Chapter 3

Riverine Civilisations

General

In chapters 1 and 2 we described some of the radical innovations that took place within neolithic cultures. The transition from societies based on hunting and gathering to farming and cattle-raising communities led, as we have seen, to:

- settlement in villages;
- economies capable of producing a surplus;
- the development of relatively sophisticated tools and utensils;
- population increase;
- greater division of labour;
- the establishment of a warrior class and patriarchy;
- social stratification.

Villages became larger, some of them developing into fortified cities, such as Jericho (c. 7000 BP) or Susa (Iran, c. 6000 BP). This is the start of civilisation, not in the meaning of good manners or enlightenment but in the *real* sense of the word, *civitas* being Latin for 'city state' or 'city folk', *civis* meaning 'citizen' and *civilis* meaning relating to people living in cities (citizens) or to public life in cities.[1]

Together with a climatic change leading to the dehydration of vast areas from North West Africa through the Middle East to Central Asia, Kirghizia and the Gobi, increases in population forced people to migrate to fertile river valleys. Such cultures, a.k.a. 'hydraulic societies', developed into riverine civilisations[2] in Egypt along the Nile and in its delta (from c. 4000 BP), in Mesopotamia[3] along the Tigris and Euphrates (from c. 3000 BP), in China along the Huang Ho (from c. 2500 BP) and in India along the Indus (from c. 2000 BP). Common denominators for these cultures were:

- agrarian economy;
- skills in working metals;
- high division of labour and hierarchical social stratification;

---

1. Latin words starting *civi-* are not slow to acquire the evaluative charge of the English words 'civilised' and 'civilisation'. For example, Ciecro uses a pair of opposites in the rhetorical question *civitates aut nationes?*, which basically means do we want city states (i.e. civilisation) or nations (i.e. tribes, 'barbarism')?
2. Riverine civilisations are societies with one or more city located by rivers.
3. 'Mesopotamia' (μεσοποταμια), from the Greek *mesos* (μεσος 'middle') and *potamos* (ποταμος = 'river'), i.e. 'the land between the rivers'.

- cities as centres of trade and administration, as well as of cultural, religious and political power;
- monarchy of warriors with courts composed of family and close associates;[4]
- systematisation of weights and measures;
- knowledge of astronomy and mathematics;
- priesthood derived from the rainmen and magicians of earlier cultures;
- scribal traditions established at court and in religion;
- totem images of animals and other fertility symbols as gods with their own names and temples;
- prayers and epic stories of heroic deeds and other occurrences to cement the state religiously, culturally and historically; such epics recited or sung to instrumental accompaniment;
- music considered an important phenomenon, able to influence people's state of mind and to create balance and harmony in the social hierarchy as well as between heaven and earth;
- class differences parallelled by differences in musical styles and habits;
- music as a profession;
- theory and aesthetics of music amongst ruling classes.[5]

---

4. Cf. Quangos (quasi-autonomous non-governmental organisations), in which members of the U.K. Tory government (1979-1997) used to place their friends and family without regard for even the most 'representative' of representative bourgeois democratic procedures.
5. These characteristics of music and society in ancient riverine civilisations are an expanded version of those listed by Ling (1983: 10).

Egypt

3:1 Old Kingdom tomb fresco representing a feast for the dead. Each musician is led by a cheironomer. According to Hickmann (1961), the hieroglyphics above the musicians mean 'sing and make the sign to play' for flute, clarinet and harp.

It is perhaps appropriate to start this account of music in ancient riverine civilisations with Egypt for two reasons: (i) it is probably the earliest of such civilisations; (ii) many of the general observations about Ancient Egyptian civilisation apply to the other riverine cultures accounted for subsequently.[6]

The history of Ancient Egyptian civilisation is usually divided into five main periods: (i) The Two Kingdoms (c.4000-2850 BP), (ii) The Old Kingdom (2850-2052 BP), (iii) The Middle Kingdom (2052-1570 BP), (iv) The Empire or New Kingdom (1570-715) and (v) The Late Period (715-332 BP). It is The Old Kingdom, including its several dynasties of Pharaoh kings, that is of particular interest here. Before presenting a brief summary of music during that period, however, it is important to bear in mind that sources of information from the period are, by virtue of their almost exclusively iconographic character, open to considerable interpretation and that the following account constitutes no more than a summary of just one set of such interpretations.

Egypt during the time of the Pharaohs was a complex society. Agriculture, the basis of Egyptian prosperity, was totally dependent on the right amount of water coming down the Nile. Unfortunately there was often too little (drought) or too much (flooding).[7] The waters had therefore to be regulated. This meant carrying out works of civil engineering for purposes of irrigation and flood protection, i.e. digging canals and ditches, erecting dams, dikes and embankments etc. Such construction demanded that some people — the happy few with suitable education and 'background' — would specialise in measuring, planning, calculating and administrating, while others — the majority — would have to do the actual digging, lifting, carting and dragging.

As with many riverine civilisations, the ruling classes of Ancient Egypt imported cheap labour in the form of slaves from peoples living in areas conquered by their army.[8] Some slaves (such as the Hebrew Joseph, son of Jacob) may have ended up

---

6. Most of the information presented about music.in Egypt comes from two main sources: Elsner (1975) and Ling (1983: 14-18). Ling bases much of his description on Hickmann (1961, 1965).
7. According to Kinder and Hilgemann (1978: 17), the Great Deluge (Noah's Ark etc.) probably took place around 3000 BP in the form of repeated flooding and other natural catastrophes. Dams and canals were consequently built in both Egypt and Mesopotamia.
8. e.g. the Israelites who, led by Moses, fled slavery in Egypt and reached Canaan in about 1500 BP.

as household servants, concubines, dancers and musicians at court or in the homes of the Egyptian rich and famous but the vast majority were forced to labour under extremely harsh conditions. It is they, not the Pharaohs, who built the canals, dikes, temples, pyramids, monuments and statues that Europeans visit as tourist sites. Such an oppressive and complex society presupposes some kind of social order regulating conflicts of interest between groups inside the society.

Egyptian society in the time of the Pharaohs was singularly hierarchical. At the top of the social pyramid was Pharaoh, hereditary king, incarnation of the god Horus ('hawk') and revered son of the sun god Ra (or Re). This position as god in state religion was instrumental in ensuring that the monarchy seemed to be as immutable as the gods and other powers who were supposed to hold sway of life, death and life beyond death. Executive power was wielded on an absolute basis by Pharaoh, his court and its officials. This organisation of power included a complex legal system upheld by courts of law and religious institutions. It also meant extreme centralisation and the hierarchical ordering of society into sharply differentiated classes. These were, in descending order, Pharaoh (as God), other rulers, priests, warriors, officials, craftsmen, traders, peasants, servants and slaves. Since economic life was based on the exchange of natural produce, the state's revenue came from taxation on grains and domestic animals as well as from the obligatory labour services subjects were obliged to contribute. Underwritten in this way by the labour of the slaves and general populace, the centralised state administration could employ officials, known as writers or scribes, serving under a chief minister, all of whom were chosen from the nobility by Pharaoh and appointed by him. Such organisation of the state also meant that professional musicians could also be hired and fired by the court.

Although very little is known about the music of peasants and slaves during the time of the Pharaohs, information about the music, and to some extent the musical views, of the ruling classes has reached us, thanks to their belief that you could take what you had in this life to the next one. There is plentiful evidence of music from the time of the Pharaohs in the form of wall paintings, frescoes, writings, instruments etc. found in the graves, pyramids and mausoleums of the elite. In fact our scanty knowledge of the music of the people in Ancient Egypt comes also from such sources, e.g. that flutes were played at harvest time, that there was sometimes music during pauses in manual work, that grape treading was accompanied by music, that rowing was made easier and more efficient if music was played and that herders were wont to sing during their labours.[9] Similar sources also suggest that the ruling classes had a clear view of differences in musical style and habit between themselves and the popular majority, e.g. that highly popular music of foreign origin performed by women in inns and in public places was to be frowned down upon (see fig. 3:2, p.6).[10]

The ruling classes imagined that a god had created the world with a hand sign, i.e.

---

9. Paraphrased from Elsner (1974: 399).
10. Evidence for this is found first in sources from The New Kingdom which are probably referring to the new Asian influences upsetting the old order during the Hyschos era (1730-1562 BP) (Elsner, 1975: 400).

the same gesture that Pharaoh might make to command an action or the same hand gesture — the *cheironome* — used by musicians portrayed in paintings and reliefs on the walls of tombs (see fig. 3:1, p.3).[11] Some researchers have used the visual connection between different cheironomes and particular fingering or hand positions on different instruments to interpret the cheironomes of Ancient Egypt in the following way. With the cheironomer seated on the ground, thumb against index finger, elbow on knee and forearm at 45° meant 'tonic' or 'drone note'; the same hand sign with the forearm at 90° meant the octave above; an open palm meant the melodic 'dominant' or main recitation tone and so on. On the rhythm side, an open palm brought down on to the thigh has been interpreted as denoting an accentuated beat or a long note, while other beats or note values are thought to be signalled by bringing together the thumb and each of the four fingers of the hand (Uddling 1976:318).

We can only speculate as to why the music of the ruling classes in Ancient Egypt needed such a system of hand signs to regulate their music. One plausible reason is that in an ordered society those doing the ordering feel the need to maintain that order and to keep control not just economically and socially but also culturally and musically. This is especially true if more than several musicians are performing at the same time and if, as already mentioned, the power of the state is explicitly related to notions of the supernatural and eternal. Thus, official music associated with either state religion or the royal court (remember Pharaoh is a god) must be seen and heard to have lasting qualities that outlive and seem to transcend the changing social and economic conditions of individuals and groups of individuals within the state. Even with forms of musical notation or sound recording it is difficult enough to preserve musical practices from one generation to another. The ruling classes of Ancient Egypt never really developed any form of notation and cheironomes were used not only as direct instructions to musicians but probably also as *aides-memoire* to help regulate music so that it would sound the same each time it was performed. Indeed, it is worth remembering here that the Egyptians also worshipped music gods, one of whom was Hesu, characterised as both musician and cheironomer or conductor. In his presence, not to mention Pharaoh's, it must have been worth trying to get the music 'right' and cheironomes were used to help do just that.

This ordered and regulated music was primarily destined for ceremonies of state religion, to glorify Pharaoh, the gods and the spirits of the dead.[12] The Royal Being

---

11. *Cheironome* derives from the Ancient Greek word *kheironomia* (χειρονομια), meaning 'measured motion of the hands, gesticulation'. *Kheironomia* in its turn derives from the two words *kheir* (χειρ) meaning 'hand' and *nomos* (νομος) meaning 'law, rule, order, instruction' etc.) (Liddell & Scott: *Greek-English Lexicon*, London, 1871). Cheironomes are in this context series of hand signs denoting the pitch and possibly also the duration of particular tones or groups of tones. Hickmann (1949, 1958, 1962) bases his deciphering of cheironomes not only on iconographic evidence but also on the observation of present-day living practices. 'Cheironomy is still practised by some Coptic and Egyptian cantors' … 'Their hand movements reveal a remarkable similarity to those of antiquity' (Groves vol. 4:191-192).
12. Temple music was performed by trained musicians. Their instruments had to be thoroughly in tune and special rules were in operation concerning musical discipline, order and restraint (Ling, 1983: 18).

was even woken up with song so that his day would pass in peace and musicians (along with harvesters, craftsmen, soldiers, his harem and dancing girls) followed Pharaoh into the grave so that he could live his afterlife in the manner to which he was accustomed this side of death.

3:2 Female musicians from the New Kingdom (1580-1090 BP). .

(a) Young women, sumptuously clothed, playing long-necked lutes, double shawms and drum. Perfumed wax cones on their heads would melt in the heat, giving off pleasant odours.

(b) Girls waving lotus flowers and shaking *sistra* to the honour of the god Hathor. The *sistrum* was a holy rattle instrument. Girls were taught arts of *sistrum* playing and hand clapping.

Some extant wall paintings found in pyramids are in fact so meticulous that it is possible to see and recreate the instruments of the time, complete with accurately measured fretboards, finger-hole placement, string fixtures etc., even to the extent that such re-creations tally exactly with the corresponding archaeologically preserved artifacts rediscovered later than the paintings representing them. Moreover, some frescoes can be seen as representing a sequence of movements — ancient animation drawings or comic strips, so to speak — so that, for example, dancing girls playing tambourines are portrayed in slightly different positions, one following another, this giving a hint of the kinds of movement used in one sort of dance at the royal courts.[13]

It is also possible to deduce from observations of images portraying music making that there were changes in the construction of instruments and in the way they were played. In fact it seems as if gapped pentatonic scales (of doh- and la-pentatonic type, as found in Nilo-Sudanic areas of Africa and as preserved in the music of the Coptic church), which were very common during the Old and Middle King-

13. Ling (1983: 17-18), based on Hickmann (1961, 1965).

doms (2850-1570 BP), were superseded in the New Kingdom by scales containing intervals of a semitone or less (more 'Arabic' and less 'African' to our ears).[14]

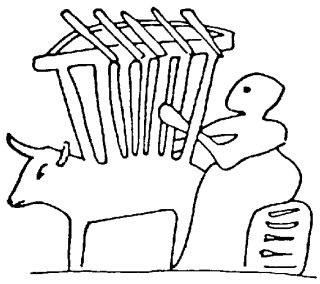
Such changes in tonal system were almost certainly due to frequent Egyptian warmongering which brought about continual contact with the musical cultures of neighbouring peoples such as the Hebrews and Assyrians. Complete court ensembles belonging to foreign potentates were acquired in this way and brought to Pharaoh's court, where the appearance of foreign artists was always regarded as an extra treat. Soldiers, however, were warned by state moralists of the time against the sweet sounds of foreign music and against the good looks of foreign women, perhaps with 'good' reason, for, as we just mentioned, at some time during The Middle Kingdom the music of Asia Minor and the East appears to have made substantial inroads in Egypt, to the extent that the old pentatonic system had virtually disappeared by the middle of The New Kingdom. This is also the period during which the lyre, lute and shawm entered Egypt. It is also the time when, with the rising importance of trade as a basis for economy, the middle classes started using music as sonic-aesthetic decoration, i.e. as entertainment to listen to or to hear in the background, rather than as a set of practices intimately connected to state religion or the court.

Perhaps this course of events confirmed the fears of learned men in the old Pharaonic court: that the order and rule of God or gods on earth, upheld by the self-appointed keepers of divine seals here below, will crumble and fall when the old order of divine music falls into disarray. There is something disconcertingly familiar about this line of thought ...

3:3 Fresco of nomads (c. 2000 BP, found in an Egyptian aristocrat's burial chamber). Note the armed men, the finely clad women and the young man playing a lyre.

14. Paraphrased from Elsner (1975: 402).

Mesopotamia



3:4 Bull bodied lyre ~ from a Sumerian seal

Mesopotamia (μεσος = middle, ποταμος = river) is the ancient Greek name for the once highly fertile land between the Tigris and Euphrates rivers in what is now Iraq. The history of Mesopotamian civilisations is usually divided into three main periods: (i) the Sumerian (c. 3000 BP); (ii) the Babylonian (c. 2500 BP); (iii) the Assyrian (c. 500 BP). Our knowledge of these ancient civilisations is based mainly on archaeological and iconographic sources, including reliefs, panels (fig.3:6), sculptures, seals (fig.3:4) etc. and, to a lesser extent, on literary evidence.'

Kinder & Hilgemann (1978:27-28) summarise political, religious and cultural life during the Sumerian period (c. 3000 BP) in the following terms.

> 'The land was divided into city states. The centres of the cities were the monumental temples erected on rising terraces of bricks, the walls decorated with coloured plugs of clay in mosaic fashion. They were located in districts dedicated to the god to whom the land belonged. Possessors of political power and the chief of the high priests were the local princes'... 'They dominated both priesthood and city. Writing (first pictographs, later abstract symbols, scratched into tablets of soft clay with slate pencils — cuneiform)[15] was used in the administration of the temple'... 'The sexagesimal numerical system divided the time of the day (24 hours, 60 minutes, 60 seconds) and the circle (360°).

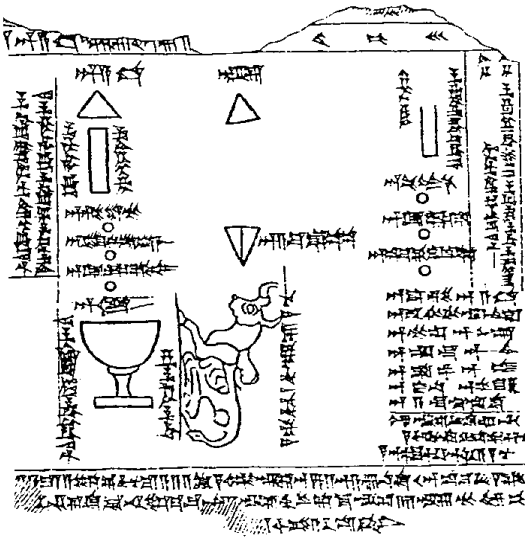
The Sumerians seem to have been fervent animists. Their god of thunder, Ramman, destroyed crops with his storms, while Ea, god of wisdom, music and the deep, flooded their fields. To appease these gods, the Sumerians used musical instruments in temple rituals: a reed pipe which they believed to represent Ramman's breath and an hour-glass drum marked with the sign of Ea. They also seem to have used string instruments quite extensively, most notably the lyre. This instrument seems to have been associated with the bull, a fertility symbol of divine power, as can be seen from the numerous finds of lyres with tearing shaped soundboxes. Similar lyres are also found on seals that were used to guarantee safe delivery of supplies within the temple area of the city (fig.3:4).

Percussion instruments also seem to have been important in both Sumerian and Babylonian music making. Apart from the *sistrum* (rattle) and clappers, both common in the music of ancient Egypt, the small drum (*tambour*) became widespread during the Babylonian period and was later adopted by the Arabs, Greeks and Romans. Larger drums also existed, as the table of ritual instructions from Uruk, shown as figure 5, suggests in its instructions for the manufacture of a sacred kettle drum.[16]

---

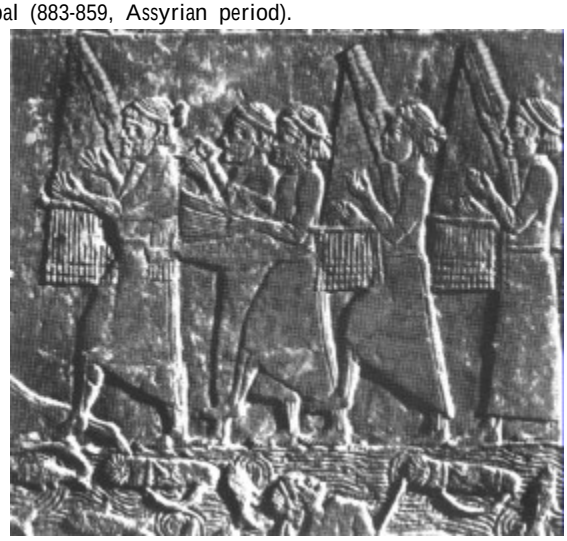
15. 'Cuneiform', from Latin *cuneus*, = wedge shaped, triangular.

3:5 Instructions, in cuneiform text, for construction of a sacred drum (Uruk, c.2000 BP).



Translation: 'The bull, once tamed, is brought to the temple on a day deemed propitious by edict of the oracular priest. Gifts are sacrificed to Ea, the god of wisdom and music, and to other gods. The bull is placed on a red mat which is covered with sand. After the oblations and incense, a torch is lit and hymns are sung in praise of the bull, at which time twelve bronze images are laid upon a cloth. The images show the gods of heaven, earth and the underworld. The body of the instrument is then brought in. The priest speaks into the bull's ear. The bull's breath is sweetened by fragrant oils. Then the beast is killed, his heart burnt and, with due ceremony, his hide prepared as a drum skin. After fourteen days, new ceremonies are conducted, at which time the drum may enter into the collection of the temple god.'

3:6 Relief from palace of King Assurbanipal (883-859, Assyrian period).



These sturdy harps contained as many as 22 strings strung at right angles to the resonance box, while Sumerian bow harps were relatively simple instruments.

During the Akkad dynasty (2350-2300 BP) and the third dynasty of Ur (2050-1950 BP), ultimate state power was in the hand of warrior kings whose rule was considered divine.[17] The wealth of the ruling classes derived not only from exploitation of the local peasantry but also from trade (wars) with other peoples, for example Elamites, Canaanites and Egyptians. All land was owned by the temple, the crown and the nobility. Mass deportations were carried out to destroy the substance and the national consciousness of subjected peoples. The spoils of such aggression helped underwrite 'a highly developed temple and state economy which involved a vast bureaucratic apparatus' (Kinder & Hilgemann 1978:27).

---

16. The cuneiform text and illustration of figure 5 are taken from Ling (1983:12), quoting W Stauder *Alte Musikinstrumente in ihrer vieltausendjhrigen Entwicklung und Geschichte* (Braunschweig 1973), p. 199. The text of figure 5 is translated freely by P Tagg from Ling's Swedish translation of Stauder's German.

17. One king (Shulgi) said he became God by 'sacred marriage' (Kinder & Hilgemann 1978:27).

New city states were established, including Babylon itself (*Babili* = God's gate), whose most stable period was around 1700 BP. It was around that time that 20,000 clay tablets were completed, most of them recording the appearance of prophets at sites of sacred cults, and that major literary works, such as *The Epic of the Creation of the World* and the *Gilgamesh* epic, were written down. Laws governing life and property were also formulated during this period on the principle 'an eye for an eye, a tooth for a tooth'. Punishments, which originally ranged from whipping and maiming to execution (impaling, burning, drowning), were later extended to include castration, the puncturing of ear drums, and the application of boiling asphalt to faces.[18]

'Nothing is known', writes Stauder (1995:199), 'of any organised popular or secular music' [in Mesopotamia]; 'depictions of shepherds or herdsmen playing instruments', he continues, 'and corresponding cuneiform signs have been frequently misunderstood. They were symbolic and often connected with Tammuz, the god of plant life'. On the other hand, quite a lot seems to be known about the ritual uses of music among the ruling classes which was governed by clear rules of aesthetic procedure and education.

As with the Vedic chants of India (see p.23 ff.), the melodies of Sumerian temple ritual were orally transmitted, and skills of their correct performance were included as part of a priest's education. Although no specialised music schools seem to have existed, a few academic institutions, covering all disciplines, including music and its theory, were founded during the Babylonian period.

> 'The training of a musician was rigorous; for a temple musician, it lasted about three years and concluded with an examination. The subjects of instruction included the sacred texts that had to be spoken, recited or sung, as well as performance on a number of instruments' (Stauder 1995: 200).

Just as in Egypt, music accompanied the rich and powerful from birth to death and beyond. Music was also an integral part of daily liturgy in the temple, it occurred at annual festivals, on special occasions, such as the completion of a temple, at funerals, etc. Detailed rules of procedure governed how which music on which instruments should be used for what purpose on which occasion. An example of this prescriptive function of court music occurs not long before the fall of Babylon.[19]

---

18. Kinder & Hilgemann (1978:29), referring to the Old and Middle Assyrian Empires in Mesopotamia (1375-1047 BP). Brutal warfare continued during the New Assyrian Empire (909-625 BP). 'The resistance of neighbouring peoples was broken by annual campaigns which used cavalry for the first time in the history of warfare', continue the authors (p.31), 'Cruel methods of subjugation put the conquered into a state of fear: impalement, scourging and mass executions. A new residence with a gigantic palace was established at Calah, populated by deportees'. The Canaanites were just one of many peoples to be deported. According to my grandfather's *Analytical Concordance to the Bible* (Edinburgh 1879), there are almost 1000 references to Babylon in the Old Testament, starting with the evil Hebrew king Menahem robbing citizens to pay off the King of Assyria (2 Kings 17:24) through to the innumerable listings of Babylonian iniquity recorded especially by prophets Jeremiah and Ezekiel. The most famous record of deportees in Babylon is probably that found in Psalm 137: 'By the waters of Babylon we sat down and wept when we remembered Zion. We hanged our harps upon the willows in the midst thereof. For there they that carried us away captive required of us a song' … 'saying, Sing us one of the songs of Zion.'

> 'Nebuchadnezzar the king made an image of gold, whose height was threescore cubits'... [He] 'sent to gather together the princes, the governors, and the captains, the judges, the treasurers, the counsellors, the sheriffs, and all the rulers of the provinces, to come to the dedication of the image'... 'Then a herald cried aloud, To you it is commanded, O people, nations, and languages, that at what time ye hear the sound of the cornet, flute, harp, sackbut, psaltery, dulcimer, and all kinds of musick, ye fall down and worship the golden image that Nebuchadnezzar the king hath set up; and whoso falleth not down and worshippeth shall the same hour be cast into the midst of a burning fiery furnace' (Daniel 3: 1-7).

As Crossley-Holland (1959:16) notes:

> 'The mention of the instruments first separately and then together suggests a performance where prominence was given to the solo instruments before the ensemble got under way, as in the *taqsim* or prelude of Arabic classical music to this day.'[20]

Indeed, the influence of Mesopotamia on subsequent music cultures, especially that of the Arab world, goes a good deal further than just suggested. Such influence is particularly strong in the area of music education, theory and aesthetics, as we shall see shortly.

We know that in early Sumerian times (fourth millennium BP), priests, mathematicians, astrologers and musicians had all worked together in the temple. We also know that, towards the end of the Mesopotamian period (first millennium BP), music theory was closely connected with astrology and mathematics. Just as in ancient Egypt, the idea was that if you knew the motions of the stars, if you believed in their sway over human destiny, then you understood the perfect harmony of the universe. If you believed humans to be part of the universe, you could then become one with the universe by making music which abided by the rules of its harmony. Of course, music conforming to such rules was that of the temple and court, while that of other classes and peoples presumably failed to make the grade. Thus, an oppressive political system could be identified with a system of musical organisation which coincided with the immutable system of the universe. Like the deification of the worldly system's kings, such metaphysical connections between the ruling classes, their music and the heavenly spheres, contributed to the illusion that their unjust political system was as great, as divine, as eternal, as unquestionable and as unchangeable as the universe.

---

19. King Nebuchadnezzar II reigned in Babylon from 604-562 BP. Babylon fell to the Persians in 539 BP. The 'threescore (3 x 20) cubits (forearms), mentioned in the ensuing Old Testament quotation, is equivalent to about 80 feet or 25 metres, i.e. quite big for a statue.
20. The instrument nomenclature mentioned in the book of Daniel is almost certainly unreliable, not only because the story of the three men in the fiery furnace was written down 400 years after the event but also because it seems clear that the author has selected instruments of exotic origin from the Jewish viewpoint (Ling 1983:13). However, the inaccurate nomenclature of *particular* instruments does not contradict the correct observation of Babylonian ritualistic use of instruments *in general*. For more on *taqsim* and its Indian equivalent (*alap*), see p.35, ff. In any case, Crossley-Holland (1959:16) reckons that the relevant passage from Daniel should be interpreted as follows: 'As soon as ye shall hear the sound of the horn (*qarna*), the pipes (*masroqitha*), the lyre (*qatros*), the lower-chested harp (*sabbeka*), the upper-chested harp (*psantrin*), the full consort (*sumfonyah*), and all kinds of instruments, ye shall fall down and worship the image'...

The connection between music and the universe, just mentioned, was based on acoustic observation and mathematical speculation. One notion was that the primary divisions of a stretched string — expressed as the mathematical ratios 1:1 (unison), 1:2 (octave), 2:3 (fifth) and 3:4 (fourth) — not only define octaves and tetrachords, but are also related to the four seasons. Cuneiform texts also indicate that the Babylonians used an octave containing seven different pitches, that they were familiar with the circle of fifths, and that they used seven different modes, each based on one of the seven different pitches of the same octave. Several authors also state that there is reason to believe that Pythagoras (sixth century BP), after extensive studies in both Egypt and Mesopotamia, brought back knowledge of harmonics and scales to Greece, where he and his disciples developed their own theories of the harmony of the spheres, including the notion of *ethos* (modal character and affect) that was later, via Arabic treatises, to influence music theory in medieval Europe. It is in other words generally accepted that Mesopotamian notions of music theory were influential in Egypt, India, Palestine, Greece, the Arab world and medieval Europe. Even Chinese high culture may also have been influenced by them, at least if we are to lend any credence to the story of music's origins in the western boundaries of the Emperor Huangti's territory (c. 2000 BP)[21]...

21. See p.15 for more about the foundation note of Chinese music.

China

Around 3000 BP life in China was mainly semi-nomadic. By 2000 BP, however, agriculture had developed and people had cultivated the fertile valleys of the Yangzi and Yellow rivers.[22] This period is recorded in myths, subsequently written down, about demigods and legendary emperors, each of whom is said to have had his own musical system (Crossley-Holland 1959:42).

The Shang (商) dynasty (1766-1122 BP) was a feudal monarchy under a warrior king who, like the Pharaohs and many English monarchs, was also religious leader. As in Egypt and Mesopotamia, the cities, incorporating temple structures, were fortified by walls while script was developed and used by oracular priests in the Daoist religion. *Dao* (道), meaning 'The Way', was the principle governing the ordered universe, the 'sublime heavens', nature and the spirits of ancestors.

There are tangible remains from this period of Chinese history: the sonorous stone (*qing* 磬) and the globular flute (*xuan* 弦).[23] The *Shijing* (詩经 'Book of Songs'), a compilation made in about 1200 BP, also mentions the drum (*gu* 鼓) and bell (*zhong* 钟). The same source also mentions how important festivals were held at the junctions of rivers between seasons.

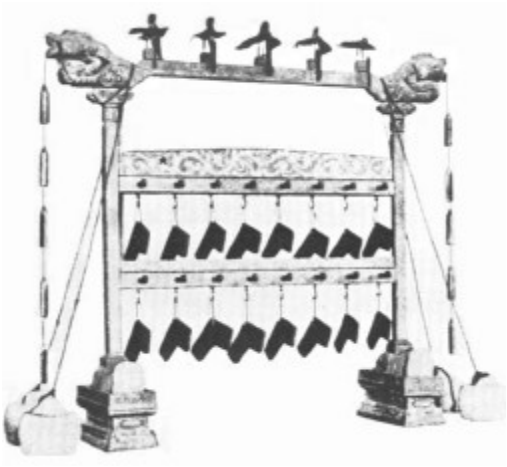
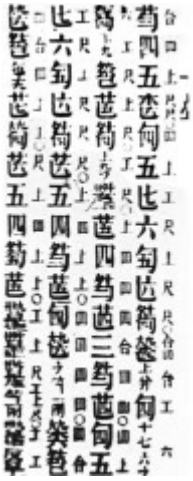
> 'On these occasions choirs of boys and choirs of girls from different villages challenged one another by singing sequences of distichs accompanied by gestures.[24] Each half of the distich usually consisted of eight words, that is, eight syllables, a form well known in Chinese poetry. The contest of the sexes and the alternate singing (antiphony) were said to symbolise the two polar principles of the universe, *Yang* and *Yin*, and the sexual rites which followed brought harmony with nature and human harmony through the reunion of the two principles in the world. Musical form was closely connected with some such symbolism, for at one of the festivals two companies of musicians played one after the other and then both together.'
> (Crossley-Holland 1959:42).

Some evidence for the origins of Chinese music theory is offered by the *Shujing* (韦经), 'The Book of History', edited by Confucius (Kongfuzi 孔夫子, 551-479 BP). It describes how one of the legendary emperors from the Xia (夏) dynasty (2205-1766 BP) 'took odes of the court and ballads of the village to see if they corresponded with the five notes'.[25] This quotation raises two issues: (i) whether Chinese emperors employed music inspectors to cheek that people were singing and playing the 'right' pitches and, if so, why such musical inspection might be considered necessary; (ii) how and why the 'five notes' came to be regarded as the imperial norm. To answer

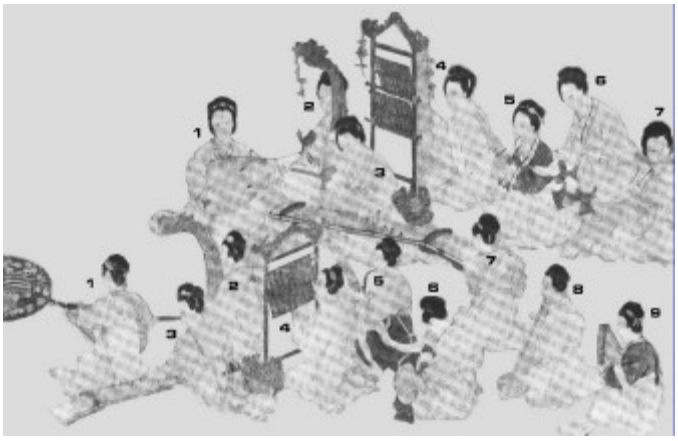
22. I have tried to use the modern (Pinyin) transliteration of Mandarin Chinese. 'Tao' (old, Wade-Giles romanisation) is written *Dao* (Pinyin), the 'I Ching' *Yijing*, 'Hsia' *Xia*, 'Chou' *Zhou*, 'Peking' *Beijing*, 'ch'ing' *qing*, etc. Thanks to Greg Lee (Lyon) for help with transliteration. For basic conversion between Wade-Giles and Pinyin, see http://acc6.its.brooklyn.cuny.edu/%7Ephalsall/texts/chinlng1.html [2002-03-01]. Since, due to tonematic distinctions in Mandarin, the same monosyllabic transliteration may represent several concepts, I have included some Chinese characters to minimise confusion. Thanks to Ivy Man (Hong Kong) for help with this task.
23. These instruments may he older since they tally more with instruments of neolithic tradition found elsewhere (Crossley-Holland 1959: 42).
24. *Distich* means two lines of verse, i.e. a couplet.
25. This quotation, and most of the subsequent account, including citations, derive largely from Crossley-Holland (1959:42-46).

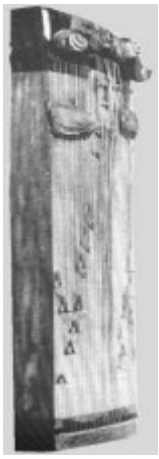
these questions, it is necessary to provide a brief account of the development of music and theories of music in China up until around 200 BP.

3:7 **(a)** Stone chimes of type still used in Confucian rites in Taiwan (see Kishibe 1995: 250); (b) Chinese notation; (c) mouth organ (*sheng*).[26]

(a)  (b)  (c) 

3:8 **(a)** Banquet music (*yenyue*) during reign of Emperor Xuandong (712-756): a girls' orchestra including [1] lutes, [2] angular harps, [3] long zithers (*se*, *zheng* see fig. 8b), [4] stone chimes (*xing*, see also fig. 7a), [5] mouth organs (*sheng*, see also fig. 7c), [6] hourglass drums, [7] transverse flutes, [8] vertical flute, [9] clapper; **(b)** 25-string zither (*se*) from tomb of King Ma's wife (c.193 BP).[27]



(a) (b) 

The Zhou dynasty (1050-255 BP) marks the period during which most of the institutions, manners and customs of China acquire the basic form that lasted until the twentieth century. As for music, recent catalogues describe several hundred instruments that date back to those already known in the Zhou dynasty. Amongst these are the stone chime (*bianqing* 編磬, fig. 7a), the bell chime (*binqing*), the reed mouth organ (*sheng* 笙, fig. 7c), the panpipes (*paixiao* 排簫), the five- or seven-stringed zither (*qin*), the thirteen- or twenty-six-stringed zither (*se* 瑟, fig. 8b) and

26. Scanned in from Crossley-Holland (1959: parts of plate 1, after p.128).
27. Scanned in and adapted from Pian (1995:253), fig.12a is taken from a detail on a silk handscroll produced during the Sung dynasty (960-1279); the original artefact is in the Art Institute of Chicago (USA). The ancient *se* of fig.12b, scanned in from Liang (1995:274), is housed in the Provincial Museum at Hunan (China).

various drums. Music from the Zhou (周) dynasty until the end of the Qing (磬) dynasty and the establishment of a nationalist government in 1911 was used in three main areas: (i) in agricultural festivals of ancient origin which combined poetry, music and dance, (ii) in imperial court rituals, (iii) in religious ritual. Between around 600 BP and the end of the Zhou dynasty (255 BP) there are some particularly important developments in Chinese culture: it is at this time that Daoism, including its comparison of musical tone to human essence, is formulated by Laozi (Lao Tsu 老子, 604-517 BP). It is also during this period that Confucius (孔夫子, 551-479 BP), traditionally associated with musical performance and the part played by music in the ritual of living, edited most of China's ancient books. These include the *Shijing* (詩经 'Book of Songs'), the *Shujing* (韦经 'Book of History'), the *Liji* (礼記 'Record of Rites') which contains a chapter called *Yueji* (樂記 'Memorial of Music') and the *Yijing* (易经 'Book of Changes'), a metaphysical work including a section on the relationship between the basic principles of music and the cosmic elements. Confucius' editorial work laid the basis of all subsequent writing about music. One such subsequent work, the *Lu Shi Chun Qiu* (呂氏春秋) or *Lu Buwei* (呂不韋 'Master Lu's Spring and Autumn Annals', 239 BP) helps answer the latter of the two questions raised at the end of the previous paragraph: how the 'five notes' became a musical norm in imperial China.

According to the *Lu Shih Chun Qiu* or *Lu Buwei* the foundation tone of music is *huang zhong* (黃钟), which literally means 'yellow bell'.

> 'This was conceived simultaneously as a sacred eternal principle, the basis of the state and a note of definite pitch in music. *Lu Buwei* attributes it to the mythical Emperor Huangdi (third millennium BP) who sent the equally mythical Ling Lun ('Music Ruler') to the western boundaries of the kingdom where, in a mountain valley, he cut a node of bamboo in such a way as to give the foundation tone — the pitch of a man's voice when he spoke without passion. It was considered important to find the correct pitch for each dynasty, or political disorder would be likely to ensue'... 'From the foundation tone, other higher notes were derived by taking a tube of length one third less than the first, then a tube one third more than the second and so on, that is, tubes alternately two-thirds and four-thirds the length of each preceding one. The resulting sounds thus have alternately vibrations of $\frac{3}{2}$ and $\frac{3}{4}$ times the frequency of the preceding, which gives'... 'alternating series of ascending fifths and descending fourths. It will be seen from this that the vibration frequencies in the Chinese system are all based on powers of the numerals 2 and 3'.[28]

The *Yueji* (樂記 'Memorial of Music') and *Liji* (礼記 'Record of Rites', both c.450 BP) put these figures in cosmic perspective.

> 'Music expresses the accord of Heaven and Earth'.
>
> 'Since 3 is the numeral of Heaven and 2 that of the Earth, sounds in the ratio 3:2 harmonise as Heaven and Earth.'

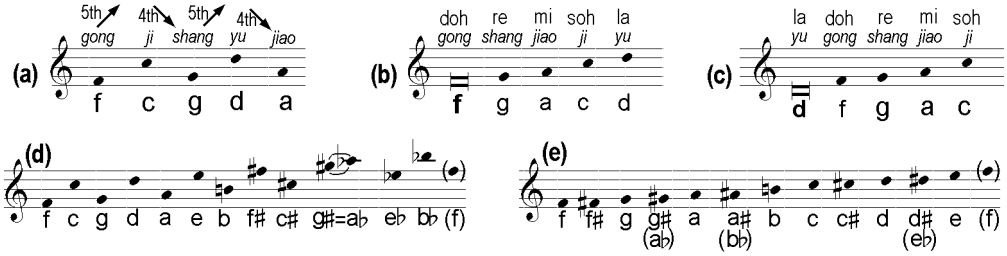
If we posit the note `f` as the *huang-zhong* foundation tone of Chinese music theory, the first five notes in the series of pipes just described will be `f-c-g-d-a`. (fig.9a, p.16). Scalar rearrangement of these pitches produces `f-g-a-c-d` (fig.9b), the Chinese five-note scale identical to the European major- or doh-pentatonic scale.

28. All quotations on this page are from Crossley-Holland (1959:42-46).

This system already existed in melodies from the time of the Zhou dynasty (1050-255 BP) and Chinese texts from the fourth and third centuries BP call the five notes *gong, shang, jiao, ji* and *yu* (宮商角徵羽). Any of these five might serve as centre for a new mode of the scale and each mode would be characterised by this note as its principal and final, for example the f of ex.3:9b or the a of ex.3:9c. In other words, the procedure described thus far rationalised the origin of the 'five notes', establishing a physical theory of the major pentatonic mode and of modes deriving from any of its constitutent pitches.[29] However, ancient Chinese music theory did not stop at that.

> 'The symbolism underlying Chinese ritual required music's fundamental note to move... with the twelve months (and the twelve hours). In other words, the keynote (and the scale based upon it) had to be transposed for each successive period. To regulate this movement a series of twelve notes was generated by the method of ascending fifths and descending fourths already mentioned' (fig.9d): 'and each of the twelve notes so generated became in turn the starting point of the scale. In order to show all the notes in their musical firmament together the Chinese next arranged the twelve notes in stepwise order' (fig.9e). 'The resulting arrangement has all the appearance of a chromatic scale, but it was never used as such, only as a system for transposing the five-note scale' (Crossley-Holland 1959:46-47).

3:9 Theoretical basis of pentatonicism in ancient China, here with f as doh (*gong*): (a) the 'five notes' as rising fifths [$\frac{3}{2}$ × frequency of previous pitch] and descending fourths [$\frac{3}{4}$ × frequency of previous pitch]; (b) the same notes arranged as standard major pentatonic scale with doh as principle note [=]; (c) same notes arranged as a minor pentatonic scale with la as principle note [=]; (d) as (a) except extending the sequence by seven more intervals to complete the octave and return to doh; (e) the notes of (d) arranged as a twelve-tone chromatic scale.



The above account explains the rationale behind gapped pentatonicism as the norm in imperial China but it does not answer the other question: did Chinese emperors employ music inspectors to check if people were singing and playing the 'right' pitches and, if so, why would such musical inspection be considered necessary?

> 'An Imperial Office of Music (*Yuefu*) was founded under the Emperor Wu (141-87 BP) for standardising pitch, supervising music and building up musical archives. The Chinese had long previously recognised the relationship of musical pitch to the length and capacity of a tube and so it was that this organisation was attached to the Office of Weights and Measures' (Crossley-Holland 1959:48).
>
> 'The basic *lu* pipe preserved in this office was also used as a standard measurement for length and weight. Thus, the music office was a bureau of the Office of Weights and Measurements and remained so through many dynasties' (Malm 1977:152).

---

29. It is unclear, however, if the minor pentatonic mode, with la as principal (starting on *d* if doh=*f*) as principal , was established at the same time.

There is little doubt that the establishment of theories relating a particular population's use of particular musical pitches to unquestionable physical phenomena and the bureaucratic standardisation of pitch were two ways in which the high status and privileges of those practising what was 'right', 'natural' and well-regulated could be justified in comparison to those who did not: Confucius' distinction between *ya-sheng* (雅声 'right music') and *jeng-sheng* ('vulgar music') provides a pithy illustration of that same social and cultural standpoint.

For over 2000 years of Chinese imperial history, from the start of the first Qin dynasty (221 BP) to the end of the last Qing dynasty (1911), one set of musical practices was identfied by ideologues of the ruling classes as the 'right music'. *Ya-yue* (雅樂 'elegant music'), as it was called,[30] refers both to court music of that long period and, more particularly, to court music associated with Confucian philosophy. In the *Yueshu* (樂韦 'Book of Music', from 1101 CE), Chen Yang, chronicler of the Dang dynasty (618-907), records that court music featured a wide range of genres, including *ya-yue* (雅樂 Confucian music), *su-yue* (俗樂 Chinese popular music), *hu-yue* (胡樂 foreign music), *yen-yue* (宴樂 banquet music, see fig.8a, p.14), *jun-yue* (軍樂 military band music), *san-yue* (theatre music) and *qin-yue* (seven-string zither music). *Ya-yue*, the 'elegant' Confucian music, was divided into two main categories: *yue-xuan* (樂弦 'music chime'), performed by an instrumental ensemble outside the building where Confucian rites were conducted, and *dang-go* ('chamber song'), songs performed with an instrumental ensemble inside the building (Pian 1995:250-251).

Yue-xuan (outdoor 'music chime' subgenre of *ya-yue*), was further subdivided into four target-specific categories: *kung-xuan* for emperors, *xien-xuan* for lords, *pan-xuan* for ministers and *te-xuan* for lower officials (*ibid*. 251). *Yue-xuan* instrumentalists and dancers were placed according to strict stage instructions deemed appropriate to the status of the audience.

> 'The instruments were placed on four sides (east, west, north and south) for an emperor, on three sides (east, west, north) for a lord, on two sides for a minister and on one side (north) for an official' (Pian 1995:251).

The protocol of 'stage' positioning instruments for a performance of *kung-xuan* (outdoor 'music chime' for emperors) was, as figure 10 shows, quite intricate, and 'the two types of accompanying dances' were, continues Pian, 'similarly classified'.[31] For emperors there were 64 dancers arranged into a square consisting of eight lines and eight rows, for lords 48 (8×6), for ministers 32 (8×4) and, for lower officials 16 (8×2).

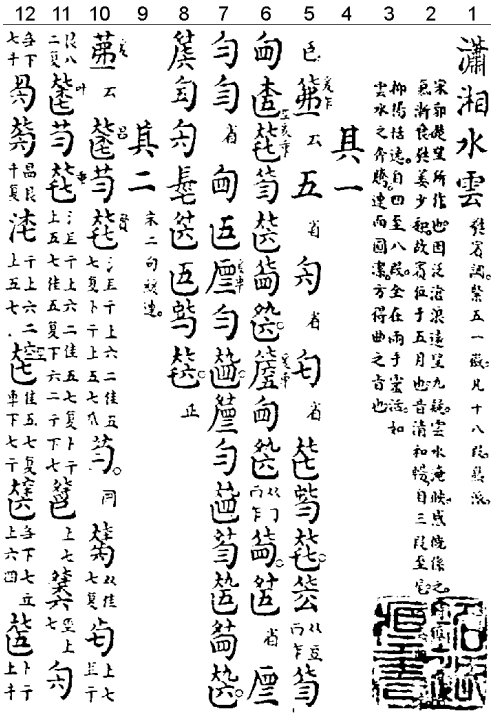
3:10 *Kung-xuan*

Instrument placement for performance of 'elegant' outdoor music for emperors (c. 1300 CE).

30. Compare latter-day expressions like 'classical music', 'beautiful music', 'good music', 'great composers', 'refined musical taste', 'musique savante', 'musica colta'. See also page 27, ff.).
31. Figure 10, scanned in from Pian (1995:251), is taken from the *Wenxian Tunggao* encyclopedia of the Yuan dynasty (1280-1368).

Now, any regressive type of cultural regulation — whether it be today's endless auditing of British teachers by managerialist bureaucracies (complete with their vague value words like 'underachievement' and 'excellence'), or whether it be benchmarking by the Bureau of Music (*yue-fu* 樂府) in imperial China (with its equally nebulous 'right' or 'elegant' versus 'wrong' or 'vulgar') — has to rely on the description of practices established in the past to prescribe the sorts of action it can sanction now and in the future.[32] Oppressive bureaucracy uses measurement and documentation, not to explain and enlighten but to establish rules, to lay down the law, and to regulate behaviour in advance on the basis of what went before. In order to perform such feats of conceptual illusion, bureaucracies need to ensure that whatever 'best practice' they happen to promulgate is at least *seen* to be: [i] related to unquestionable and apparently immutable physical and/or moral precepts; [ii] related to concepts of 'order' and governed by strict and often complex rules of procedure; [iii] in need of special skills and knowledge to be understood and performed; [iv] reproducible consistently over time by those who know the rules of the game; [iv] connected in some way with the authority of a respected historical tradition.

3:11 *Qianzi pu* – abbreviated character tablature for the *qin* (7-string zither): tune 'Water and Cloud of Xiaoxiang' from *Wuqi zai qin pu*, compiled by Xiu Qi (1722). Columns 1-4 and 9 show the title and technical details, columns 5-8 and 10-12 contain notation.



The music of imperial Chinese courts, especially *ya-yue* ('elegant music'), was presented as though it had all these qualities of 'best practice'. It was, as we have seen, related to the cosmic values of the numerals 2 and 3 which, in their turn, were related to notions of heaven and earth, male and female, *Yang* (阳) and *Yin* (陰), etc. It was certainly regulated by strict rules of performance, not only in terms of 'stage' positions for instrumentalists and dancers, but also, as our account of the 'five notes' and the imperial Music Office (*yue-fu* 樂府) shows, with regard to tonal norms. Intricate division and subdivision of genres in terms of both musical style and audience type illustrate further aspects of complex codification, as do the number of ancient texts setting out the history, aesthetics and metaphysics of imperial music-making. These sources also imply that knowledge of such intricacies was important for those producing and consuming the 'elegant' music, whose history, as master Lu's annals stated in 239 BP, could be traced back to what was, even then, the

32. For more about the plight of British university teachers hounded by 'performativity' bureaucrats and their auditing obsession, see www.tagg.org/rants/auditis/auditis.html [2002-02-19].

distant past of an ancient dynasty (p.15). Moreover, imperial Chinese music could be reproduced consistently from one time, generation or dynasty to another, not only because of the many treatises codifying its aesthetics and practice, but also because certain types of notation were used. Although such notation, either as characters indicating pitch (see fig.7b, p.14) or as tabulature for string instruments (fig.11, p.18) was probably used less prescriptively than the sheet music followed by a western European symphony orchestra, it at least helped ensure that singers and musicians could make the music they composed or performed conform adequately to prescribed patterns.

That the musical tradition measured, recorded, documented and theorised in the manner just described was that of the ruling classes, not that of the popular majority, should be obvious.

> [For over two thousand years] 'China was dominated by a central imperial court (the imperial household), the aristocracy, bureaucracy and provincial powers. Under this stratified society, commoners (peasants, merchants, artisans) and slaves were responsible for [...] products and labour. Cultural expression in the graphic arts and music was generally the privilege of the élite, especially the court, although a folk music culture existed as well.' (Pian 1995:250).

Kept in illiteracy, unable to afford fancy burials or the expensive artefacts aristocrats took with them into their graves, and forced to work long hours in order just to survive, the vast majority of the population were unable to document their own musical history and traditions for posterity. The very little we do know about the music of those millions over thousands of years comes mainly from whatever seeps up into court life. Nevertheless, the fact that the ruling classes chose to document and justify their own cultural habits so rigorously as being 'right' as opposed to 'vulgar' (Confucian *ya-sheng* versus *jeng-sheng*) suggests that there was something strong and vibrant from which they felt it necessary to distinguish themselves.[33]

Whether or not Emperor Wu's Office of Music employed the equivalent of OFSTED[34] inspectors to oversee standards of music in imperial China over two thousand years ago we may never know. The point is that such a bureaucracy for the regulation of music as a cultural practice did exist, and that its existence exemplifies the ruling classes' compulsion to measure, monitor and control not only actual cultural practices, including music, but also the way in which those various practices are understood, valued and ranked. It is also clear that similarly hierarchical efforts to regulate music elsewhere and at other times in cultures are found in conjunction with societies characterised by similarly hierarchical social stratification.

---

33. Another threat to Confucian *ya-yue* was the music of foreigners (*hu-ye*) (Pian 1995:250). One aspect of music about which I have yet to find any information in relation to imperial China — and this statement should definitely not be relegated to a footnote — is the role and status of women.
34. OFSTED: the UK government's Office for Standards of Teaching and Education, a notorious cabal of 'experts' (often ex-teachers, failed teachers, or government ideologues) who, with no more than 14 days of warning, descend on any UK school for a few days, and proceed to quantify various (and often questionable) aspects of 'achievement' and 'underachievement' on a unilinear scale so that schools can be ranked in 'league tables' in a trumped-up spirit of 'free competition'. Then, it is supposed, parents can exercise consumer 'choice' as to which school they want their children to attend.

In Ancient Egypt, Mesopotamia and China, then, not to mention, as we shall see, India, Athens and feudal Europe, the ruling classes managed in various ways to relate their musical practices with the supernatural, the immutable, and the apparently suprasocial and unquestionable. In this way, an oppressive political system can market itself as if it were just and permanent, and its representatives can present themselves as the self-styled representatives of whatever god, gods, morals and manners their own closely guarded class interests compel them to identify as upholding and determining the fate of nature and society. Therefore, cultural practices associated with the ruling classes have to be rationalised as closer to the divine, closer to eternal values, less ephemeral than those associated with peasants, slaves or any other popular majority. This means (i) preserving the musical practices of religious rites intact; (ii) codifying relationships between music and the supposedly eternal, immutable or unquestionable; (iii) constructing aesthetics of music as theory and as practice debarring the uninitiated from both understanding and mastery of the music of the ruling class. It is by such means that music can contribute to maintaining not only the cultural but also the social, political and economic status quo of an unjust system.

India

3:12 Painting of *r˜ga meghmalhar*, Jaipur school (18th century).[35]

Instruments (from l. to r.):

rab˜b (lute), *pakh˜vaj* (drum), *k˜sya* (hand cymbals), flute (played by Krishna), *bÿn* (stick zither), *t˜npura* (lute).

What about that 51%?

Before starting our account of music in India, I have to raise an important issue relating to figure 3:12. It is the fourth picture in this chapter to show young women performing music in a courtly setting (see also figs.3:2a and b, p.6; fig.3:8a, p.14). This choice of pictures is not due to any conscious effort to put women into print here, but to an abundance of women in the musical iconography from the ruling-class cultures of ancient riverine civilisations which has found its way into the latter-day accounts to which I have had access. My first question is therefore: why are there so many pictures of female musicians in histories of the music of ancient civilisations? Is it because there are so many primary pictorial sources of that kind or because historians have chosen to reproduce those rather than others? If so, why? And, if not, why is there such a considerable amount, or proportion, of musical iconography representing female musicians from those cultures?

35. Scanned in from Powers (1995:86). Painting in Shri Bhavani Museum and Library, Aundh (India).

Judging from the pictures themselves, it seems that women played an important part in the music cultures discussed in this chapter. However, I have so far been unable to find any literature dealing with the role or status of female musicians portrayed in the iconography. The texts I have had access to which describe the actual musical cultures are mostly written by men and do not mention the role of women in music. Moreover, very few texts which explicitly address the topic of female musicianship deal with periods before the eighteenth century, and even then mainly with European women composers. Therefore, until I find sources providing clues to the questions just posed, I can only speculate and ask more questions.

One striking trait common to the four pictures of female musicians in this chapter is that the women are all young and attractive: none of them appear to be middle-aged, old, obese, undernourished, silver-haired or disabled. Another common trait is that they are all clothed quite sumptuously. Attractively dressed and presented, the young women must also have been considered talented enough as singers, dancers or instrumentalists to appear at court. Can these women be compared to today's girl bands whose members possess some musical talent while conforming to current notions of beauty and attractive presentation? Or did the young women of those ancient civilisations have to assume the role of courtesan in addition to that of musician? If so, were their conditions as ignominious as those under which the ballet girls of the Paris Opera, with its top floor designed like a brothel, were expected to work in the nineteenth century? Perhaps neither prostitution nor polygamy were involved? Could the young women have been respected artists, on a par with male musicians, artists, writers and thinkers?

Where were the young women recruited from? Were they slaves, as seems to have sometimes been the case in ancient Egypt, or were they the daughters of artisans, traders or lower officials who hoped to marry them off to someone in the emperor's family? Perhaps girls were press-ganged from the streets or countryside, or did impoverished parents have to sell their talented daughters in order to help provide for the rest of the family? How were the young women educated in music? Were they expected to be accomplished musicians before they appeared at court, or were they provided with in-house training, as seems to have been the case with the Egyptian *sistrum* sisters shown in figure 3:2 (p.6)? And what happened when the women had children and grew older? Were they dumped on the social rubbish heap or provided for? Or were older women nevertheless employed as musicians despite their apparent absence from extant pictures of music in the 'high' cultures of ancient times?

Why are these issues not addressed in the histories of the music cultures I have had access to? Why could I not find anything on the internet? Is it just because I have not had enough time to investigate more sources nor to ferret out answers buried elsewhere? Or is it because history is still very much men's history, mainly written *by* men, even though over half of humanity is female, even though so many women appear in pictures of the subject discussed in this chapter? Although the whole issue of the role of women in the musical worlds of ancient times, and of its historiography, may be great importance, I regret that I am unable to answer any of the questions just raised. We will therefore revert to the main thread of this chapter's narrative.

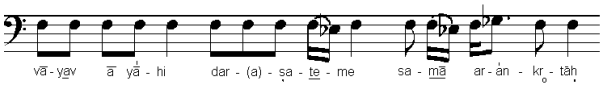
History

The history of Indian music is usually divided into four main periods: (1) the Vedic period (c. 1400-500 BP); (2) the early classical period (c. 200 BP - 1200 CE) when the *r˜ga* principle is first thought to have evolved; (3) Islamic invasions in the north (c. 1200-1500 CE) and (4) the modern period, when clear differences arise between Northern and Southern Indian art music styles.[36]

As with the cultures of Egypt, Mesopotamia and China, Indian cultures also developed from advanced neolithic settlements.[37] The earliest major urban settlement in the region was at Harappa, situated on the Indus river, 800 kilometres inland, near today's city of Multan in the Punjab. Established around 2500 BP, Harappa was ruled by kings (rajahs) and superior kings (maharajahs). Harappa civilisation was characterised by cities constructed with a grid of streets, a castle mound dominating the city, by brick houses and canals. In around 1500 BP the Aryans, a people of Indo-European origin whose military strength was greater than that of the indigenous Dravidian people, invaded the region.[38] A peasant culture of homesteaders and herders evolved but there was less by way of grain production. This is the time of the early Vedic chants. During the late Vedic Period (1000-600 BP), however, there was gradual expansion into the upper Ganges area, into the region of what is now Delhi, and the culture became increasingly based on crop production

The Vedas, written in the ancient Indo-European language Sanskrit,[39] are the oldest extant sacred scriptures in the world. In addition to Rita ('Truth', a deity of impersonal power), Varuna (god of human obligations) and Mythra (god of contracts), certain natural forces, like Agni (fire) and Surya (sun), were also considered deities. As with all agrarian societies, the fertility of nature was an important ingredient in Vedic religion (cf. Shiva) and there was also belief in life after death.

3:1 *Rigveda* 1,2,1, rec. 1971, Nadidad, Gujarat[40]



'The sacrificial ceremonies in which' [the Veda hymns] 'were employed, designed as they were to uphold the order of the world, laid stress on the efficacy of a correct intonation. The hymns of the *Rigveda*, the oldest of the four books (c. 1500-1200 BP)

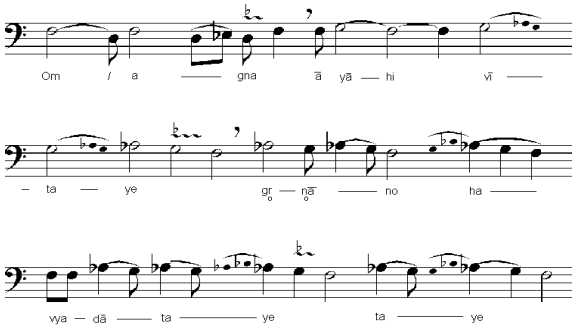
---

36. I have tried to provide correct transliteration of Indian languages, chiefly Sanskrit and Hindi in this text. I have also used English-language versions of familiar names and concepts, for example *Krishna, Rigveda, Shiva, Shankar, raga*, and *tala* rather than *K®þna, , g-veda, ÚŸva, Úankar, r˜ga* and *t˜la*. Sanskrit final vowels have usually been kept in this text (e.g. *r˜ga* rather than Hindi *r˜g*, *t˜la* rather than *t˜l*).
37. The late neolithic settlements of Amri, Nal, Quetta, Kulli and Nundara (c. 3000 BP) were situated in what is now the province of Sind, in the vicinity of Karachi and Hyderabad.
38. A bit like the Celts, who were pushed progressively westwards in Europe by mainly Latin and Germanic peoples, the Dravidians were pushed progressively southwards in the Indian subcontinent. Tamil, for example, is a language of basically Dravidian origin, whereas the main languages of Northern India — Hindi, Bengali and Urdu — are basically Indo-European with important Arab (Semitic) ingredients.
39. 'Sanskrit' (*sangskrita*) = ordered, regulated.
40. Quoted by Jairazbhoy (1976:560). *Svarÿita*-pitch syllables are marked with a little vertical line, *anud˜tta* pitches with a short horizontal line under the syllable. *Ud˜tta*, the main intonation pitch, has no symbol.

were chanted on three accents connoting definite differences in pitch: *ud˜tta* ('raised' or upper note); *anud˜tta* ('not raised' or lower note), and *svarÿta* ('sounded' or middle note). The notes followed the words closely in pitch and in prose rhythm, one note to a syllable'.[41]

Since Hindus consider the divine words of the *Rigveda* so important, *Rigveda* hymns are/were chanted or intoned rather than sung. With the *Samaveda*, however, the music seems more important than the words: vocal delivery is florid and has been compared to the Hebrew (Sephardic) chant of the prophets, even to Christian plainsong. The latter comparison has been made because, amongst other common features, both traditions prolong(ed) ends of phrase[42] and because both contain(ed) the kind of tremulant singing found in Islamic traditions, as well as in some types of medieval plainchant.[43]

3:2 *Samaveda* 1,1,1 in *Grāmageyagāna*[44]



Hinduism (*Sanatana dharma*, 'The Eternal Law') is usually thought to embody the tradition of the Vedas but it is impossible to say whether, and if so to what extent, the chants used by Hindus today actually resemble the early forms because (i) there is only scant information in the ancient treatises; (ii) there are only a few people left who can sing in the Veda styles; (iii) the surviving schools of Veda singing differ in approach; (iv) secrecy enshrouds the utterance of a chant believed to possess supernatural power.[45] Even so, a system of Veda notation, in existence for several centuries, at least enables musicologists to access some aspects of the tradition from a time when it was practised much more than it is today. It should also be remembered that the Veda hymns, whose words were finally written down in Sanskrit around 700 BP, have been passed down orally, with great attention paid to exact detail, from generation to generation, for the last 3000 years or so.[46]

'The Rig Veda and Sama Veda in India are somewhat analogous to the Catholic and Orthodox Christian chant tradition of the West form although both sets are actually performed and known only by special groups, their early texts and theoretical implications are considered to be the foundations of many later styles. The Vedic tradition

41. Crossley-Holland (1959:25).
42. cf. the *finalis* of plainchant corresponds to the *vrddhi* ('augmented length') of *Samaveda* singing.
43. Cf. *tremula voce* and performance of such neumes as *quilisma* and *pressus*.
44. Quoted by Jairazbhoy (1976:560).
45. Crossley-Holand (1959:26) also supposes that such secrecy has worked to keep the tradition in tact.
46. Malm (1977:94), drawing on Jairazbhoy (1974).

> belonged to the higher caste cultures and, because of its religious nature, was the subject of rigorous essays concerning its correct performance. Metaphysically, the physical vibrations of musical sound (*nada*) were inextricably connected with the spiritual world, so that the validity of a ritual and the stability of the universe itself might be adversely affected by a faulty intonation of sacred texts'.

Whether or not Vedic singing sounds the same today as it did a thousand years ago, it should be noted that it was under the same religious system during the same Vedic period (c. 1000-600 BP) that the Indian caste system evolved, being considered by traditional and orthodox Hindus as a 'Divine Institution'. This system of social stratification was — and still is to some extent — particularly severe, its ranks being, in descending order, warriors (Kshatryas), priests (Brahmins), peasants (Vaishias), subjected peoples and those of mixed blood (Shudras) and, finally, the untouchables or those without caste (Pariahs).[47] Once again, it seems as though we are dealing with a highly stratified agrarian culture whose urban centres of power and trade were established by rivers, whose religion includes the notion of life after death and whose culture has developed forms of writing.[48] There is also evidence to suggest that a distinct classification of musics came into operation during the same period as the classification of castes.

> 'From earliest times and throughout the ages Hindu music has been intimately associated with religious rites, court ceremonies and private occasions. In all these performances the religious element is never far away.' ... 'The sacred and secular were, however, always carefully distinguished: *Marga* (literally 'the sought') was music 'composed by the gods' which, when sung according to rule, could lead to liberation and break man's circle of lives; *Deþ*ÿ (literally 'regional') was music for entertainment'.[49]

This information has probably been culled from chapters 28 to 33 of the *N˜tyaþ˜stra*. This work, traditionally ascribed to the sage Bharata, who is regarded by many Hindus as the founder of Hindu classical music, dates from around 200 BP and codifies musical practices already well established by that time.[50] This does not mean that the classical music of India ('raga music')[51] as we know it today evolved at that time. In fact, the first use of the word *raga* in the sense we understand it today, applied to music, first turns up in writing in the seventh century A.D.[52] Before this time *raga* had clearly been in used in its literal and original sense of 'colour' or 'feeling' and, indeed, the Aryans of antiquity (in the *Ramayana*, c. 400 BP) recognised nine basic moods (*raga*-s) that were not necessarily musically determined.

---

47. Kinder & Hilgemann (1978:42).
48. The *Ramayana*, for example, dates from c. 500 BP and the first parts of the *Mahabharata* were compiled c. 400 BP.
49. Crossley-Holland (1959:26). 'Local' and 'popular' are other possible translations of *deši*.
50. loc. cit. The *N˜tyaþ˜stra* is not the only early written source of information on Hindu music. Both the *Ramayana* (c. 500 BP) and the *Mahabharata* (400 BP - 400 CE, including the famous *Bhagavad-gta*) refer frequently to matters musical.
51. *Raga* should really be transliterated as *r˜ga* (see footnote 36, p.23).
52. According to Crossley-Holland (1959:29), it turns up in the *Brihad deþi* of *M˜tanga*. Dating the work to 800 A.D., Crossley-Holland adds the caveat that 'some of these dates may well be several centuries earlier than those given here'. For explanation of the term *raga*, see p.31, ff.

> [The Aryan settlers] ... 'adopted many of the seasonal agricultural rites of the previous inhabitants and it was natural that the songs sung at each of their six seasons should be able to articulate the prevailing mood, such as delight in spring or merriment in autumn. There were in fact at first six generic *raga*-s. No doubt many of the pre-Aryan ritual tunes were taken over with the festivals and adapted by the Aryans. Though the steps by which this process was accomplished are unknown, many *raga*-s must have originated in tribal melodies. The very title of M˜tanga's *Brihat deþi* (*deþi* = 'regional') suggests as much and evidence is still preserved in the names of several raga-s, such as *Malvi*, after the war-loving M˜lavas who fought against Alexander the Great, and *Dravida*, still current in the Dravidian south.[53]

With these quotations we have passed into the 'early classical' period of Indian music (200-1200 CE), when the raga principle is generally thought to have evolved. In addition to M˜tanga's *Brihat deþi* and Bharata's *N˜tyaþ˜stra*, already mentioned, a number of other writings from this period provide valuable information about Indian music theory.[54] All these works contain lengthy quotations from earlier (non-extant) writings and concern themselves with three main problems: (i) the definition of musical intervals; (ii) the construction of scales; (iii) the categorisation of scales into related families (see p.29, ff.)

In these works there is enough circumstantial evidence to suggest that the musical notion of *raga* in India, though not explicitly referred to as such, may have been in operation several centuries before M˜tanga wrote his *Brihad deþi* (c. 650 CE). In fact, M˜tanga himself noted that several of the raga-s he described at that time had already fallen into disuse. Despite some chronological uncertainty, it would not be rash to suggest that the practice of making music according to the basic principles of the raga was probably established by the end of the Asoka dynasty (272-231 BP), whose territories extended not only along the Ganges and its tributaries to the delta but also as far south as Madras and along the basins of the Narbada and Godavari rivers. The Asoka dynasty capital, Pataliputra (near today's Patna), at the confluence of several rivers in the middle of the Ganges plain, was also the capital of several subsequent Indian empires, most importantly the Gupta (320-535 CE). This region (today's Bihar and Uttar Pradesh) was also highly fertile and able to support a large population. Trade flourished, a monetary economy developed and towns grew larger. Both court and the houses of wealthy traders cultivated lifestyles setting them apart from the lower castes, The *Kamasutra* (= 'Book of the Art of Love') was written during the Gupta period (320-535 CE) for those in a position to cultivate such pleasures (see fig.6).

> 'The daily life of a comfortably well-off citizen is described in the Kamasutra' ... 'as a gentle existence devoted to the refinements of life for those who had both the leisure and the wherewithal for such living: comfortable if not luxurious surroundings were provided to harmonise with moods conducive to poetry and painting, in both of which the young city dilettante was expected to excel. Gatherings were frequently held where poetic recitations and compositions were heard. Painting and sculpture were always on view in the homes of those who executed them. Music

---

53. Crossley-Holland (1959:31).
54. For example Dattila's *Dattilam*, Bharata's *N˜nyaveda*, Abhinavagupta's comments to the *Bharatan˜tyaþtra*, N˜rada the Elder's *N˜radÿyaþiksa*, N˜rada the Younger's *Sangÿtamakaranda*, Sharngadeva's *Sangÿtaratn˜kara* (see Jairazbhoj 1976:557)

> was another necessary accomplishment, particularly the playing of the lute (*vina*).' (Thapar 1966:151)

During subsequent centuries, various parts of Northern India — the Punjab, the Ganges basin, Bengal etc. — were invaded on numerous occasion: by Turks, Afghans, Persians, and, most notably, by Arabs. The Islamic influence on the Indian subcontinent has been particularly strong, several important centres of power being established between the time of the first Arab incursion in 711 CE and of British colonial domination in the mid eighteenth century.[55] With the Arab occupations, new raga-*s* were introduced, partly by Hindu court musicians who had been converted to Islam and who needed to compete with their Arab colleagues by incorporating a range of *maqamat*[56] into their repertoire for composition and improvisation. A whole host of musical treatises were written during the period of Islamic rule. Some of these mention paramusical aspects of the raga, while others categorise *raga-s* on a musical-structural basis.[57]

Although the political, religious and musical life of Northern India may was profoundly influenced by those thousand years of Arab presence, as well as by two hundred years of British rule, the strict underlying class stratification of Indian society has persisted, whether it be feudal or capitalist. Such stratification also underpins differences of musical practice throughout the subcontinent.

There seem to be two important dividing lines in most writing about Indian music: one between northern Indian (Hindustani) and southern Indian (Carnatic) traditions, the other between 'art' ('classical') and 'folk' music. The latter distinction is also referred to as that between the 'Little' traditions, in the sense of local and vernacular music, and the 'Great Tradition', to which the raga music of both Hindi and Carnatic areas belong. It is the 'Great Tradition' that we will deal with first.

Raga *music*

Sangÿtaþ˜stra

To qualify as art music (i.e. 'classical' or belonging to the 'Great Tradition'), Indian performing art, be it from the North or South, must, as Powers (1995:72) points out, satisfy two main criteria.

> 'Firstly it must establish a claim to be governed by authoritative theoretical doctrine; secondly, its practitioners must be able to authenticate a disciplined oral tradition of performance extending back over several generations.'

The important concept here is *þ˜stra*, meaning an 'authoritative exposition of doctrine or the body of doctrine itself'. The relevant *þ˜stra* in this context is *sangÿta-þ˜stra*, which applies to vocal and instrumental music.[58] For Indian musical practices to be

---

55. e.g. the Abbasid dynasty (750-1258), the sultanate of Delhi (1206-1526), the Mogul empire (1526-1658).
56. See under section on Arabic music (not yet written).
57. For example, N˜rada's *Sangÿtamakaranda* describes paramusical connotations of various raga-*s*, while R˜m˜m˜tya's *Svaramelakal˜nidhi* (1550) classifies raga-s structurally. Other important works are Soman˜tha's *R˜gavibodha* (1609) and Ahobala's *Sangÿtaparij˜ta* (1700). For detailed explanation of the raga concept, see p.31, ff.

qualified as 'classical' or doctrinally correct in India itself, they must adhere to one canonical point set out in the *sangÿta-þ˜stra*: melodic construction must be governed by one of the tradition's raga-*s*. This rule is so important that the proper Hindi term for canonically correct musical practices — *þastriya-sangit*, which literally means 'scientific music' or 'doctrinal music' — is less frequently used than the expression *r˜gdar-sangit*, meaning simply 'music having a raga'. Indians also often use the English term 'classical' when distinguishing the raga tradition from various forms of popular music practice.

It is in this context worth noting that *The Oxford Concise English Dictionary* defines 'classical', with reference to music, as follows:

> 'serious or conventional; following traditional principles and intended to be of permanent rather than ephemeral value'... 'representing an exemplary standard; having a long-established worth.'[59]

In other words, calling *þastriya-sangit* or *r˜gdar-sangit* 'classical music' is quite accurate because not only do buzzwords of higher and lasting value occur in the connotative spheres of both terms: *þastriya-sangit* and 'classical music' also both allude to notions of greater tradition, doctrine, convention, and learning. This observation is substantiated by the obvious similarity existing between *þastriya-sangit*'s qualification as 'scientific' or 'knowledgeable' music and such European language equivalents of 'classical music' as *musique savante, musica colta, música culta, E-Musik, serious music* and *art music*'.[60] Unlike most types of 'popular' and 'folk' music, the musical practices qualified by such epithets as 'classical' are all associated with doctrinal texts codifying the philosophy, aesthetics, performance, interpretation, understanding and structural basis of the music in question.

To increase our understanding of such codification we shall next review some of the most important structural principles of raga music, concentrating on the Northern Indian (Hindi) art music tradition. We will start with tonal theory (*nada, svara, þruti, gr˜ma, th˜ta, r˜ga*) and then discuss the rhythmic, metric and periodic parameters (*matra, t˜la* etc.) of the raga tradition. After a short section about raga-music instruments we will conclude this summary of music in India with a brief overview of popular traditions of the subcontinent.

Tonal theory

During the first centuries of the first millennium CE, Indian theorists laid down the basic notions of interval, rhythm and affect that form the basis of much of today's raga music. Scholars like Bharata not only classified rhythm and periodicity according to a system that is still largely applicable to today's raga music (p.33, ff);

---

58. The authoritative doctrine for dance is lumped together with that for drama: *N˜tyaþastra*. (see p.25).
59. *The Oxford Concise English Dictionary* (Oxford, 1995:243).
60. *Musique savante* (French) literally means 'knowledgeable music', i.e. music for people in the know. *Musica colta* (Italian) and *música culta* (Spanish and Portuguese) literally mean 'cultured', 'refined' or 'learned' music, i.e. music for educated and cultivated people. *E-Musik* (German) is short for *ernste Musik*, meaning 'serious' music, i.e. for people who take their music seriously, and is generally opposed to *U-Musik*, short for *Unterhaltungsmusik*, meaning 'entertainment music', i.e. for those who are imagined as incapable of taking music seriously.

they also defined musical intervals (see *bruti*, below), systematised scales and scale types, codifying the main seven tones in the octave in terms that are also still in current use (see *svara*, p.29).

Tones and intervals

Nada

Nada basically means sound vibration. It is a notion linked with Veda hymns (see p.23) and with metaphysical ideas about the harmony of the universe. Hindu priests considered *nada*-s to be immutable pitches. With its associations of the supernatural, *nada* may have played an important part in contributing to the preservation of *Rig Veda* hymns, orally transmitted over several millennia.

Shruti

A *bruti* is best understood as a microtone of variable size: it may be as small as 19 cents (about 5 per semitone) or as large as 66 cents (1½ per semitone) in terms of absolutely defined pitch. Indian music theory holds there to be 22 *bruti*-s to the octave. According to European notions of absolute measurement, this should mean that the average *bruti* would be equivalent to just over a quarter-tone.[61] However, just like the microtones of Arab music theory, the *bruti*-s of Northern Indian art music should not be understood as absolute measures of pitch difference.

Svara

Table 3:1 *Svara*-s and their equivalents

System	Pitch names in heptatonic scale						
Scale degree	1	2	3	4	5	6	7
Tonic sol-fa	doh	re	mi	fa	soh	la	ti
Indian *svara*	sa	ri	ga	ma	pa	dha	ni
Notes in C	c	d	e	f	g	a	b

Svara-s are the names of the seven recurrent relative pitches within one octave. They are called *sa, ri, ga, ma, pa, dha* and *ni*. These abbreviated syllables (see table 1)[62] do not denote absolute pitches with reference to an acoustic standard such as *a* = 440 Hz, like our a, b, c, d, e, f and g.[63] *Sa, ri, ga, ma, pa, dha* and *ni* can be more fruitfully compared to the *doh, re, mi, fa, soh, la* and *ti* of tonic sol-fa because the tonic *doh*, like *sa*, can be at any performable pitch. The only problem with this otherwise useful comparison is that while the intervals between all seven relative pitches of tonic sol-fa remain constant, those between *sa, ri, ga, ma, pa, dha* and *ni* need not do so. In other words, although every *sa, ri, ga, ma, pa, dha* and *ni* may be consistently separated from the pitch of the same name an octave above or below, and although *pa* is, when it occurs, almost always at a perfect fifth above (or

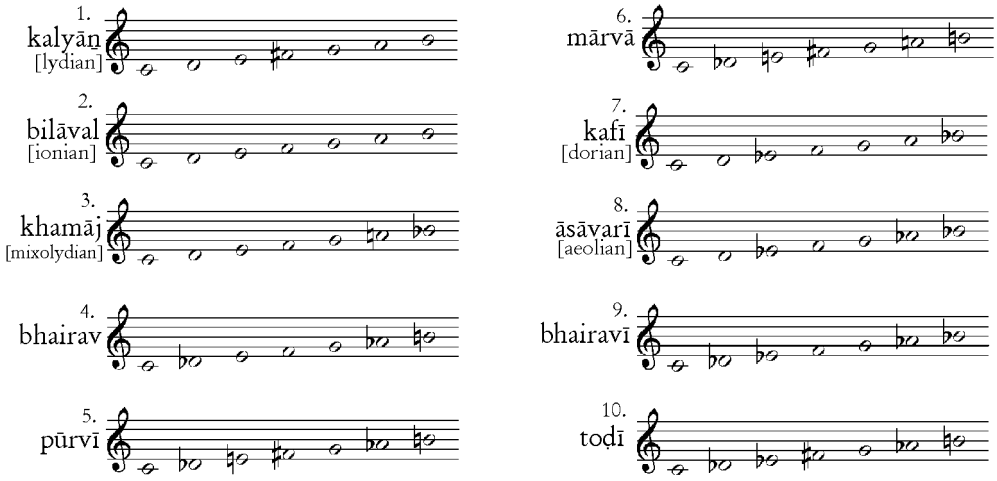
61. According to Western theories of pitch there are 100 cents per semitone and 12 semitones per octave, i.e. 1200 cents per octave. If their are 22 *bruti*-s per octave, then the average *bruti* is equivalent to 1200÷12 = 54.545 cents, i.e. just over 50 cents or one quarter-tone, i.e. 1·14 quarter-tones or 27½% of a tone.
62. Original note names: *sadja, risabha, gandhara, madhyama, pancama, dhaivata*, and *nisada*.
63. Hence, the notion of perfect pitch is of no relevance to the tonal theory and practice of raga music.

perfect fourth below) *sa*, the intervallic relationship of other pitches to each other and to the tonic (*sa*) can vary considerably. These variable pitches are determined by the number of *śruti* between each one of them according to stipulations of tuning for the raga being performed. It should be noted, for example, that frets on the *sitar* and *vina* are moveable, allowing musicians to retune the intervals of the octave and so to obtain the correct tonal vocabulary for the raga they are about to play.

The letter *k* can be used as suffix to any *svara* name except *sa* if the heptatonic tone in question is lowered, for example *Ri-k* for d♭ if *sa* is *c*. Similarly, a *t* is used to raise a tone, for example *Ma-t* for *f*♯ if *sa* is *c*.[64]

Gr˜ma and th˜ta

3:3 Bhatkande's 10 *thāta* (scale types) for Hindustani music theory[65]



A *gr˜ma* is a heptatonic scale, i.e. an arrangement of seven fixed tonal pitches (see *svara*) within one octave. Two *gr˜ma*-s are known in raga music: *sagr˜ma* and *magr˜ma*. These correspond to our heptatonic ionian and lydian scales respectively. *Sagr˜ma* is a heptatonic scale starting on *sa* ('doh') and consisting (in ascent) of intervals arranged as 4 + 3 + 2 + 4 + 4 + 3 + 2 *śruti*-s respectively. This 'doh-scale' is just like our major scale (ionian mode). *Magr˜ma śruti*-s run (also in ascent) 4 + 3 + 4 + 2 + 4 + 3 + 2 and constitute a 'fa-scale' (lydian mode).

There were originally fourteen *gr˜ma*-s (scales), one *sagr˜ma* and one *magr˜ma* for each of the seven *svara*-s in the octave. These fourteen scales (*m¨cchan˜*-s) can be compared to the seven medieval 'church' modes of Europe and their seven 'hypo' variants. During the course of time, seven of the fourteen scales fell into disuse, while other scale types containing less than seven pitches were added. This process resulted in eighteen scale types (*j˜ti*-s) which were classified according to both intervallic spacing and number of pitches within the octave. These scale types gradually assumed the character of melodic archetypes and are regarded as precursors of the raga system.

---

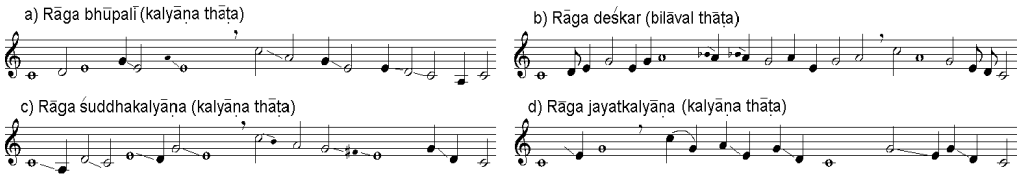
64. The *t* is short for *tivra* (♯), the *k* short for *komal* (♭).
65. Quoted by Powers (1995:98).

Th˜ta is a concept introduced to India during the most important period of Islamic influence on the subcontinent (1200-1500). *Th˜ta*-s can best be understood as modes arranged as scales in similar ways to the *maqamat* of the Arab world, to the *dastgah*-s of Iran or to the 'church' modes of medieval Europe.[66] *Th˜ta*-s are used in Northern Indian art music theory to classify the tonal vocabulary into ten groups (see ex.3:3).

Raga *(r˜ga)*

Raga-s are not scales (*gr˜ma*), modes (*th˜ta*) or melodies (*sama*). They are melody forms and intervallic archetypes, each of which has its own ascending (*˜roha*) and descending (*avaroha*) form. Each raga has its own particularly important *svara*-s, most usually referred to as *v˜dÿ* (the main melodic pitch or 'melodic dominant') and *samv˜dÿ* ('melodic subdominant').[67] The placement of *v˜dÿ* and *samv˜dÿ* is one of the most important factors determining the unique character of a raga. Example 4 shows this phenomenon quite clearly, since the four raga-s presented there (*bh¨palÿ*, *deþkar*, *þuddhakalyana* and *jayatkaly˜na*) all use the ionian mode.[68]

3:4 Four ionian mode ragas with varying character[69]



Whereas *R˜ga bh¨palÿ* has *ga* ('mi', the third degree or *e*, if we are in *c*) as its *v˜dÿ* and only uses *dha* ('la', sixth degree, a) as a relatively unimportant tone, *R˜ga deþkar* has *dha* ('la', 6th, a♮) as its *v˜dÿ* ('melodic dominant'). This gives *R˜ga deþkar* quite a different flavour from *R˜ga bh¨palÿ*, especially seeing how the former's *v˜dÿ* (*dha*, 'la', 6th, a) is mostly stated as a glissando pull down from the flat seventh (b♭). The European objection that *R˜ga deþkar* cannot be in *th˜ta bil˜val* (ionian) because of iits flat seventh (b♭) is irrelevant to Northern Indian ears because pitch inflections, though contributing importantly to the character of a raga, are not considered part of the raga's tonal vocabulary in the same way as the tones they inflect. Moreover, *pa* ('soh', 5th, g), an important tone in *R˜ga deþkar*,[70] is unstressed in *R˜ga bh¨palÿ*, besides which *deþkar* should be performed at a lively tempo while *bh¨palÿ* is supposed to be stately, royal and dignified.

---

66. See handout *Modality and other short articles for EPMOW* [www.tagg.org/teaching/epmowartics2000.pdf].
67. 'Dominant' and 'subdominant' are used here, not in the sense of V-I or IV-I in Western harmony, but in the more general sense of the word, i.e. as the pitches which are particularly dominant in melodic statements.
68. In theory ragas *deþkar*, *þuddhakaly˜na* and *jayatkaly˜na* actually use *th˜ta kaly˜na* (lydian mode), not *th˜ta bil˜val* (ionian). However, since none of these three ragas contain any *ma* ('fa', fourth degree), except *þuddhakaly˜na*, and then only as an ornamental passing note, these three ragas can, along with *bh¨palÿ*, all be regarded as adhering to *th˜ta bil˜val* (ionian mode).
69. Cited by Jairazbhoy (1976:560).
70. *Pa* (soh) in *R˜ga deþkar* is *visrantisthan*, which means more or less the same as *v˜dÿ* or *samv˜dÿ*.

Other obvious differences between the four raga-s of example 4 (all really more doh-pentatonic than ionian heptatonic) are (1) the order in which tones are stated, (2) the contour formed by those tones in ascent and descent, (3) the relative length of ascending and descending forms. *R˜ga Shuddhakalyana*, for example, has a zigzag pitch pattern in ascent and quite a straight descent while *Jayatkaly˜na*'s very short ascent is followed by a dual zigzag descent. One of *R˜ga bh¨palÿ*'s unique characteristics is the final melodic cadence from the *dha* below *sa* (sixth up to prime) while *deþkar* is the only one of the four raga-s to contain no glissando in its descending form.

Ragas are associated with particular colours, moods, poems and times of the day. A morning raga should, strictly speaking, not be played in the middle of the afternoon any more than happy house music should be played at your grandmother's funeral. In *R˜ga lalita*, for example, which should be played before dawn, there is no *pa* ('soh', or g in C) because the perfect fifth connotes 'clear, awake, sunshine'; thus, *ma* ('fa', 4th, f, connoting 'night, peace, beauty'), or *dha* ('la', 6th, a) has to act as *v˜dÿ* or *samv˜dÿ*. Recently, however, these paramusical conventions have been largely abandoned and the disaster that was once supposed to strike households hearing or performing a morning raga at night is no longer seen as a real threat.

3:5 R˜ga Todi

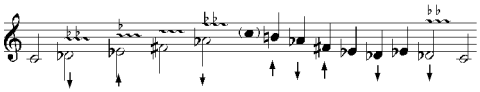


Table 3:2 R˜ga Todi

tone	cents in interval	cents from c (sa)	Intervallic affect in R˜ga Todi
d♭↓↓	71	71	sad
d♭↓	19	90	(pleasing, tender)
d♭	13	103	(satisfied, less careful, more independent, prayers answered)
e♭↓	182	285	very sad, pathetic, weeping
f♯	348	633	intensifies sorrow and beauty of *ri-k* (d♭↓↓) and *ga-k* (e♭↓)
g	71	704	sunshine, hope
a♭↓	71	775	sad
a♭↓	19	794	(tender, caring)
b♮	316	1113	(seeking pleasure)
b♮↑	19	1129	stubborn, active, selfish

Every pitch in a raga has its own affective charge when heard in relation to the tonic drone *sa* (doh). It is the combination of these intervals in relation to *sa* (doh) and the relative importance or recurrence of some intervals (together with a spe-

cific ascending and descending form, special inflections for particular tones, etc.) that give each raga its special character, mood and feel. This character is also determined to some extent by the *number* of pitches in the raga concerned. For example, whereas *R˜ga Vibhasa* (c d♭↓ e♮↑ f♯ a♮↑) and *R˜ga S˜ranga* (c d f g b♮, see ex.15, p.38) are both pentatonic (the latter being also connected with happy activity in the afternoon), *R˜ga Pily* is virtually dodecaphonic, being compared to 'a fickle woman who knows not what she wants, who is satisfied but who longs, sometimes happy, sometimes sad'.[71] Another example is *R˜ga Todi*, whose particular ascending and descending form is shown as example 3:5. The intervallic affect of this raga, including its ornamental pitches (inflections), is shown in Table 3:2.

T˜la

T˜la (hereafter 'tala')[72] is the most important rhythmic concept in Northern Indian art music. The tala, whose origins can be traced to the prosody of Vedic poetry, is a rhythmic mode or a rhythmic-periodic cycle spanning a certain number of beats. (*matra*-s). There are hundreds of talas, of which only thirty-odd are in common use today. One of the most usual is *tÿnt˜l*, a rhythmic cycle of sixteen matra-s ('beats'). This cycle of beats is divided into four sub-groups (*vibhaga*-s), each consisting of four beats each (4 + 4 + 4 + 4). *Dhamart˜la*, on the other hand, is a fourteen-beat tala with *vibhaga* division of 5 + 2 + 3 + 4 *matra*-s (see tables).

The *zarb* is more or less equivalent to beats you might stamp with your foot. This footstamp phenomenon does not have to be regular like the kick drum track in a techno number: it is often more similar to stamping on 'one' and approximately 'three' in a waltz. The first *matra* in every tala is called *sum* (sometimes written *sam* and meaning 'one', see tables 3:3 and 4). Indian music theorists usually mark sum graphically as an *X* and it is the most important rhythmic point in any tala. It is often articulated in a special way by the drummer and often coincides with the melodic occurrence of either *sa* or the raga's *v˜dÿ* or *samv˜dÿ*. *Sum* is not necessarily played louder than other beats in the tala.

Table 3:3 *Tÿnt˜l* basic pattern (avarta): 16 matras 4+4+4+4

vibhaga-s	1				2				3				4			
matra-s	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
zarb-s	X				T2				0				T3			

Table 3:4 *Dhamart˜la* basic pattern: 14 matra-s 5+2+3+4

vibhaga-s	1					2		3			4			
matra-s	1	2	3	4	5	6	7	8	9	10	11	12	13	14
zarb-s	X					T2		0			T3			

71. Quoted by Daniélou (1968).
72. Like *r˜ga*, which is usually written 'raga' in this text, *t˜la* is such a common term that we will anglicise its spelling to 'tala', even though *a* and ˜ are different sounds.

The beat marked *0* or *Ø* is called *khali* and is a more difficult concept for Europeans to grasp. Although *khali* is as important as any other beat in the tala, it is not counted. *Khali* is perhaps best understood as an 'anti-downbeat' or 'non-accentuation' which does not need to be articulated, or which can be performed with a characteristic dry sound. *Tali*-s (marked *T*) are the first beats of *vibhaga*-s that start with neither *sum* nor *khali*. *Sum*, as 'one', is always *tali* number 1 and *khali* is not counted. This means that *tÿnt~l* is considered to contain only three *tali*-s (*sum*, *tali* 2 and *tali* 3). In fact, *tÿnt~l*, though containing sixteen beats divided 4 + 4 + 4 + 4, is sometimes also called *trint~l* ('three measures') since it only contains three *counted vibhaga*-s.

Table 3:5 *Dadrat~l*: 6 matra-s 3+3 (avarta)

vibhaga-s	1			2		
matra-s	1	2	3	4	5	6
zarb-s	X			0		

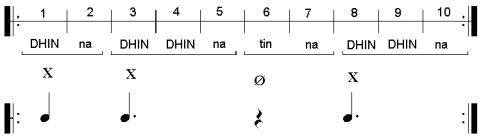
Some talas have no *tali*-s apart from *sum* (e.g. *Dadrat~la*, table 3:5), but no tala is without *sum*, except *Rupakt~la* (table 3:6), which starts with *khali*

Table 3:6 *Rupakt~l*: 7 matra-s 3 + 2 + 2 (avarta)

vibhaga-s	1			2		3	
matra-s	1	2	3	4	5	6	7
zarb-s	0			T1		T2	

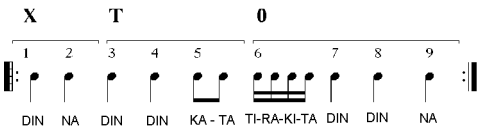
Some talas are used quite frequently, for example *TÿNt~l* (table 3 p.33) and *Jhapt~l* (exx.3:6; 3:10, p.37). *Jhapt~l* is a rhythmic cycle of ten *matra*-s.

3:6 Slow *jhapt~l* - 10 *matra-s* (2 + 3 + 2 + 3)



Other talas are less frequent, for example *Brahmat~l*, with its twenty-eight beats grouped in twos and containing four *khali*-s, or *Chandrakridat~l* (3:7).

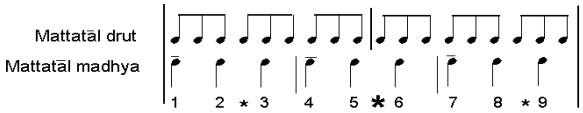
3:7 *Chandrakridat~l* - 9 matra-s (2 + 3 + 4)



In both examples 6 and 7, the basic rhythm pattern is often expressed using special syllables called *bole*-s (e.g. the *dhin na, dhin dhin na, thin na, dhin dhin na* of 3:6). Each separate syllable denotes a particular way of hitting the drum(s). The syllables function mnemonically, making it easier for drummers to learn and to remember both long and short rhythm patterns.

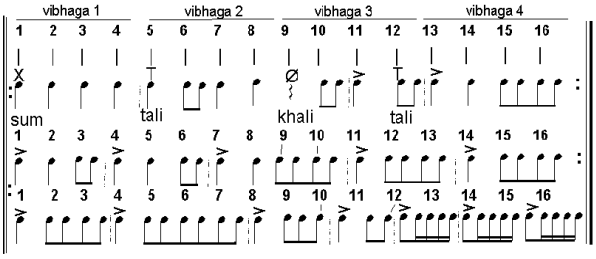
A *t˜la* (or *t˜l*)can be performed in slow, medium or fast tempo. Slow tempo (*vilambit*) can be thought of as equivalent to roughly one beat per second (c. 60 bpm), medium (*madhya*) as two beats per second (c. 120 bpm) and fast (*drut*) as about three beats to the second (c. 180 bpm). One way in which rhythmic interest is created is for singers and instrumentalists to play the same tala at different speeds. This means that accents will naturally occur in different places, creating a polyrhythmic effect. For example, playing *Mattat˜l* fast superimposed on medium results in the hemiola pattern shown in 3:8.

3:8 *Mattat˜l* - 9 matra-s, 3 + 3 + 3 - hemiola accent distribution at two tempi



Another way of creating rhythmic interest is to insert patterns that cut across the tala's intrinsic accentuation pattern inside one tempo. One trick is to create agogic accents by using a run of short notes followed by a longer one (see *tehai*, p.36), and to play the longer note at a point where it does not concur with one of the tala's basic accents, as in example 9. There, three rhythms are suggested, the first of which mainly underlines the 4+4+4+4 division of *tÿnt˜l*. The second line uses the same crotchet-plus-quavers idea to create four subdivisions of three beats and one of four. This additive (non-divisive) grouping of *tÿnt˜l*'s sixteen beats is repeated at the start of the bottom line, after which additive quaver rhythms are introduced, with a series of 3/8 figures leading up to the next *sum* (or 'one').

3:9 Conceivable cross-beat patterns for *tÿnt˜l*



Raga music cross rhythms, performed by the melodic line or on drums, do not have to be contained within one tala, as in example 9. Sometimes they stretch over the duration of several cycles, one highly appreciated skill being the ability of concerting performers to return synchronically to *sum* ('one') after a lengthy episode of radical rhythmic divergence (see lines 5-16 in example 10, p.37).

Raga performance practice

A serious musician in this tradition should be familiar with over fifty raga-s and a great number of tala-*s* before being considered a professional. These skills are learnt using methods resembling in some ways the training of Western conservatory musicians: many years of études designed to instill the basic tonal and rhythmic framework of the tradition. The main difference between the training of European and Indian classical musicians is, however, that the latter need their training (i) in order create and improvise, rather than to reproduce and merely interpret, and (ii) to be able to deal with far greater rhythmic complexity than their

European counterparts are likely to meet. It should also be added that the 'Great' Indian music traditions are oral and that no notation is used for music making.[73]

The first thing you hear in a raga performance is the drone instrument(s), most commonly the *tanpura* (a.k.a. *tambura, tanbura*, etc.), a long-necked lute. The four strings of the *tanpura* are tuned *pa-sa*^{1}*-sa*^{1}*-sa* (5-8-8-1), except if the raga contains no fifth, in which case you may, for example, hear *ni-sa*^{1}*-sa*^{1}*-sa* (7-8-8-1), at least in cases where the raga contains a seventh. The open strings of the *tanpura* are then played gently *senza misura* throughout the performance.

> [The strings of the *tanpura*] 'should be sounded continuously and provide a drone full of overtones'... 'Against this background the melody[74] should stand out as embroidery on cloth. The *tanpura* is not a solo instrument, nor is it something 'interesting' like the piano accompaniment of a modern song; it is rather the medium in which the melody lives, moves and has its being'... 'It is heard before, during and after the melody: it is the timeless and whole which was in the beginning, is now and ever shall be. The melody itself, on the other hand, is the shifting character of Nature which comes from the Source and returns to It'... 'Harmony is an impossibility for us, for by changing the solid ground on which Nature's processes rely we would be creating another melody, another universe and destroying the peace on which Nature rests'.
>
> (Coomaraswamy 1995:77-80)

After hearing the *tanpura* for a brief moment, most raga performances then begin with the singer(s) or the soloist(s) performing in free rhythm. This rhapsodic *senza misura* section, known as *alap*,[75] starts with the gradual revelation of the raga's complete tonal material, in ascent and then descent. The raga's intrinsic turns of phrase are emphasised and important melodic intervals, especially those between *sa* and the *v~dY* or *samv~dY*, are underlined. The importance of each interval in relation to sa is one major factor determining the character of a raga. Other important factors are the slides, vibratos and grace notes intrinsic to the raga. Gradually, more complete phrases are introduced, often so that *tempo giusto* and the tala are established before the drums enter. When the drums do enter, that is definitely the end of the *alap*.

> 'Since there at least as many different forms in Indian music as there are in the Western tradition, it is impossible to generalise about what will happen after the close of an *alap*.' (Malm 1977:103)

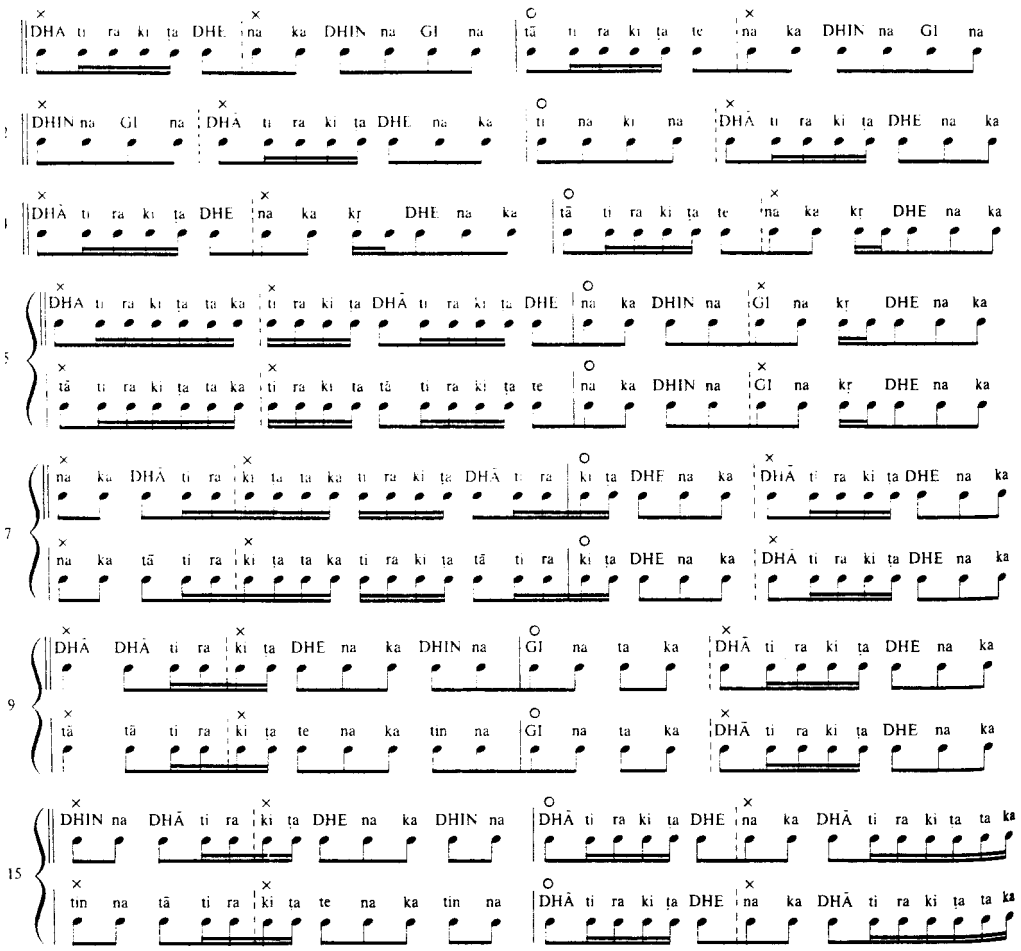
One common practice in the post-*alap* section is 'duelling' between musicians. One variant on this theme is for the drummer may try to catch out the other musicians by playing complex variants of the tala rhythm, such as those shown for fast *jhapt~l* in 3:10. The trick here is called a *tehai*, an upbeat (anacrusis) pattern which allows the drummer to throw the downbeat to and fro, sometimes for as much as three complete tala-s, until it lands on *sum* ('one' of the tala) to the great delight and relief of musicians and audience alike. Another variant is for two musicians to vie

---

73. In addition, Indian raga musicians study longer than their European counterparts and are expected to hold their teachers in high esteem (as gurus).
74. The original text states 'song' rather than 'melody'. However, the observations about 'song' and *tanpura* apply as much to instrumental as to vocal melody.
75. In shorter, more popular raga performance, a very short *alap* called an *aochar* may be substituted.

with each other, entering into musical dialogue in which increasingly virtuosic phrases are banded in a form known as *sawal-jawab* ('question and answer'). Another common formal device is to use an existing melody of popular origin (a *gat* in Northern India) as a kind of rondo theme between improvised passages allowing the drummer to play all sorts of cross rhythms against the relatively simple metricity of a thoroughly singable tune.

3:10 Qaída in fast *Jhapt~I* (2+3+2+3) ♩=144[76]



76. Quoted in Powers (1995:138)

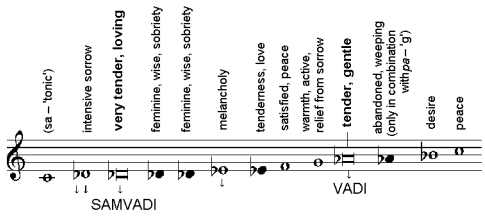
Notes

To be written up

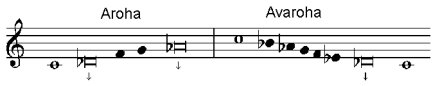
- Indian instruments
- Indian 'folk' and 'popular' music
- Ancient Greece
- Arab music traditions
- Medieval European views of music
- How classical music became 'classical'
- Art and popular music

Extra examples

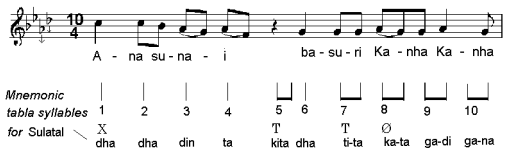
3:11 *R˜ga ·þ˜vari*: intervallic affect



3:12 *R˜ga ·þ˜vari*: ascent and descent



3:13 *R˜ga ·þ˜vari*: (a) 'rondo' theme; (b) *bole*-s



3:14 *R˜ga ·þ˜vari*: ending

3:15 *R˜ga S˜ranga*: ascent and descent

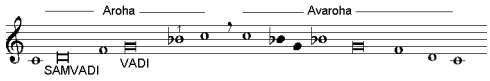
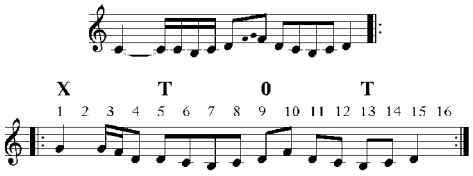


Table 3:7 ***R˜ga S˜ranga*: intervallic affect**

ri	***d***	***Samv˜dÿ*: forceful, active, glad**
ma	*f*	satisfied, peace
pa	***g***	***V˜dÿ*: active, awake, glad**
ni-k	*b♭*	tenderness, beauty
ni-k↑	*b♭*↑	desire, love

3:16 *R˜ga S˜ranga*: *Gat* melody in quick *tÿnt˜l*



Bibliography

ANDERSON, ROBERT. 'Egypt' (I). *Groves Dictionary of Music and Musicians*, 6:70-75. London, 1995.

ASSAFIEV, BORIS (1976). *Die musikalische Form als Prozeß* (tr. E Kuhn; ed. F Lehmann and E Lippold). Berlin: Verlag neue Musik.

COLLAER, P. 'Amerika, Eskimo und indianische Bevölkerung'. *Musikgeschichte in Bildern*, 1:2:52. Leipzig, 1967.

COOMARASWAMY, Ananda K. *The Dance of Shiva*. New York: Dover, 1995.

CROSS, IAN. 'Is music the most important thing we ever did? Music, development and evolution'. *Music, Mind and Science*, ed. Suk Won Yi. Seoul: Seoul National University Press, 1999.

CROSSLEY-HOLLAND, PETER. 'Non-Western Music'. *The Pelican History of Music*, 1. London, 1959: 13-135.

DANIÉLOU, ALAIN. *Northern Indian Music*. London, 1949.

ELSNER, JÜRGEN (1975). 'Egypten'. *Sohlmans Musiklexikon*, 2: 399-405. Stockholm.

FALK, D (2000). 'Hominid brain evolution and the origins of music'. *The Origins of Music*, ed. In Wallin et al/., Cambridge (MA, USA): 197-216.

FINK, BOB (1997). 'Neanderthal Flute. Oldest Musical Instrument's 4 Notes Matches 4 of Do, Re, Mi Scale — Evidence of Natural Foundation to Diatonic Scale: Musicological Analysis'. www.webster.sk.ca/greenwich/fl-compl.htm [2002-03-07]. Related information on this analysis: April 5 1997 *Times* (London); April 12 *Globe & Mail*; April 11 *Science Magazine*, p.203; *Discovery Channel* 5/7/97; *Western Report* 5/5/'97 (Cover story); *Scientific-American* (Sept., 1997)

GERSON-KIWI, EDITH (1995). 'Cheironomy'. *Groves Dictionary of Music and Musicians*, 4:191-196. London.

HICKMANN, H (1949). 'Observations sur les survivances de la chironomie égyptienne', *Annales du service de l'antiquité*: 17.

— (1952) 'La musique polyphonique de l'Égypte ancienne', *Bulletin de l'Institut d'Égypte*, xxiv: 229.

— (1958) 'La chironomie dans l'Égypte pharaonique', *Zeitschrift für ägyptische Sprache und Altertumskunde*, lxxxiii:96.
— (1961) 'Ägypten'. *Musikgeschichte in Bildern*, II.1. Leipzig.
— (1965) *Ägypten* (Handbuch der Orientalistik, Beihäfte 4). Leiden.
HURON, DAVID (1999). 'An Instinct for Music: Is Music an Evolutionary Adaptation?' Lecture 2 of the 1999 Ernest Bloch Lectures, Ohio State University. www.music-cog.ohio-state/ Music220/Bloch.lectures/2.Origins.html [2002-03-07].
JAIRAZBHOY, N A. (1974) 'Legacy of India: Indian Music'. *Cultural History of India*. Oxford.
— (1976) 'Indien'. *Sohlmans Musiklexikon*, vol. 3: 556-563. Stockholm, 1976.
KARMILOFF-SMITH, A. *Beyond Modularity*. London: MIT Press, 1992.
KINDER, HERMANN & HILGEMANN, WERNER (1978) *The Penguin Atlas of World History, Vol. 1*. London (reprinted and revised from 1974 version; first published as *drv-Atlas zur Weltgeschichte*, München, 1964).
KISHIBE, SHIEGO (1995). 'China' (II). *Groves Dictionary of Music and Musicians*, 4:249-253. London.
LING, JAN (1974) 'Kompendium i musikhistoria'. Unpublished teaching materials, Göteborgs universitet.
— (1983) *Europas musikhistoria - 1730*. Uppsala, 1983.
LOMAX, ALAN *et al*. (1968). *Folk Song Style and Culture. A Staff Report on Cantometrics*. New Brunswick: Transaction (paperback, 1978).
MALM, WILLIAM P (1977). *Music Cultures of the Pacific, the Near East, and Asia*. Englewood Cliffs, 1977.
Merker, Björn (2000). 'Synchronous chorusing and human origins'. *The Origins of Music*, ed. N L Wallin, B Merker, S. Brown. Cambridge (MA, USA): MIT Press.
MILIUS, S (2000). 'Music without Borders: when birds trill and whales woo-oo, we call it singing. Are we serious?' *Science News Online*, Week of Apr. 15, 2000; Vol. 157, No. 1. www.sciencenews.org/20000415/bob2.asp [2002-03-07]
PAYNE, K. (2000). The progressively changing songs of humpback whales: A window on the creative process in a wild animal. In N. L. Wallin, B. Merker and S. Brown (Eds.) *The Origins of Music*. Cambridge (USA): MIT Press: 135-150.
PIAN, RULAN CHAO. 'China' (I), *Groves Dictionary of Music and Musicians*, 4:245-249. London, 1995.
POWERS, H S. 'India' (I-II), *Groves Dictionary of Music and Musicians*, 9:69-141. London, 1995.
SACHS, CURT. *The History of Musical Instruments*. New York, 1940.
SPEAR, PERCIVAL. *A History of India, Vol 2*. London, 1956.
STRINGER, C & MCKIE, R. African Exodus: the origins of modern humanity. London: Cape, 1996.
STAUDER, WILHELM. 'Mesopotamia', Groves Dictionary of Music and Musicians, 12:196-201. London, 1995.
THAPAR, ROMILA. *A History of India, Vol.1*. London, 1966.
UDDLING, H. 'Handtecken'. *Sohlmans Musiklexikon*, 3:317-319. Stockholm, 1976.