

4716
HAMILTON, A.
2007

CHAPTER 1

AESTHETICS AND MUSIC IN ANCIENT GREECE

Ancient Greek culture, in its own right and through its influence on Roman culture, was foundational to the musical development of the West. Its civilization lasted 500 years, from Classical Greece of the fourth and fifth centuries BCE, through the Hellenistic period from the death of Alexander in 323 BCE to the Roman conquest of Egypt in 30 BCE. My aim in discussing the place of music in this culture is philosophical in both an historical and a non-historical sense. It is important to show how enduring ideas in Western musical aesthetics have their origin in Ancient Greece and to cast light on the philosophical question of music in an alien culture using Greece as a case study. This project raises deep philosophical issues to do with understanding alien societies, for which many philosophers, who stress the importance of participant or empathetic understanding, have used the German term *Verstehen*. One essential aim of this chapter is to show how things that are taken as given or natural are not in fact so. It is easy to overstate the extent to which all peoples and times have a basic concept of music in common, and if we go back even to what is the foundation of Western civilization in Ancient Greece, we find that this is an open question.

However, while there are fundamental differences across cultures, there are also fundamental affinities. As argued in the Introduction, in this volume I take seriously the title *Aesthetics and Music* and wish to defend an aesthetic conception of music which regards it as an art at least with a small 'a' – a practice involving skill or craft whose ends are essentially aesthetic and which is the necessary object of aesthetic attention, with sounds

AESTHETICS AND MUSIC IN ANCIENT GREECE

regarded as tones. To reiterate, no one would deny that music is an art with lowercase 'a', it is the interpretation of art as aesthetic which is contentious. It is true that many Ancient Greek theorists seem to neglect the auditory experience of music and do not regard it as an art in the sense in which we use the term. Hence it is argued – or even sometimes assumed – that the Greeks did not have an aesthetic conception of music but rather an ethical or a mathematical one. However, despite the apparently alien nature of the Greeks' mathematical and ethical conceptions of music, I believe that an aesthetic conception of music should be attributed here as in other cross-cultural instances. There are several reasons for making this claim. One is that those who neglect auditory experience are the theorists, not musicians, of whose views we know almost nothing. Another reason is the unduly dominant influence of Plato's rationalism, which, as we will see, has had an unbalancing effect on our conceptions of the arts in Ancient Greece.

MUSIC AND *MOUSIKĒ* ART AND *TECHNĒ*

In the second book of his treatise *On Music* (*Peri musikēs*) Aristides Quintilianus writes:

There is certainly no action among men that is carried out without music. Sacred hymns and offerings are adorned with music, specific feasts and the festal assemblies of cities exult in it, wars and marches are both aroused and composed through music. It makes sailing and rowing and the most difficult of the handicrafts not burdensome by providing an encouragement for the work. It has even been employed by some of the barbarians in their funeral rites to break off the extreme of passion by means of melody.¹

Aristides is an important source for our understanding of music in Ancient Greece, though he wrote much later, during the Christian era around 300 CE. His remarks emphasize something on which all writers agree: music had a part in almost all important occasions of Greek life. Political and social systems were intertwined with music, which existed in the context of non-musical activities. Greek music embraced hymns, wedding songs,

funeral laments, drinking songs, love songs, work songs and many other varieties.

Sources such as Aristides enable us to build up a fairly convincing picture of Ancient Greek music and musical life. It is not now known how Greek music sounded; only a few notated fragments have survived, with no clue for realizing them, and surviving texts on music are fragmentary and imprecise. The principal instruments were the *kithara*, an elaborate kind of lyre (see Figure 1); the *aulos*, a wind instrument commonly translated as 'flute' but in fact a pair of pipes with vibrating reeds in their mouthpieces (see Figure 2); and percussion. Male and female choirs, accompanied by the *kithara* or *aulos*, sang in the cult of the gods and at weddings and funerals. In the theatre, music had a central role in the dramas of Aeschylus, Sophocles, Euripides and Aristophanes. The great games of Ancient Greece involved much musical activity. As Landels comments, 'for the Greeks the sung word was almost as commonly heard, and certainly as important, as the spoken word' – not only in drama but also in poetry.²

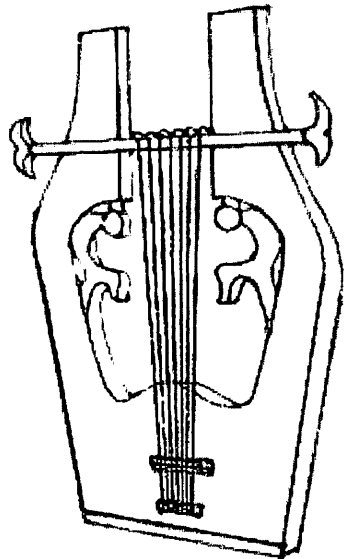


Figure 1 *Kithara*, principal musical instrument of Ancient Greece. Illustration by David Lloyd.

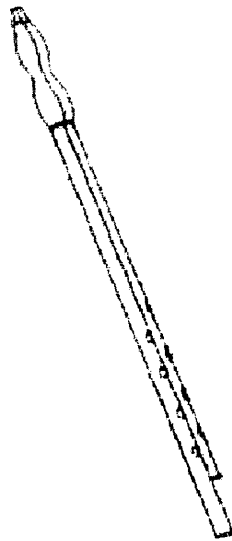


Figure 2 *Aulos*, principal musical instrument of Ancient Greece. Illustration by David Lloyd.

Nearly all Greek literature was sung, or accompanied by music and dance – though it is uncertain whether the *Iliad* and *Odyssey* were sung or merely recited – and purely instrumental music was also popular. The performance of a long narrative poem was likely to be in the form of a sing-song chant or kind of speech-singing. Notated compositions did exist, but most pieces were aurally transmitted. Instrumental music had a rather low status. Learning to play an instrument was part of a child's education, but performance as an adult was a lowly activity; it was slave girls and prostitutes who came to play at the symposium, a kind of intellectual party.

The integration of music in a seamless whole with other social activities raises important philosophical questions. There are in fact three intertwining or overlapping issues here, concerning the concepts of music or *mousikē*, of art in general or *technē*, and the domain of the beautiful or *kalos*. For the Greeks, music did not belong to anything like our modern system of the arts, which, as I will shortly explain, did not exist at that time; moreover, the sphere of aesthetic value was not distinguished from that of the ethical, religious, cognitive or practical in the way that it has been in the West since the eighteenth-century revolution in the arts (discussed in the Introduction). These issues are incredibly hard for us to grasp, and they make the challenge of explaining Greek conceptions of art and music a formidable one.

I will say something about how one might understand the relation of *mousikē* and music before moving on to the closely related question of *technē* and art. Although 'music' comes from the Greek word *mousikē*, classical Greece had no single word for what we call music; *mousikē* (Latin *musica*) was used in a much broader sense than we use 'music'. It literally means 'the business of the Muses', goddesses of poetic inspiration who sponsored every kind of intellectual or cultural activity. Perhaps the closest contemporary term would be 'humanities' – although the Greeks included science under that heading, their conception of science did not match ours and so the description 'humanities' may still be apt. The Greek educational system was divided into two components, *mousikē* and *gymnastikē*, the former referring to all cultural and intellectual studies, the latter to physical training; *mousikē* therefore refers to any art, craft or science practised under the aegis of the Muses, whether poetry, dance or music. The late

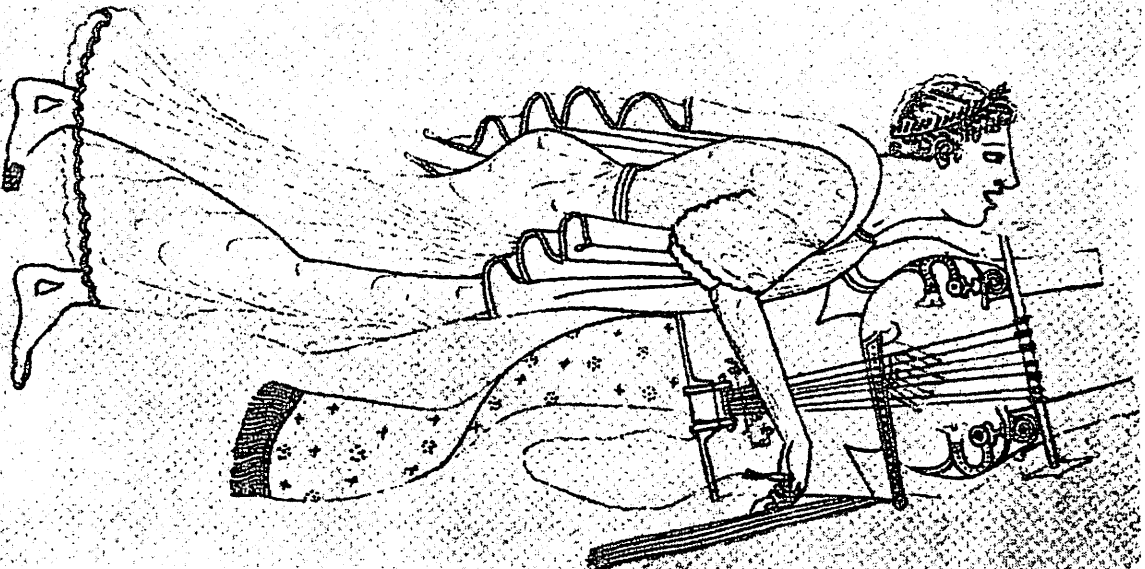


Figure 3 *Kitharōdos* (solo singer with *kithara*), from Attica, the region around Athens, about 480 BCE (from A. Barker: *Greek Musical Writings I: the Musician and His Art*, published by Cambridge University Press 2004. Reproduced by kind permission of Cambridge University Library).

Hellenistic and Roman division of liberal and vulgar arts included music among the liberal arts, but, as Shiner notes, this is music as a science (what became known as *musica universalis*); singing and playing at banquets for pay were part of the vulgar arts.³ (As they still are, of course.)

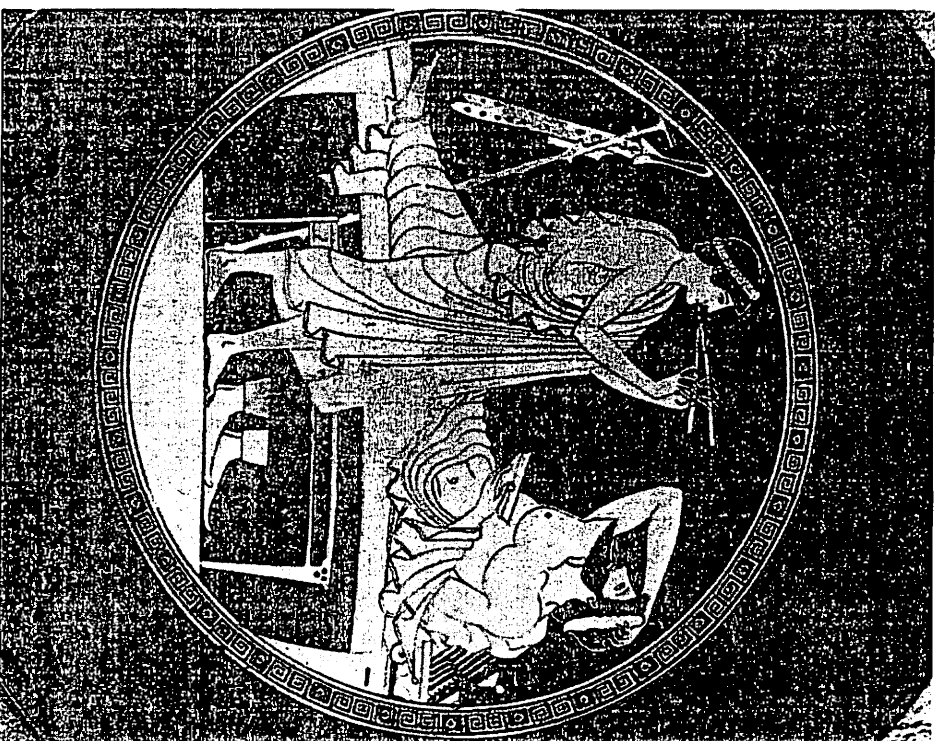


Figure 4 Symposium scene. A young man plays the *auloi*, while a reclining guest sings. From Attica, around 480 BCE (from A. Barker: *Greek Musical Writings I: the Musician and His Art*, published by Cambridge University Press 2004. Reproduced by kind permission of Cambridge University Library).

The interpretative difficulties that result are shown in different translations of Plato's *Republic*. Jowett renders *mousikē* as 'music', while Waterfield variously has 'cultural studies', 'cultural education', 'musicology' or 'music'; Daryl Rice settles on 'arts and letters', while Jonathan Barnes refers to 'harmonics' (of which more shortly).⁴ Not only is *mousikē* a general term for all cultural activities; even when the Greeks referred to music in the sense of singing and playing instruments, it was not clearly separated from poetry and dance – both Plato and Aristotle treat music and dance as elements of certain kinds of poetry, notably lyric and dramatic.⁵ It may be argued that much later writers also conflated the different arts but could nonetheless talk intelligibly about them. Lessing contrasts poetry – which for him embraces literature, lyric poetry, epic – and painting, which includes sculpture. But he also has the terms to make the finer distinctions.⁶ Surely the Greeks did also? I would argue that like the African peoples discussed in Chapter 2, they have no holistic term. They do not have a word for 'musician' in our sense, just as they do not have a word for 'artist' in our sense, meaning someone involved in an art in our modern system. Even so, reference will be clear in context; and there are terms for lyre-players and flute-players and singers. Also, as we will shortly see, the Greeks directed much speculation towards music in its more restricted present-day meaning and evolved an intricate scientific rationale embracing tuning, instruments, modes or scales and rhythms.

In the rest of this chapter I talk of 'music', but when the so-called music of the spheres is under discussion – the idea that the heavenly spheres operate in perfect mathematical ratio – 'harmony' (*harmonia*) is the fundamental concept. In this context, then, one should perhaps refer to 'harmony and number' rather than 'music and number'. *Harmonia* requires some explanation. Although Greek music until after the fourth century BCE was almost entirely monophonic, that is, unaccompanied melody, from the sixth century a new structural framework called *harmonia* had appeared. Its first meaning was 'tuning of an instrument', and thus 'dispositions of intervals within a scale', but it came to embrace features such as register, timbre and intensity, which characterize the musical discourse of a region – hence Aeolian, Dorian, Lydian, Phrygian, Ionian and so on. However, these names have come down to us as denoting different modes or

scales. Playing just the white notes on the piano, the Ionian is C to C (the Western major scale), Dorian is D to D, Lydian is F to F and so on.⁷

To move from 'music' to 'art' in general. Just as *mousikē* is broader than our 'music', so *technē* is broader than our 'art'. Indeed, it is because the concept of art is underdeveloped in Ancient Greece that the concept of music (as an art) is underdeveloped, and vice versa – and I do believe that 'underdeveloped' is the right description. Again, though, one should bear in mind who the concept is being used by; another way of putting my claim is that music – in our present sense – was not thought amenable to theoretical, scientific or technical study by those thinkers such as Plato who were developing theoretical models. For such thinkers, art, craft and science were not readily distinguished, and all came under the heading of *technē*. The historian of ideas Paul Oskar Kristeller, in a famous article first published in 1950, argued that this conflation of art and craft constituted a more fundamental difference between the world of the arts in Ancient Greece and our post-Enlightenment era. For Kristeller, the Western system of the five major arts – painting, sculpture, architecture, music and poetry – did not assume definite shape until the eighteenth century, even though its ingredients went back to classical, medieval and Renaissance periods.⁸ He concluded that 'classical antiquity left no systems of elaborate concepts of an aesthetic nature, but merely a number of scattered notions and suggestions that exercised a lasting influence down to modern times'.⁹ Kristeller's thesis commands wide support, and it is now generally maintained that the Greek term *technē* (Latin *ars*) does not distinguish between art and craft, in the modern senses of these terms, but embraced all kinds of human activities which would now be called arts, crafts or sciences.

Kristeller's thesis poses a deep philosophical or aesthetic problem. One might feel that individual arts could exist without being collected together in a system, but Kristeller's point is that the term 'art' would not then be used in its present-day sense. However, many writers have argued against Kristeller that fine arts did exist in Ancient Greece, citing the treatment of painting, epic and tragedy as arts of imitation in writers such as Plato and Aristotle. (Though their concepts of imitation differ considerably, and they did not consider the possibility of non-mimetic art.)¹⁰

Eva Schaper takes Plato's distinction in the *Ion* between skill (*technē*) and inspiration (*poiesis*) as justification for talking about 'art'.¹¹ Nietzsche, in *The Birth of Tragedy*, claims that Socrates shows belated recognition that art has intrinsic value: 'the Platonic dialogues do not permit us to view him solely as a disintegrative, negative force [for art]'. Nietzsche suggests that when Plato portrays Socrates in his last days writing or reading poetry, he was concerned that poetry and music might be a neglected source of knowledge and value.¹² Nonetheless, Plato clearly maintains that the imitative arts are no more worthy of serious intellectual attention than someone waving a mirror around, doing magic tricks or imitating animal voices. Music, poetry, rhetoric, painting and so on must fall into the class of things which in the *Gorgias* he calls 'knacks' rather than 'skills', and as we might say, they are a matter of taste, not truth or falsity. Even Aristotle, who was more favourably disposed, held that what painting and tragedy have in common as imitations does not separate them in their procedures from arts like shoemaking or medicine.¹³

The thesis that the Greeks lacked a system of the arts has been taken to imply a deeper claim, that the value spheres of the aesthetic, the ethical and the cognitive, which we now take as separate, were not distinct. That is, judgements about the beautiful, the good and the true did not fall into clearly demarcated categories – in judging a person's beauty, for instance, the Greeks considered their moral qualities. Of this, more later. Here I simply note that nostalgia for the alleged unity of value spheres in Ancient Greece underlies the popular view that for the Greeks, the discipline of music was a synthesis of the arts and sciences, in laudable contrast to the present Western division between 'two cultures'.¹⁴ This claim is connected with the view that the Greeks made no distinction between science and art – that there was a desirable unity or harmony in contrast to our divided culture. This idealization originates in German writers of the late eighteenth century, most notably Goethe, Hölderlin and Schiller, who looked back with yearning at the harmonious pre-modern world of the Greeks, which had not suffered the divisions of the modern era.¹⁵ When we examine Ancient Greek theorizing about music, however, it becomes clear that Goethe's interpretation is anachronistic.

THE PYTHAGOREAN AND PLATONIC-PYTHAGOREAN MATHEMATICAL CONCEPTION

The substantial amount of surviving Greek music theory concerns, almost exclusively, acoustical and mathematical properties of music. It was not intended for practising musicians. My claim is that the musical theorizing which crystallized in the celebrated conception of the music of the spheres was a kind of proto-science; while for Greek thinkers, human music was an art or craft, in the present-day sense of those terms, and a lowly echo of cosmic harmony. So in fact there was a divide, not the unity imagined by Goethe and his successors. The idea of the music of the spheres originates in a very ancient mathematical conception of music which asserts its connections with number. This conception has had an enduring influence despite – or perhaps because of – its detachment from music-making as an auditory and human phenomenon. It is most strongly associated with the name of *Pythagoras*, who flourished about 550 BCE, nearly two centuries before Plato. Plato then uses the expression 'music of the spheres' as a conceit, a way of expressing the supposed fact that the heavenly spheres operate in perfect mathematical ratio, and through him it influenced later thinkers.

According to ancient tradition, Pythagoras was, after Thales, the originator of *philosophia* – the pursuit of wisdom, and precursor of both present-day science and philosophy. But the figure of Pythagoras is shrouded in historical mist, and scholarly opinion is divided on whether he really was a philosopher and mathematician or merely a magician and dogmatist. His status is more problematic than that of other pre-Socratic thinkers – the philosophers before Socrates. Although their work often does not survive as primary sources, there is direct quotation to it in the work of later writers. Pythagoras, in contrast, appears to have written nothing, and all we have are early and vague reports about his followers, and late and presumably forged works ascribed to them; there are no statements by Pythagoras which later authorities agree in attributing. Aristotle refers to 'so-called Pythagoreans', and only after Plato is he represented as the head of a philosophical school – so it is likely that Plato and his followers are the source of many so-called Pythagorean ideas. As Burkert puts it in his classic work *Lore and Science in Ancient Pythagoreanism*, 'a Platonizing interpretation of Pytha-

goreanism, which had a decisive influence on the later tradition, goes back to Plato's immediate disciples and differs sharply from the reports of Aristotle [which become] more important than ever; for he alone warns us to separate Pythagorean and pre-Platonic from Platonic material'.¹⁶ The spell of Pythagoras' name – the fact that there was a continuing Pythagorean tradition – has made interpretation of his ideas even harder, Burkert argues:

at the source of this continuously changing stream lay not a book, an authoritative text ... There is less, and there is more: a name ... Just as a city which was continuously inhabited over a period of time ... presents to the archaeological investigator far more complicated problems than a site destroyed by a single catastrophe ... the special difficulty in the study of Pythagoreanism comes from the fact that it was never so dead as, for example, the system of Anaxagoras or even that of Parmenides.¹⁷

(In Chapter 4, we see the influence of Pythagorean ideas in discussion of musical listening and the 'acousmatic'.)

With these reservations in mind, I will refer to the activities of the Pythagorean school, leaving open the question of how far it is the creation of Plato and later thinkers. The connection between music and mathematics was forged by the school's discovery of the relation between pitch and the length of a vibrating string – generally accepted as the first law of nature to be formulated mathematically.¹⁸ The Pythagoreans discovered that the natural harmonics of vibrating strings divide into mathematical proportions; that is, there is a correspondence between the length of the string and the pitch of the resulting note. Nicomachus of Gerasa (late first to early second century CE) told in his *Manual of Harmonics* the famous but apocryphal story of how Pythagoras made his discovery after hearing the ringing sounds from a blacksmith's anvil. To explain what this discovery involved, and how it laid the foundations of Pythagoreanism and the mathematical conception, a short lesson on musical acoustics is required.

The Pythagoreans discovered that plucking two strings, one exactly half the length of the other, will produce notes in harmony. The sounds seem in concord and go together. Strings that are two-

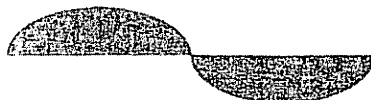
thirds or three-quarters the length of the first string produce the same effect. This is, when one thinks about it, a remarkable fact, and it forms the basis for the science of acoustics.¹⁹ To put the matter more precisely, the first three overtones of the harmonic series – the main intervals of the musical scale, the octave, fifth and fourth – stand in the ratios 4:3, 3:2 and 2:1. To give an example: if a player bows the open E string of a violin and then places their finger on the string exactly midway between the neck and bridge, the resulting note will be a fifth above E, that is, B. In the natural harmonic series, every note or tone is the fundamental or lowest tone of its own harmonic series or spectrum of overtones; the Pythagorean discovery is that the proportions between the overtones are constant, exhibiting the ratios just specified. One might assume that these ratios would be familiar to instrument-makers anyway, independent of theoretical discovery by the Pythagoreans, but Burkert argues that this is unlikely:

The most common stringed instruments have strings of equal length and no finger board ... In the triangular harp the tension of the strings and their thickness played some role, but we do not know just what ... In a wind instrument with finger holes, that is, the *aulos*, the distances between the holes do not correspond directly or accurately to the ratios of the intervals; actually the holes were simply bored at equal distances.²⁰

Only the monochord, an ancient single-string instrument with a moveable bridge, used mainly for teaching and tuning, could demonstrate Pythagorean theory with any exactness, and it is not known when such an instrument was invented.



Fundamental; 1st harmonic; unison; ratio 1:1



2nd overtone; 2nd harmonic; octave; ratio 2:1



2nd overtone; 3rd harmonic; perfect 5th; ratio 3:2



3rd overtone; 4th harmonic; perfect 4th; ratio 4:3

Figure 5 Vibrating strings and the Pythagorean discovery. These diagrams illustrate the following acoustic facts: touching the vibrating string half-way along its length produces the first overtone, an octave higher than the fundamental tone which dominates; alternatively one could imagine what is in effect the same thing, taking a string that is half the length of the original string and vibrating it. Touching the string one-third of the way along produces the second overtone, a total of an octave and a fifth higher; touching it one-quarter of the way along produces the third overtone; and so on. Illustration by David Lloyd.

Tonality and tuning

The tonal system, developed in Western music from the seventeenth century onwards, is only an imperfect reflection of the Pythagorean vision. It uses the base of the harmonic spectrum – the first six overtones, to be precise, the fundamental, the octave, the fifth above it, the octave again, then the third and the fifth – a basis reflected in the scoring of the last chord in a Haydn or Mozart symphony, which to that extent is 'natural'. But the reflection is not exact. Tonality depends on an artificial system of equal temperament, dividing the octave into twelve equal semitones, which distorts the natural harmonic intervals a little to make changes of key possible. Bach's *48 Preludes and Fugues* for keyboard, Book I of which is known as *The Well-Tempered Clavier*, run through all twenty-four keys chromatically (C, C#, D, etc.), and was foundational to the development of tonality.²¹ 'Well-tempered' does not refer to a specific tuning but simply to any tuning which allows one to play tolerably in all keys; 'equal temperament', in contrast, is a specific, exact tuning. The traditional view in musicology saw equal temperament as the logical goal of musical progress. But, as Ledbetter comments, with the rise in the 1970s of the authentic performance movement using original instruments, players experienced 'the purity and sonorousness of unequal temperament, [and] turned [from] the characterless, commonplace sound [that equal temperament] can give to an instrument'. The debate in the late seventeenth and early eighteenth centuries highlighted real advantages to each method, and, in the twentieth century, composers such as Harry Partch and Terry Riley have returned to experiment with unequal temperament, including its pure version of just intonation.²²

The belief that music embodies numerical principles which underlie the laws of nature was common throughout ancient societies, including those of China, Babylonia and India.²³ Lippman describes this 'theory' as 'nothing less than a myth of Western civilization ... found in the poetry and literature of every age, in innumerable commentaries on Plato, and in astronomical tracts'.²⁴ Though it seems implausible that the belief in numerical ratios held by other ancient societies had no basis at all in an empirical knowledge of acoustics, the Pythagorean contribution was to make this hitherto mysterious relationship amenable to rational

inquiry. As Mueller writes, 'everywhere in ... the Pythagorean tradition of Greek music, including Archytas, Plato, Euclid and Ptolemy, the sense of the cosmic power of pure numbers and the willingness to indulge in meaningless numerical manipulation is always present'.²⁵ However, as noted earlier, Plato and his followers are the source of many so-called Pythagorean ideas. Plato appears to us as the first great and prototypical rationalist. That is, he maintains that reason provides the ultimate source of knowledge and, indeed, that our grasp of the physical world through the senses is not, properly speaking, knowledge at all; for him, empirical investigation is at best the prelude to the exercise of pure reason, and there can be no genuine science of the empirical.²⁶ It is likely, therefore, that it was Plato who first portrayed the Pythagoreans as exploring musical phenomena in order to deduce theoretical truths – as believing that the important truths about music consisted in its harmonious reflection of number. On his interpretation, the numerology of the Pythagoreans was speculative, not empirical, and applied to the cosmos as a whole; mathematics was a key to the abstract, essential nature of things.²⁷ Plato would have to concede that the ratios were discovered empirically by examining the properties of strings, but he would hold that it is fruitless to explore them empirically.

The Platonic-Pythagorean vision – that is, the Pythagorean vision as presented by Plato and his disciples – evolved into the celebrated doctrine of the harmony of the spheres, according to which the distances from the Earth to the visible planets and sun, as well as the velocities at which the celestial bodies circle the Earth, are in the same ratios as various musical intervals, especially those of the diatonic scale. These ratios were held to be present also in the compositions of substances and in the souls of good men. However, music was the only field in which these ratios had been discovered rather than merely postulated. The doctrine that music was essentially an abstract system of relationships expressible in a set of equations has haunted musical thought ever since Plato's time. It may seem bizarre that music was believed to extend to all of the cosmos, but it should be understood that this is music in the sense of 'harmonia' or harmony – the concept of harmony is even broader in its application beyond music than the concept of rhythm, which applies also to poetry, speech such as oratory, and bodily movement in dance, sport and elsewhere, as we

will see in Chapter 5. While many writers talk of the music of the spheres, it would be preferable to refer to the harmony of the spheres.

Plato the rationalist, in addition to rejecting an empirical interpretation of Pythagorean theory, generally underplays the importance of the auditory in music. In *The Republic*, he presents an ethical vision of cosmic harmony in which music and astronomy are 'branches of knowledge [which] are allied to each other ... [as] the Pythagoreans claim'. Just as Plato's condemnation of physical as opposed to mathematical astronomy is not total – he holds that empirical investigation is necessary to give us the material for 'higher astronomy' – neither is his condemnation of empirical investigation of tunings.²⁸ But the role he envisages for it is strictly limited and subordinate. He is scathing about precursors of the Aristoxenians, who, as we will see, argued that tone is essentially an auditory phenomenon in which mathematical relationships are strictly subordinate. Such theorists, he writes, 'waste their time like the astronomers, measuring audible concords and sounds against one another' when they could be transcending the sensible world to gain exact knowledge through reason. He portrays Socrates as mocking the music theorists who subject the strings to a painful inquisition, stretching them on the rack in an effort to detect the smallest difference in pitch. Even the Pythagoreans are too wedded to the empirical, he believes, since they 'try to find the numerical properties hidden in these audible consonances, but they do not rise to the level of formulating problems and investigate which numbers are consonant and which not, and why'.²⁹

In the *Timaeus*, Plato outlines this programme of pure number theory, in a cosmological vision which relates musical harmony to the harmony of the universe. There is no mention of human music. A scale without audible sound, comprising a series of numbers derived from ultimate principles, constitutes the basic harmonic structure of the world, the 'world-soul'; the Creator of the world-soul separates portions of the mixture of elements in the proportions of Pythagorean tuning. This conception of harmony is rationalistic, intellectual and supersensible. According to the Platonic vision, human music is the lowest form of music and merely echoes divine harmony, which is inaudible to us because with us since birth; rhythm and melody imitate the movements of heavenly bodies, reflecting the moral order of the universe. The

Roman writer Cicero restated Plato's mythical vision in his own *Republic*: 'Gifted men ... on stringed instruments and in singing, have gained for themselves a return to this [heavenly] region ... But the sound coming from the heavenly spheres revolving at very swift speeds is of course so great that human ears cannot catch it'.³⁰

THE ETHICAL CONCEPTION AND PLATO'S MORE EMPIRICALLY MINDED SUCCESSORS, ARISTOTLE AND ARISTOXENUS

I have already mentioned that with Plato, mathematical and ethical conceptions of music are synthesized, and I will now turn to the latter. The idea that music possesses an ethical influence is just as ancient as the Pythagorean numerological vision, with which it is intimately connected through the concept of harmony of the soul and of the state. The ethical view is held by Confucius as well as by Plato and Aristotle. *Ethos theory* developed the ramifications of this ethical influence. A leading exponent was Damon of Athens in the fifth century BCE, who believed that a people's music expressed their character, arguing that the modes or scale systems expressed the personality types of the peoples who favoured them: the Dorians, Lydians, Phrygians and so on, mentioned earlier. Both Plato and Aristotle believed that music, in its human form, has a direct effect upon the soul and actions of humankind.

For Plato, as for Confucius, earthly music is suspect. In *The Republic*, Plato has Socrates argue that soft and plaintive modes, and complex rhythms, should be excluded from the education of the guardians and that innovations in music threaten the order of the state: 'One must be cautious about changing to a new type of music as this risks a change in the whole. The modes of music are never moved without movement of the greatest constitutional laws'.³¹ In the *Laws*, Plato declared that rhythmic and melodic complexities should be avoided because they cause depression and disorder and prescribed that through musical and literary training 'the whole community may come to voice always one and the same sentiment in song, story and speech'.³² These remarks show again that musical performance was less important to the Greek concept of *mousikē* than its embodiment of universal principles and higher truths. Later Hellenistic and Graeco-Roman writers

downplayed ethical concerns in favour of Plato's numerological vision.

Plato's great pupil and successor *Aristotle* agreed with him that music moulded human character, but, unlike Plato, he had a tolerant understanding of the value of music as part of the good life – he did not advocate banning any of the modes, for instance. This is because he is more inclined to view the cosmos as a commonwealth of individuals, rather than regarding individuals simply as elements of the cosmos. However, his philosophy of music is not as systematic or substantial as Plato's, and though it is more empirical – that is, based on perceptual knowledge or scientific investigation of things in the world, rather than the realm of thought or reason – there is dispute over the extent to which this is so. Lippman, for instance, argues that the mathematical conception of tone was common to the Pythagorean, Platonic and Aristotelian traditions: 'a fundamentally different approach to tone – an appeal to hearing and to an innate auditory and vocal sense of tonal relationships – is found only in the subordinate tradition of Aristoxenus and Theophrastus, which discards mathematics as irrelevant'.³³ This may be an overstatement, however, since Aristotle did question Platonic-Pythagorean number theory. He wrote in the *Metaphysics* that the Pythagoreans mistakenly 'supposed the elements of numbers to be the elements of all things, and the whole heaven to be a *harmonia* [harmony or musical scale] and a number', hence their 'charming' notion of the harmony of the spheres.³⁴

Aristoxenus (c.300 BCE), a pupil of Aristotle, took the latter's more empirical approach further, stressing the role of the human listener and rejecting Pythagorean numerology and the related *ethos theory*. His treatise *On Harmonics*, the oldest work of Greek music theory to be substantially preserved, constructs a musical science based on Aristotelian principles, arguing that music is emotionally expressive and involves both the hearing and intellect of the listener. He was the first musical theorist to stress the value of ear training, and, in comparison to the authorities discussed so far, he emphasized the importance of the senses:

we endeavour to supply proofs that will be in agreement with the phenomena – in this unlike our predecessors. For some of these ... rejecting the senses as inaccurate, fabricated rational

principles, asserting that height and depth of pitch consist in certain numerical ratios and relative rates of vibration – a theory ... quite at variance with the phenomena.³⁵

He anticipated the standpoint which assumed importance much later, from the eighteenth century onwards, that music is an autonomous discipline, entirely separate from arithmetic and astronomy and concerned with musical sound as distinct from noise or spoken language. For him, music is a self-referring phenomenal system, its significant form derived from the principles of its own organization; its audible constructions acquire ethical significance only by association, he maintains. Aristoxenus saw his position as mediating between rationalism and empiricism, but Ptolemy in the second century CE regarded his school and that of the Pythagoreans as the two extremes of musical theory. Burkert agrees that the two schools 'stood in a relation of hostility: the [Pythagoreans] accused Aristoxenus' followers of imprecision, and were accused, in their turn, of using arbitrary hypotheses and contradicting the clear testimony of the musical ear'.³⁶ The Epicurean and Stoic thinkers who came after Aristoxenus – such as Philodemus in the first century BCE – adopted a more naturalistic view of music, which they accepted as an adjunct to the good life.

As we have seen, the claim that on the Pythagorean vision, music was virtually a department of mathematics, requires qualification. The concern of the Pythagoreans, and of other thinkers in antiquity who elevated the status of *mousikē*, was not with audible music. So the cliché that there was a unity of arts and sciences in Ancient Greece, even assuming these concepts to have something like their current meaning, is false. Music had two senses. The practical art or craft – according to the theorists and philosophers – was a pale reflection of music in a second sense, the inaudible Pythagorean harmony underlying the universe. To reiterate, the authorities that are cited about Greek music tend to be theorists and philosophers, who were not interested in musical practice. By the same token, *aulos* players were probably not interested in the concept of the harmony of the spheres. Kristeller, for instance, is explicit that his primary resource is treatises on the arts, not actual artworks. In our own time, regrettably, there is still too much of a divide in aesthetics between concern with theory and with practice.

THE SEPARATION OF THE VALUE SPHERES

As noted earlier, Kristeller's thesis that the Greeks lacked a system of the arts has been interpreted as involving a deeper claim: that the value spheres of the aesthetic, the ethical and the cognitive, which we now take as separate, were not distinct. That is, judgements about the beautiful, the good and the true, which we assume to be made on separate bases, were somehow drawn together. Thus Martha Nussbaum writes that

For the ancient Greeks ... Poetry, visual art and music were all taken to have an ethical role ... and a citizen's interest in them was understood to be an interest in pursuing questions about how best to live ... One sign of the thoroughgoing unity of the aesthetic with the ethical can be seen in the Greek word *kalon*. Usually translated as "beautiful" in some contexts, as "noble" or "fine" in others, it is in reality a univocal word, giving evidence of the Greek belief that only what is ethically fine is pleasing to behold and that visible beauty is a sign of excellence.

Shiner comments that 'The idea of beauty in the ancient world usually combined what our aesthetic theories have typically separated ... Both the Greek *kalon* and the Latin *pulchrum* were often used simply to mean "morally good"'. Kristeller himself writes that although the ancients were 'confronted with excellent works of art and quite susceptible to their charm, [they] were neither able nor eager to detach [their] aesthetic quality ... from their intellectual, moral, religious and practical functioning or context, or to use such an aesthetic quality for grouping the fine arts together'.³⁷

Other authorities maintain that the value spheres were not, in fact, so unified in Ancient Greece – that the ethical did not absorb or eliminate the aesthetic but merely sought to appropriate it. The resulting position could be described as a *qualified separation of the value spheres*. What I have in mind is, for instance, the view that Janaway puts forward, that Plato was not blind to the realm of the aesthetic but had inhabited this realm, knew how seductive it is and declared his arguments a 'charm' to ward off the fine works of poetry.³⁸ Though familiar with an aesthetic conception of art, he wished to transcend it. For Janaway, Plato understands

the basic premises of one kind of 'aesthetic' defence of the arts: 'He is aware that some people assign the arts autonomous value on the basis of the pleasure they provide to those who experience them ...'. So Plato holds that philosophy must be defended from the arts, which have at most instrumental value.³⁹ He would recognize that a *kithara*-player was skilful, a purely aesthetic assessment having nothing to do with morality or piety, and in various places, notably in *The Republic*, refers to 'lovers of sights and sounds' – but he believes that they fail to learn about beauty because they only look for individual beautiful things rather than by pure reason trying to divine beauty's essence. Plato wants to re-educate us to become finer connoisseurs of beauty led by our understanding of the good. The claim that only what is ethically fine is pleasing to behold – made in Nussbaum's quotation above – might be expressed better as the view that what is pleasing to behold is given positive ethical value. For Plato, the cosmos is the one definitively beautiful artefact and paradigm of phenomenal beauty; all other things can be considered beautiful just insofar as they contribute to its beauty.⁴⁰

If the preceding arguments are correct, and the Greeks did to some extent recognize the separation of aesthetic and moral value, then Plato's position is comparable to that of later moralists about art. Thus when he objects to certain precise musical tunings, for instance of the interval of the major third, on the grounds of their malign ethical and educational import, he concedes that they sound better aesthetically. On this view, Plato was not alone among Ancient Greek thinkers in regarding music as morally dangerous, believing that it provoked sexual urges – a view which endures in the modern era as a challenge to aestheticism and art for art's sake, in the form of Adorno's criticism of jazz as 'loin music' and myriad moral panics directed at popular music in the past century, from early jazz to Elvis to punk.⁴¹ The Greeks' ethical conception of *mousikē*, which as we have seen valued it primarily as part of moral education in the state, holds it to be of instrumental rather than intrinsic value – just as today, philistine attitudes to music education value it primarily because it helps to develop mathematical skills, for instance. So, proponents of this line of interpretation might conclude, it was aestheticism or 'art for art's sake', and not the aesthetic as such, which Plato and others failed to accept – the idea that aesthetic qualities should be appreciated in isolation from

others. The Greeks might have felt that such qualities can be appreciated in isolation, but that they should not be.

I do not think this plausible line of interpretation is correct. The Greek attitude to the value spheres was not the qualified separation comprehensible to us. For what Janaway fails to acknowledge is that there were no 'arts' that formed a system, and which were recognized by some, if not Plato, as having autonomous value. Plato at least – though it is true that he is an extreme example – holds to a notion of beauty which is quite alien to us, divorced from the autonomy and subjectivity of aesthetic experience emphasized by Kant. Thus, underlying the dispute over the unity or separation of the value spheres are radically different conceptions of both the artistic and the aesthetic, which conceptions, I believe, are inextricably interlinked. The difference between the Ancient Greek and post-eighteenth-century positions lies in different conceptions of the possibilities of art, with their consequent or concomitant effect on the conception of the aesthetic – indeed, the claim that the value spheres are separated may just amount to the claim that there is a modern system of the arts.⁴² Plato objects to the aesthetic conceived of as sensual – that is, he objects to hedonism or sensualism – because he has no conception of art as other than pleasurable or didactic. He does not regard the arts as having truth-content – where this is not the same as their being 'instructive' in the classical moralizing sense – and does not recognize that the aesthetic can be a synthesis of the sensory and the intellectual.

A defence of an aesthetic conception of music and other arts does not depend on the assumption, implausible in Ancient Greece, that music belongs to a system of fine arts, however. In Chapter 2, I will justify an aesthetic conception which regards music as an art with a small 'a', that is, a practice involving skill or craft whose ends are essentially aesthetic, which particularly rewards aesthetic attention and whose material is sounds regarded as tones. However, the unity of poetry, music and dance in Ancient Greece, and the absence of a system of fine arts, illustrates a more general problem concerning the presence of music in cultures radically divergent from our own. Despite differences in its conceptualization which this assimilation shows, writers consistently refer to music – in our sense – in Ancient Greece without doubting that the concept is instantiated. This indeed seems

correct, but in the light of anthropological attitudes it is perhaps surprising. The consensus may arise because Ancient Greece is regarded as the basis of Western civilization and the lines of development to the modern Western concept of music can be traced from there; it is not a so-called primitive society wholly detached from our own. Anthropologists do not write about Ancient Greece; it is the preserve of more Eurocentric scholars. Even so, there is a real problem here, which I will return to in the next chapter.

MEDIEVAL AND RENAISSANCE MUSICAL THOUGHT

The Platonic-Pythagorean influence in musical thought was dominant at least until the Renaissance. The idea of music as an explanation of the divine universe was taken for granted by astronomers and astrologers, physicians, architects, humanist scholars and poets up to Isaac Newton. Medieval musical aesthetics, under the influence of Roman scholar and theorist Boethius (480–524 CE), continued the Platonic-Pythagorean tradition of thinking of music as a branch of mathematics, a framework which haunted musical thought for a millennium. Boethius solidified Plato's treatment into a threefold division. *Musica universalis* expressed the cosmic harmony of the spheres, determining the courses of the stars and planets, the seasons and the combinations of elements. It was reflected in *musica mundana*, which unified the healthy human body and soul. *Musica instrumentalis* or audible music, the lowliest of the three divisions, manifested in sound the mathematical proportions of the higher divisions. Thus, for medieval theorists, the true musician is a scholar who judges compositions and performances intellectually; the poet composes songs by instinct rather than knowledge; while the instrumentalist is essentially a skilled artisan. There emerged a dichotomy between a low, sensual, instrumental, secular music and an exalted, intellectual, vocal, sacred music.

Medieval theorists remained preoccupied with ways of calculating and representing musical ratios. But during the later Middle Ages, the Platonic-Pythagorean view of music as the branch of mathematics that pertains to sounds was gradually supplanted by the humanist view of music as a sonorous art, in which mathematics had the subservient role of calculating means to audible ends. Musical authorities debated whether, in tuning



Figure 6 Boethius discussing music with Pythagoras, Plato and Nicomachus. From a twelfth-century drawing (from R. Hoppin, *Medieval Music*, published by Norton. Reproduced by kind permission of Cambridge University Library, MSli.3.12 folio 61 verso).

systems, Pythagorean purity of numbers was paramount, or the judgement of the human ear. Thus Johannes de Grocheo argued around 1300 that the practical art of music was the application of mathematical theory to singing, rather than a branch of mathematics, while Tinctoris in the late fifteenth century regarded music as a practical human activity rather than a hermetic science or model of the cosmos. Zarlino in 1558 declared that the ear is judge. Instead of finding metaphysical reasons why each mode – Dorian or Ionian for instance – must reflect a different type of character or feeling, he appealed to the listener's experience.⁴³ Zarlino also argued that just as a poem has a subject, for instance the fall of Troy, so does a musical composition; but it is an audible subject or theme – music is not rhetoric. These were still advanced views, however; for most authorities, rhetoric was the basis of a courtly education, while musicians' music was for monks and artisans. The process by which music was liberated from literary or linguistic models was completed only with the rise of the ideology of absolute music during the nineteenth century, as we will see in Chapter 3. As music theorist Carl Dahlhaus put it, 'The older idea of music, against which the idea of absolute music had to prevail, was the concept, originating in antiquity and never doubted until the seventeenth century, that music, as Plato put it, consisted of *harmonia*, *rhythmos*, and *logos*' – 'logos' meaning language as the expression of human reason.⁴⁴

The astronomer Johannes Kepler made the last important statement of the music of the spheres early in the seventeenth century – at the same time as the composer Praetorius wrote that 'God himself, as Plato says, has ordered all things in accordance with number, weight and measure'.⁴⁵ The complexity of tones, ignored by the mathematical conception, began to be recognized during the Renaissance, and in the seventeenth and eighteenth centuries the discovery of overtones reinforced the auditory conception. By the time that the tonal system became established, in the eighteenth century, the harmony of the spheres had become a fascinating historical curiosity, though the connection between music and mathematics endures.

In the next chapter, the aesthetic conception of music is developed further, in the context of developments in music during the twentieth century.

Musical notation

The introduction of a written notation in the twelfth or thirteenth centuries had momentous consequences for Western music. The drive towards polyphony and polyrhythm – music in more than one part, in which the various lines or parts move more or less independently, and in different rhythms – was one of the factors that led to the development of a graphic, mensural notation, without which such complex music could not be learned or transmitted. Originally, notation was probably a mnemonic device, to remind performers of music that was fairly fixed in advance; so when medieval notation did not specify pitch, this was not because it was at the performer's choice, but because performers knew the material and did not need reminding. But this is a matter of some controversy. Although notation began as a means of communicating music that had already been made, it became a driving force in the evolution of music. It liberated musical time from the tyranny of the syllable and, eventually, from expressiveness based on words; it finally led to the composer becoming a desk-worker rather than a performer and, finally, to the idea that a composition is defined by its score – what is known as the *work-concept*. The rise of the latter during the eighteenth to twentieth centuries, which involved increasing specificity in the score, increasingly limited the input of the performer to that of interpreter of an apparently fixed artefact. In the twentieth century, improvisation – in jazz and so-called free improvisation, discussed in Chapter 7 – provided an alternative to the increasing prescription of the score in classical music. At the same time, Western composers attempted to reintroduce performer freedom by deploying such devices as chance procedures and graphic notation (figures 7 and 16).

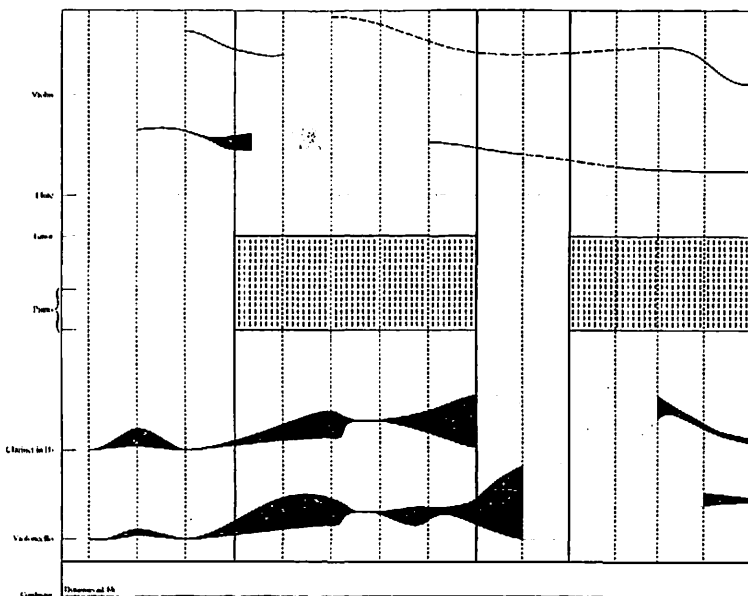


Figure 7 'Seed' by Eric Skytterholm Egan (2005) – a contemporary graphic score which attempts to make the performers' contributions equal to the composer's. Egan writes: 'This section is notated graphically because I believe it lends more freedom to the performer – the conductor can direct its course freely through a spontaneously created musical landscape. The musicians are not impeded by a set duration, musically represented through a given series of notes. The conductor controls the duration of the segments separated by the vertical lines, whilst the performers determine the pitch and duration of each individual musical gesture. Thus the composer can shape the section according to the image in the score and dynamically mould it to their own taste, whilst the performers control the harmonic/textural landscape. I aim to make every performance of the piece unique – a joint effort in which each party lends their own individual dimension.' Reproduced by kind permission of Eric Skytterholm Egan.

NOTES

- 1 Aristides Quintilianus (1983), p. 120. Barker comments: 'When Greek authors of Roman times wrote seriously about music, it is the music of a much earlier phase of their culture that they have in mind, usually that of the sixth and fifth centuries [BCE]' – this they rightly regarded as the golden age (Barker (2004), p. 2). An excellent selection of Greek texts is found in Barker (1984).
- 2 Landels (1999), p. 9. My descriptions of Greek music are indebted to this book, and to Comotti (1991).
- 3 Shiner (2001), p. 22.
- 4 Plato (1993), for instance 521d and 530d; Rice (1998); Barnes, entry on Plato in *Encyclopaedia Britannica*. The correctness of translation will depend on which part of *The Republic* is being translated. In Book 3, where Plato discusses early education, it is instrumental playing and listening to poetry that he means; in later stages of the curriculum it is harmonics.
- 5 Kristeller (1990), p. 169.
- 6 Lessing (1962). In the 'Preface', Lessing draws a single distinction between poetry and painting in their broadest senses; however, the central chapters of the book have detailed discussions of epic and lyric poetry, idyll, and so on, as well as of painting and sculpture.
- 7 A discussion of *harmonia* is found in Barker (1984), pp. 163–8, and most fully in Barker (2004).
- 8 Kristeller (1990).
- 9 Kristeller (1990), p. 172. By 'aesthetic', I believe he means 'artistic'.
- 10 In fact, poetry held a higher rank than the visual arts; this does not mean that it should be equated with a modern fine art, though Kristeller does comments that Plato and Aristotle were clinging to an older tradition that was disappearing due to the emancipation of instrumental music from poetry, indicating an incipient systematization of the arts (Kristeller (1990), p. 169).
- 11 Schaper (1968), p. 23.
- 12 Nietzsche (1999), section 14, pp. 70–1. Nietzsche's opposition between the Apollonian and the Dionysian is discussed in Chapter 3. Schaper comments that 'Plato's thought on the problems of creation, on the peculiar concreteness of the art work, on its moral implications, on the emotional involvement in it, on the sensuous character of the aesthetic experience, on art as play, and on art as belonging to the imagination, was the thought of a pioneer'. The elaboration of these concepts was left to Aristotle, whose views are in many respects completely opposed to Plato's, and who in his *Poetics* inaugurated aesthetics as a theoretical study (Schaper (1968), pp. 55, 13).

- 13 Shiner (2001), p. 21.
- 14 Famously analysed by Snow (1993).
- 15 See especially Trevelyan (1981).
- 16 Burkert (1972), p. 13.
- 17 Burkert (1972), pp. 11, 10. 'The renown of Pythagoras as the inventor of mathematics and mathematical natural science is explicable as a distortion of perspective; a pre-rational interpretation of the cosmos, along with arithmological speculation, is seen in hindsight as rational science' (p. 14).
- 18 Burkert (1972), p. 371.
- 19 A clear account of the discovery, and of how it led to the doctrine of the harmony of the spheres, is found in Armstrong (2005), Chapter 3. For a much more technical but still very engaging treatment, see Benson (2007), Chapters 4–5.
- 20 Burkert (1972), p. 374.
- 21 See for instance Ledbetter (2002), and the entries under 'Tonality', 'Temperament', 'Equal Temperament' in Sadie and Tyrrell (2004).
- 22 Ledbetter (2002), pp. 35–6.
- 23 Lippman (1994), p. 5; Burkert (1972), p. 356.
- 24 Lippman (1994), p. 8.
- 25 Mueller (1997). We will return later to Pythagoras' concept of the acousmatic.
- 26 In fact, he sees himself as offering a middle way between the extreme rationalism of Parmenides and the extreme empiricism of Heraclitus.
- 27 See Hussey (1997).
- 28 As Waterfield comments, in Plato (1993), p. 428, n.530b.
- 29 Plato (1993), 530d, 531c; see Burkert (1972), p. 371.
- 30 Cicero (1998), Book 6, Chapter 5.
- 31 Plato (1993), 398e–400c; 424b–c.
- 32 Plato (1970), ii, 664a.
- 33 Lippman (1977), p. 76.
- 34 Aristotle (1998), 985b32–986a2, 1090a20–23, 1093a28–b4; also Aristotle (1939), 290b21–3.
- 35 Quoted in Comotti (1991), p. 147.
- 36 Burkert (1972), pp. 370–1. See also Sadie and Tyrrell (2004), entry under 'Ethos Theory'. Barker comments that 'Aristoxenus is not by any means claiming that mathematics has no part to play in musical analysis: what he is insisting is that the mathematical tools must be applied to things recognizable as *heard*' (Barker (1978), p. 12).
- 37 Nussbaum (1996), Vol. 1, p. 175; Kristeller (1990), p. 174. 'Kalos' can mean anything from sexually exciting to beautiful to morally worthy. The separation of the value spheres is discussed further in Hamilton (in preparation).

- 38 Janaway (1995), p. 7.
- 39 Janaway (1995), p. 8.
- 40 As he argues in the *Timaeus* – Plato (1974), pp. 29–30.
- 41 Adorno's notorious views on jazz are discussed in Chapter 6; on aestheticism, see the box on pp. 85–6 of this volume.
- 42 These issues are discussed at greater length in Hamilton (in preparation).
- 43 Sadie and Tyrrell (2004), entry under 'Zarlino'.
- 44 Dahlhaus (1989), p. 8.
- 45 Quoted in entry under 'Plato' by Warren Anderson, in Sadie (1980).

IN AESTHETICS AND MUSIC