannot believe that an imported music would simply have replaced the native Greek art. By an accident of geography, the Greeks were close enough to the Assyrian cultural sphere to be enriched with new ideas, but had enough distance for independent growth and the survival of ancient traditions.<sup>33</sup> Thus we see epic song unfolding throughout the Archaic period to produce the so-called Homeric hymns. In terms of diction, metrics and composition, these poems are essentially faithful to the inherited art. Yet we must assume that they were now performed on the seven-stringed instruments which are ubiquitous in the vase paintings of the Archaic period. The Hymn to Hermes is particularly intriguing in this light, telling of the god’s invention of the seven-stringed lyre and its adoption by Apollo, the traditional god of the epic singer. In effect the poem documents the assimilation of heptatony by the traditional αἰοιδός, echoing Terpander’s exhortation to embrace the seven-stringed lyre.

The word μέλος, though common in Homer in its primary meaning of “limb”, is in its musical sense of “tuning” or “melody” first attested only in the early Archaic period, in the poetry of Alcman and Stesichorus.<sup>34</sup> Though we must

beware the limitations of the evidence, it is tempting to connect this secondary sense with some post-Homeric musical development, whereby μελωδεῖν would indicate not simply the traditional singing implicit in the Homeric αἰεῖν, but singing in accordance with novel intonational customs designated by μέλος (μελωδεῖν = μέλος + αἰεῖν). This helps illuminate certain curious descriptions of Terpander’s pioneering style. According to one tradition, the Lesbian singer was “the first to dress poems in ‘melody’” (μέλος τε αὐτῷ πρῶτος περιέθηκε τοῖς ποιήμασι).<sup>35</sup> In other words, Terpander fused “the words of Homer and the ‘melodies’ of Orpheus” (Ὀμήρου μὲν τὰ ἔπη, Ὀρφέως δὲ τὰ μέλη).<sup>36</sup> And in a notice deriving from the fourth-century researches of Heraclides Ponticus, we learn that

τὸν Τέρπανδρον ... κιθαροδικῶν [v.l. -ον] ποιητὴν ὄντα νόμον κατὰ νόμον ἕκαστον τοῖς ἔπεσιν τοῖς ἑαυτοῦ καὶ τοῖς Ὀμήρου μέλη περιτιθέντα ἄδειν ἐν τοῖς ἀγῶσιν.<sup>37</sup>

Terpander ... a poet of kitharodic nomes, wrapping ‘melodies’ [μέλη] nome by nome [κατὰ νόμον] around his own words [ἔπη] and those of Homer, sang (ἄδειν) them in the contests.

That Terpander’s new heptatonic music was equally derived from the inherited ‘epic’ art is reflected in a tradition preserved by the Suda, according to which the Lesbian celebrity was a third-generation descendent of Homer; a Hesiodic paternity is also mooted.<sup>38</sup> Indeed the Lesbian school, which dominated the kitharodic music of the early Archaic period, may represent a reflowering of the ancient Aeolic epic art which preceded and was adopted by the Ionian singers, of whom

<sup>30</sup> See for example West 1981.

<sup>31</sup> Stravinsky 1947, 26.

<sup>32</sup> Nicomachus Excerpta 1 (Jan 266). On the attribution of this material to Nicomachus, see Jan 1895, 225ff.

<sup>33</sup> Cf. Burkert 1992, 29; 129: “Under the special circumstances of the eighth century, they could participate in every development at the time without falling victim to the concomitant military devastations, as did their neighbors in Syria and Southern Anatolia ... Cultural predominance remained for a while with the Orient; but the Greeks immediately began to develop their own instinctive forms of culture through an astonishing ability both to adopt and to transform what they had received.”

<sup>34</sup> Alcman fragment 126 (PMG 126); Stesichorus fragment 35 (PMG 212).

<sup>35</sup> Clement of Alexandria Stromata 1.16.78.

<sup>36</sup> Alexander Polyhistor FGrH 273F77 = ps.-Plutarch De musica 1132e–f.

<sup>37</sup> Heraclides Ponticus fragment 157 (Wehrli) = ps.-Plutarch De musica 1132c.

<sup>38</sup> Suda s.v. Τέρπανδρος.

Homer was a last great representative.<sup>39</sup> In fact, the fragments of Terpander – both genuine and spurious, however one divides them – are predominantly dactylic.<sup>40</sup> It is this same curious mixture of epic and melic that we find in the Homeric Hymns.

The hypothesis of syncretism lets us imagine the imposition of native Greek melodic features – let us say microtonal customs operating over narrow melodic range – upon the imported diatonic conventions.<sup>41</sup> This may be ultimately reflected in the non-diatonic genera documented and systematized centuries later by Aristoxenus and others. At the same time diatony persisted as the foundation of the new and imported art form, what Aristoxenus knew as ἄρμονική. This emerges most clearly from two facts in combination. First are the names of the principle consonances, the resonant fourth and fifth, called respectively ἡ [συμφωνία] διὰ τεττάρων, “the [consonance] through four [sc. strings]”, and ἡ [συμφωνία] διὰ πέντε, “the [consonance] through five [sc. strings]”. Second is Aristoxenus’ cardinal rule of συνέχεια, generally translated as “continuity”, which governed the proper constitution of a heptatonic scale, the μέλος ἡρμωσμένον. This precept is clearly presented in two passages of the *Elementa Harmonica*:

ὑποκείσθω δὲ καὶ τῶν ἐξῆς κειμένων φθόγγων κατὰ μέλος ἐν ἑκάστῳ γένει ἦτοι τοὺς τετάρτους διὰ τεττάρων συμφωνεῖν ἢ τοὺς πέμπτους διὰ πέντε ἢ ἀμφοτέρως.<sup>42</sup>

And let it also be laid down that, for notes which are “continuous” along a μέλος [sc. ἡρμωσμένον] – in each genus – either every fourth note is consonant at a fourth, or every fifth note is consonant at a fifth, or both.

οὐ δεῖ δ’ ἀγνοεῖν, ὅτι οὐκ ἔστιν αὐταρχες τὸ εἰρημένον πρὸς τὸ ἐμμελῶς συγκεῖσθαι τὰ συστήματα ἐκ τῶν διαστημάτων· οὐδὲν γὰρ κωλύει συμφωνούντων τῶν φθόγγων κατὰ τοὺς εἰρημένους ἀριθμοὺς ἐκμελῶς τὰ συστήματα συνιστάναι, ἀλλὰ τούτου μὴ ὑπαρχόντος οὐδὲν ἔτι γίγνεται τῶν λοιπῶν ὄφελος. θετέον οὖν τοῦτο πρῶτον εἰς ἀρχῆς τάξιν οὐ μὴ ὑπαρχόντος ἀναιρεῖται τὸ ἡρμωσμένον.<sup>43</sup>

It is essential to realize that the aforementioned [sc. principle] does not guarantee that systems will be properly assembled from intervals. For nothing stops a tuning from being put together improperly even when the notes are consonant according to the aforementioned numbers [i.e. every note being consonant by a fourth or fifth or both with every fourth or fifth note from itself]; but if this condition is not fulfilled, there

is no use bothering about the rest: and so this must be made the first principle, without the fulfillment of which the [sc. μέλος] ἡρμωσμένον is destroyed.

When the conditions of συνέχεια are fulfilled, the names of the consonances are fairly accurate. Either every four strings will comprise a fourth, or every five a fifth – but not necessarily both. This either/or approach validates the various enharmonic and chromatic scales, which, while the ‘movable’ strings of each tetrachord can be any number of pitches depending upon the genus and species,<sup>44</sup> still fulfill συνέχεια because the tetrachord as a whole ‘responds’ to another tetrachord either by conjunction at a fourth or disjunction at a fifth. But not necessarily both – this is optional.

Only with the diatonic genus do the interval names make consistent sense. With one exception – the ‘unclear’ tritonic interval which in Mesopotamia enabled the Retuning cycle – every fourth and every fifth is consonant and the tetrachords both conjoin and disjoin simultaneously. This results from the consistent alternation of fifths and fourths, the basic mechanism of diatony. The harmonious semantic relationship between the Greek interval names and the diatonic genus suggest that this was the structural standard by which the proper constitution of the others was judged. That συνέχεια was an essentially diatonic precept finds confirmation in Ptolemy’s qualification of the structure as διατονικοῦ συνεχοῦς, “continuous diatonic”.<sup>45</sup> The enharmonic and chromatic genera, which could never match all the structural characteristics of the diatonic, were at the same time required to match some of them before being recognized as a μέλος ἡρμωσμένον.

Μέλος thus emerges as a technical term inextricably tied to heptatony and ultimately diatony.

<sup>39</sup> For the Lesbian school, see ps.-Plutarch *De musica* 6.1133c. For the Aeolic phase of Greek epic see Parry 1987, 342–362; Janko 1982, 89–93, 232, et passim.

<sup>40</sup> Cf. ps.-Plutarch *De musica* 1132d πεποίηται δὲ τῷ Τερπάνδρῳ καὶ προοίμια κιθαρωδικὰ ἐν ἔπεσιν (“Kitharodic preludes have been composed by Terpander in ‘epic language’”); cf. 1133c τὰ γὰρ πρὸς τοὺς θεοὺς ὡς βούλονται ἀφοσιωσάμενοι, ἐξέβαινον εὐθὺς ἐπὶ τε τὴν Ὀμήρου καὶ τῶν ἄλλων ποίησιν. δηλον δὲ τοῦτ’ ἐστὶ διὰ τῶν Τερπάνδρου προομιῶν (“Having discharged dutiful hymns to the gods as they liked, they proceeded immediately to the poetry of Homer and his contemporaries. And this is clear from the preludes of Terpander”); Photius *Bibliotheca* 320a33–b11 Τέρπανδρος ... ἠρώφ μετρῶ χρησάμενος (“Terpander ... using heroic metre”).

<sup>41</sup> For the various phenomena of musical syncretism, see for example Nettl 1985, 20–23 with further literature.

<sup>42</sup> Aristoxenus *Elementa Harmonica* 29.

<sup>43</sup> *Ibid.* 54.

<sup>44</sup> *Ibid.* 22–27.

<sup>45</sup> Ptolemy 2.6 (55.12–15).

For all their microtonal variation, the Greeks adhered strictly to the principle that a proper scale must have seven pitches. It is no coincidence then that Aristoxenus makes the diatonic the oldest of the genera:

πρῶτον μὲν οὖν καὶ πρεσβύτατον αὐτῶν θετέον τὸ διάτονον, πρῶτον γὰρ αὐτοῦ ἢ τοῦ ἀνθρώπου φύσις προστυγχάνει, δεύτερον δὲ τὸ χρωματικόν, τρίτον δὲ καὶ ἀνώτατον τὸ ἐναρμόνιον, τελευταίῳ γὰρ αὐτῷ καὶ μόλις μετὰ πολλοῦ πόνου συνεθίζεται ἡ αἴσθησις.<sup>46</sup>

Now, the diatonic must be put down as the first and oldest of them [sc. the genera], for the natural state [φύσις] of man comes across it first, and afterwards the chromatic, and third and finally the enharmonic, for it is the last to which the perception grows accustomed – and with difficulty at that, after much labor.

This chronology opens the possibility that the enharmonic and chromatic were not merely analyzed against the diatonic norm (as συνέχεια shows) but in fact represent its historical modification. Easy and reliable to tune,<sup>47</sup> the ‘clear’ consonant intervals of the diatonic could serve as a point of departure for the quarter-tone dissections and whole-tone omissions of the enharmonic, and for the ‘coloring’ of the chromatic.

In fact the Hibe Papyrus, a tirade composed in perhaps the early fourth century against the theory that music could affect the character, seems to regard the chromatic as a variety of diatonic by grouping the two as against the enharmonic.<sup>48</sup> This rather cryptic hint has puzzled scholars in view of Aristoxenus’ divergent classification of it as an independent genus, but a similar view resurfaces in one of the anonymous musical treatises unearthed by Bellermann which contain, besides a bulk of conventional material, a few real treasures that survived, the onslaught of Aristoxenian theory:

χρῶμα δὲ ἦτοι παρὰ τὸ τετράφθαι πως ἐκ τοῦ διατονικοῦ ἢ παρὰ τὸ χρώζειν μὲν αὐτὸ τὰ ἄλλα συστήματα.<sup>49</sup>

And the chromatic [sc. is so-called], either through having been converted somehow from the diatonic, or from its coloring of other systems.

In this and other details, the anonymous treatise closely echoes a curious passage, interpolated into Aristides Quintilianus, which defines both chromatic and enharmonic in terms of the diatonic:

Τὸ χρωματικόν γένος διατονικόν ἐστὶν ἡυξημένον καὶ πεπυκνωμένον ἡμιτονίοις· τὸ δ’ ἐναρμόνιον διατονικόν ἐστὶ τόνῳ μὲν διπλασιασθέν, τῷ δ’ ἡμιτονίῳ δίχα διηρημένον.<sup>50</sup>

The chromatic genus is the diatonic augmented and packed and condensed with semitones; and the enharmonic is the diatonic doubled at the tone, and divided in two at the semitone.

This passage also shares with the Hibe Papyrus the association of diatony with the manly and austere. Furthermore, it parallels the dual explanation of chromaticism found in Bellermann’s Anonymus when it goes on to say in nearly the same words:

χρωματικόν δὲ καλεῖται παρὰ τὸ χρώζειν αὐτὸ τὰ λοιπὰ διαστήματα, μὴ δεῖσθαι δὲ τινος ἐκείνων.<sup>51</sup>

And the chromatic is so-called from its coloring of the other intervals, when it does not actually need some one of them.

The three passages, otherwise anomalous within Greek musicography, share enough conceptions for us to see them as reflecting a single tradition whose very anonymity argues for a pre-Aristoxenian origin. At the same time, these various explanations of the genera as diatonic modifications are consonant with his rule of συνέχεια, which imposed minimum standards of diatony upon all heptatonic scales. It would be better then to translate συνέχεια not as ‘continuity’ but as ‘cohesion’, specifically ‘diatonic cohesion’. When Aristoxenus makes this rule his first principle in the passage cited above, he reveals ἀρμονική as an essentially and originally diatonic form of art music. Within this definition, the diatonic, being fundamental, must be understood as the oldest of the genera, despite the fact that we must suppose the existence of non-diatonic lyre tunings as characteristic of the Homeric period – tunings which may have dictated

<sup>46</sup> Aristoxenus *Elementa Harmonica* 19.

<sup>47</sup> *Ibid.* 55: πολὺ μᾶλλον τοῖς τῶν συμφῶνων μεγέθεσι πιστεύει ἡ αἴσθησις ἢ τοῖς τῶν διαφῶνων ἀκριβεστάτῃ δ’ ἂν εἴη διαφῶνου διαστήματος λήψις ἢ διὰ συμφωνίας (“our perception is much more trusting of the consonant interval sizes than the non-consonant, and the tuning of a nonconsonant interval would be most precise when it is arrived at through consonance”).

<sup>48</sup> Improved text of Hibe Papyrus 13 in West 1992b; for the early fourth century dating of the text, see Anderson 1966, 149f.; this is questioned by Barker 1984–1989 vol. 1, 183.

<sup>49</sup> Anonymus Bellermanni 2.26 (7.17–18 Najock).

<sup>50</sup> [Aristides Quintilianus] *De musica* 2.19 (92.19–22 Winnington-Ingram).

<sup>51</sup> *Ibid.* 2.19 (92.24–25 Winnington-Ingram).

later syncretic forms. This may shed light on a curious statement in ps.-Plutarch which seems to derive from Aristoxenus:

κιθάρα δὲ, πολλαῖς γενεαῖς πρεσβυτέρα τραγωδίας οὔσα, ἐξ ἀρχῆς ἐχρήσατο [sc. τῷ χρωματικῷ γένει]. Τὸ δὲ χρῶμα ὅτι πρεσβυτερόν ἐστι τῆς ἀρμονίας, σαφές.<sup>52</sup>

And the kithara, being many generations older than tragedy, used the chromatic genus from the beginning. And that the chromatic is older than the enharmonic is evident.

This agrees with Aristoxenus' statement elsewhere that, prior to Olympus' invention of the enharmonic in the early Archaic period, all music had been either diatonic or chromatic.<sup>53</sup> It seems to conflict, however, with the Aristoxenian chronology cited above, which made the diatonic older than the chromatic. But this might merely mean that while the diatonic was original from a structural point of view, and 'natural' in its exclusive use of consonant intervals, heptatonic shadings were part of the τέχνη from the start – whether from the influence of native Greek practice, or because this was part and parcel of Asiatic music, or both.

Alongside the central syncretism enshrined in the genera, I detect several phenomena at the margins of the orientaling movement. Some singers clearly resisted the temptations of melic music altogether, or at least preserved alongside it the pre-melic art in relatively pure form. As the Archaic period wore on, epic song became increasingly static and fossilized, giving rise to the rhapsodists – repertory artists who kept alive the memory and music of the ancient epic singers. All the same, some ability in traditional epic language persisted down to the second century BC, as shown by competent interpolations to the text of Homer.<sup>54</sup> Another outgrowth of the tradition may have been the musical παιδεία of the Classical period, where adaptation to changing circumstances helped preserve the epic singer's ancient didactic role. Central to this education were the Iliad and Odyssey, swan songs of the epic tradition, as well as the lyre, the ancestral tool of the singers' trade.

Diatony too appears to have persisted in relatively pure form. According to the Hibeh Papyrus, diatonic music was pursued to the exclusion of the other genera by the peoples of central and western Greece.<sup>55</sup> We might suppose that the same was true in other less cosmopolitan communities outside of Athens. In Sparta, for example, we hear of strong measures to counter the innovations of musicians like Timotheus in the fifth century – the

authorities cut away his strings in excess of seven.<sup>56</sup> The Spartans were, at this period, notoriously conservative. But the city's openness to innovation in the early seventh century is seen in the tradition that Terpander was the first of several musicians to found there a 'school' of musical instruction, the Spartans being until then inexperienced in 'music' – surely the new seven-stringed lyre was central to this curriculum.<sup>57</sup> It seems then that in Sparta the Orientalizing music experienced, like the city itself, a deliberately arrested development.

This is how I would epitomize the relationship between the Greek and Mesopotamian musical traditions. The hypothesis requires a revision of the position established by Winnington-Ingram, that the Perfect System represents the first coherent formal structure of Greek theory, the culmination of fifth-century efforts to find some common ground between various heterogeneous tuning conventions. This view arose largely from the belief that the earliest tunings of which we hear were 'defective', not yet attaining to the complete diatonic enumeration that underlies the Perfect System and the τόνοι. These include the 'defective' octave of Philolaus fragment 6; the libation song of Olympus studied by Aristoxenus as being the first enharmonic composition;<sup>58</sup> and the irregular scales recorded by Aristides Quintilianus as being those known to Plato.<sup>59</sup>

And yet – quite apart from unresolved issues of authenticity, accurate transmission and interpretation<sup>60</sup> – such pitch structures need not preclude a contemporary or earlier diatony. The enharmonic of Olympus, for instance, might be understood as some syncretic structure imposed on a new diatonic foundation, or some older

<sup>52</sup> Ps.-Plutarch De musica 1137e.

<sup>53</sup> Aristoxenus fragment 83 Wehrli = ps.-Plutarch De musica 1134f.

<sup>54</sup> On epic interpolations, see West 1997, 601–2; for the Homeric Hymn to Ares see Allen/Halliday/Sikes 1936, 384ff.

<sup>55</sup> P. Hib. 13.17ff.

<sup>56</sup> Plutarch Instituta Laconica 17 (Moralia 238c); cf. Timotheus frag. 15.202ff (PMG 791); Pausanias 3.12.10; Athenaeus 636e.

<sup>57</sup> Ps.-Plutarch De musica 9.1134b–c; Aelian Varia historia 12.50.

<sup>58</sup> Aristoxenus fragment 83 = ps.-Plutarch De Musica 1134f–1135b; cf. 1137a–b. On this passage see Winnington-Ingram 1928.

<sup>59</sup> Aristides Quintilianus De musica 1.9; West 1992, 174–175 and n. 47, with literature cited there.

<sup>60</sup> In a neglected article, Chailley 1968 gave a problematic but ultimately adequate demonstration that Philolaus fragment 6a and related passages from Nicomachus, the Aristotelian Problems, and elsewhere do not in fact envision a defective octave but relate to the transition from the seven-to eight-stringed norm.

melody comprehended against it. For diatonic tunings would not at any rate require the musician to use each of the seven steps in every case. In fact Aristoxenus described the enharmonic's invention precisely in terms of omitting pitches from the diatonic.<sup>61</sup>

Likewise the scales of Aristides Quintilianus might represent the development of diatony in the high enharmonic period of the later fifth century. With their frequent quarter-tones they are in fact largely enharmonic in character. Yet they show sometimes more, sometimes fewer than seven pitches, whereas it is certain that a seven-stringed lyre was standard throughout the Archaic period and persisted beyond the Classical period at the popular level. Like the libation song, these pitch structures may merely have been selective against a diatonic background. Indeed it is hard to see how they could have been preserved in written form without knowledge of diatony, since the notation system itself presupposes this.<sup>62</sup>

A key testimonium for an early diatonic precursor to the Perfect System will be Aristoxenus' report that Eratocles demonstrated the enharmonic octave species by the process of 'interval rotation':

Ἐρατοκλῆς ἐπεχείρησε καθ' ἓν γένος ἐξαριθμῆσαι τὰ σχήματα τοῦ διὰ πασῶν ἀναποδείκτως τῇ περιφορᾷ τῶν διαστημάτων δεικνύς.<sup>63</sup>

Eratocles attempted to enumerate the octave-schemes of one genus [sc. the enharmonic], showing it, without formal demonstration [ἀναποδείκτως], by the rotation of the intervals.

How this 'interval rotation' was effected is not stated, but it is clear that it concerns the progression from one octave species to another. We have taken this cyclical perspective to be Eratocles' great achievement. It is equally possible, however, to take the phrase as glossing the criticism of ἀναποδείκτως ("without formal demonstration"). That is, Eratocles did not produce a comprehensive account by Aristoxenus' latter-day standards, but, in merely using the process of interval rotation, did little to advance the state of ἄρμονική. Eratocles therefore showed how quarter-tone structures could be schematized according to a known and circular perspective which formed the basis of an earlier musical system. Despite Aristoxenus' allusive and punning statement that his predecessors only concerned themselves with enharmonic octachords,<sup>64</sup> it is certain that the diatonic was the object of early theoretical scrutiny, as may be seen from Philolaus fragment 6a. And so Proclus rightly commented that "here Aristoxenus says the incredible, that the ancients did not know the diatonic diagram" (ἐν οἷς καὶ λέγει τι θαυμαστόν ὃ Ἀριστόξενος, ὅτι τὸ διατονικὸν διάγραμμα οὐκ ἤδσαν οἱ παλαιοί).<sup>65</sup> The solution to the riddle may be that Aristoxenus, in focusing on the new Perfect System and his predecessors' contributions to it, neglected the older θεωρία as not needing any redress, saving his criticisms for the architects of its change. The lonely testimonium about Eratocles thus brings us within much more comfortable striking distance of the Mesopotamian system with its enumeration of seven diatonic scales and their sequential arrangement into a cyclical system. The two methods might even be identical.

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<sup>61</sup> Aristoxenus fragment 83 Wehrli ἀναστροφόμενον τὸν Ὀλυμπον ἐν τῷ διατόνῳ κ.τ.λ. ("Olympus was roaming about the diatonic etc.")

<sup>62</sup> See e.g. West 1992, 262.

<sup>63</sup> Aristoxenus *Elementa Harmonica* 6.

<sup>64</sup> *Ibid.* 2–3.

<sup>65</sup> Proclus *In Platonis Timaeum commentarii* 3.192A.

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