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## THE PYTHAGOREAN VIEW OF TIME AND SPACE IN JAPAN

THIS paper is intended as a discussion of the way in which the Japanese conceptualization of time and space reflects certain ideas of number and cosmos traditionally ascribed to Pythagoras.<sup>1</sup> Although Pythagoras is certainly known in Japan, it is not suggested that any Japanese concepts of time or space must be attributed, directly or indirectly, to Pythagoras or his school. Indeed the origin of these concepts, so far as Japan is concerned, is undoubtedly Chinese (Nakayama 1969: 226); one would hardly expect otherwise.<sup>2</sup> On the other hand, in the present context their attribution to Pythagoras is not entirely adventitious, for to Pythagoras is ascribed a way of looking at the world which is still characteristic of the Orient, and which, in the Western world, only modern science—adopting the deductive methods first established by Plato<sup>3</sup>—has suppressed.<sup>4</sup>

1. Heidel (1940) is extremely sceptical about the role of Pythagoras in Greek mathematics. The Pythagorean tradition, as described by Burkert (1972), is much more important than the individual achievements of Pythagoras himself, whatever they may have been.

2. Burkert (1972: 472) cites authority both for and against the possibility of direct connections between the Pythagoreans and the Chinese, but in any case finds the basic, underlying idea or attitude much more important, for 'speculation about numerical relationships in the cosmos is world wide, firmly established in ritual, and capable of being elaborated into a rich and ingeniously structured system without either presupposing or giving rise to mathematics in the proper sense of the word'.

3. The key principle is to be found in Plato's injunction, *μηδείς ἀγεωμέτρητος εἰσέλτω*, which, by establishing geometry as the basis of mathematics as a branch of deductive logic, provided the starting-point for the whole Western scientific tradition.

4. This came to be true only after the Renaissance. The position in medieval Europe is well described by Lewis (1964: 10 f.). Even in the West a Pythagorean view still prevails at a popular level.

The Pythagoreans saw the universe in terms of number. According to Aristotle, 'they devoted themselves so intensively to mathematics and became so closely identified with it that they saw nothing in the whole world but numbers' (Burkert 1972: 413). The bias of Pythagorean mathematics was, however, to establish a numerical cosmology on the basis of the non-mathematical associations of numbers. The appreciation of mathematics was aesthetic, not logical,<sup>5</sup> and although a number of fundamental theorems in arithmetic—such as the proof of the irrationality of the square root of 2—are ascribed to Pythagoras, there was no attempt to use them as the basis of any logically based deductive system. Indeed, the fact that  $\sqrt{2}$  is irrational meant that it was of no interest whatever, since Pythagorean arithmetic was based exclusively on whole numbers. The aesthetic bias of Pythagorean mathematics meant that numbers were important for their connotations, which had to be established extrinsically. The essential generality of any logical theory about the basis of arithmetic precludes any possibility of intrinsic connotations.<sup>6</sup> Pythagoras reputedly went so far as to say that all things are numbers (Russell 1946: 53), but what he meant, rather, was that all numbers were things. That is, any number which 'occurs', or any notable combination of numbers which 'occurs', such as that of 3, 4 and 5 in a right-angled triangle, must be significant.<sup>7</sup> As Burkert points out (1972: 473),

One learns to count and calculate in childhood, and from the beginning the numbers are apprehended as things, with certain characteristics; they preserve this peculiarity even, at an unconscious level, in the mind of the adult.

The Pythagoreans systematically related the whole series of integers to different concepts, so that, for instance,

One is *νοῦς* and *οὐσία*; two is *δόξα*; three is the number of the whole—beginning, middle, and end; four is justice—equal times equal—but it is also, in the form of the tetractys, the 'whole nature of numbers'; five is marriage, as the first combination of odd and even, male and female; seven is opportunity (*καίρὸς*) and also Athena, as the 'virginal' prime number; ten is the perfect number, which comprehends the whole nature of number and determines the structure of the cosmos, and with it ends the symbolic interpretation of numbers (Burkert 1972: 467–8).

This procedure<sup>8</sup> is suited both to number mysticism and the playing of games.<sup>9</sup>

5. Compare the extreme position taken by the Cambridge mathematician G.H. Hardy (1940: 70): '... pure mathematics [is] a rock on which all idealism founders: 317 is a prime, not because we think it so, or because our minds are shaped in one way rather than another, but *because it is so*, because mathematics is built that way.' Pythagoras would turn in his grave. For a modern approach see Restivo 1983, ch. 12 ('Numbers and Cultures').

6. This possibility is completely excluded by Russell's definition (1920: 18): 'The number of a class is the class of all those classes that are similar to it.' Russell himself acknowledged (ibid.: 3) that such views were the product of a high stage of civilization.

7. The 'Pythagorean' explanation given by Burkert (1972: 473) is that 'where 3 is male, 4 is female, and 5, which mysteriously unites them in the Pythagorean triangle, is "marriage"'.

8. A similar approach, in our own time in the West, is taken by Grant (1982).

9. The calling numbers used in bingo are a perfect Pythagorean system, with numerous Japanese parallels.

Inherent in the whole process is a tendency to secrecy,<sup>10</sup> for knowledge of the meaning of numbers is inevitably esoteric, and a source of power to those who have it. Plutarch, referring to the secrecy of the Pythagoreans and their prohibition of putting their doctrines down in writing (Burkert 1972: 457),<sup>11</sup> noted that

...when their treatment of the abstruse and mysterious processes of geometry had been divulged to a certain unworthy person, they said the gods threatened to punish such lawlessness and impiety with some signal and widespread calamity.

Now what has all this to do with modern Japanese views of time and space? The use of writing, and particularly the use of *kanji*, provides a good starting-point for analysis. For where language 'breaks up the natural unity of the perceptual world—or at least imposes another structure on it... writing draws out, crystallizes and extends this discontinuity by insisting on a visual, spatial location which then becomes subject to possible rearrangement'.<sup>12</sup> In traditional Pythagorean mathematics, such rearrangement is to be found in the way in which 'numbers are represented by figures made with counters or pebbles, *ψηφοι*',<sup>13</sup> so that 'what at first seems merely a game leads to arithmetical combinations which are by no means trivial' (Burkert 1972: 427). If this has its parallel in the way in which modern Japanese fortune-telling makes use of the five basic elements (Yoshino 1983: 28 f.),<sup>14</sup> it is the Chinese characters themselves

10. According to Nakayama (1969: 159), 'the [Japanese] mathematicians' lack of contact with other fields of learning made their outlook narrow. Isolated from society as a whole and alienated from its intellectual tradition, they tended to form small groups in which a strong pupil-teacher relationship and an esoteric means of initiation were maintained.' In the modern Western world, 'secrecy' in mathematics has been used in inventing codes based upon the product of two very large prime numbers to form a composite number which cannot be factorized even with the help of the largest computers. Unfortunately for the military and other users of the codes, mathematical advances in prime-number theory—also computer-based—have provided the means for cracking the codes, demonstrating that there is no ultimate secrecy in mathematics, and confirming Hardy's view (1940: 63) that 'mathematical reality lies outside us'. The advances in prime-number theory mentioned above are also extremely important in relation to the Riemann hypothesis, which lies at the centre of mathematical analysis.

11. Goody (1977: 61) notes how in the seventeenth century Culpeper's *Complete Herbal*, by publishing the secret knowledge of the medical profession, earned the author the enmity of the doctors, though he was compensated by the enormous sales of his book.

12. Here Goody (1977: 104) is accepting Bruner's view (1966: 40–1) that 'symbolic representation in contrast to representation by perceptual similarity that occurs with iconic representation (images) [is]... specific to human language.' The implications in regard to written Chinese are quite far-reaching.

13. Hence the science of psephology, which the *Concise Oxford Dictionary* defines as the 'study of elections and voting'. The allusion is to the use of pebbles to cast votes in the Athenian public assembly. For the use of pebbles in making up triangular numbers, see Crump 1982: 281.

14. According to Nakayama (1969: 63), 'The Chinese *yin-yang* and five-elements principles were expounded in Japan only among specialists at the court. The Japanese general public probably found this natural philosophy difficult to comprehend. Thus, purely Japanese aspects of the practice of fate calculation were developed in the form of a popular *yin-yang* art, *on'yō dō*. It had neither a simple core

which form the basis of much popular mysticism.

The process can be illustrated by the familiar *kanji* connotations of the numbers 61, 77 and 88 associated with the so-called *juga*, or long-life celebrations. 61 is a somewhat special case, since it represents the first year of a new sixty-year cycle based upon the combination of the ten *kan* and the twelve *shi*, in which every one of the sixty years has its own distinctive meaning.<sup>15</sup> The special significance of the 61st birthday is to be found in some parts of the country in the custom of *kumi ni goshūgi o dasu*<sup>16</sup> which, together with comparable occasions on the 42nd and 77th birthdays, are familiar to any student of Japan. The cases of 77 and 88 are to be distinguished, in the Pythagorean sense, in that the connotations of the two ages can be directly derived from their *kanji* forms. Thus the elements in the *kanji* 77, 七十七, can be recombined to give the cursive form of *ki*, 'rejoice', in the compound *kiju*, 喜寿, meaning the 77th birthday. This form of combination is somewhat more transparent in the form 米, 'rice', in the compound *beiju*, 米寿, meaning the 88th birthday. A somewhat different and more arithmetical process gives 99 in the form 白, 'white' in *hakuju* (白寿), since this is obtained by subtracting *ichi* (一) from a hundred, or *hyaku* (百).<sup>17</sup> If the connotation 'white' is derived from 99 by a combined lexical and arithmetical process, the significance of the number 33—which is important, in years, in the ritual relating to death, and in days, in that relating to birth (Tsuboi 1970: 18 f.)—is purely arithmetical. This is but one case of what Gerschel (1962: 696) calls 'le nombre marginal', which he defines as 'un nombre qui n'existe pas, puisqu'il surpasse d'une unité le dernier nombre réel, mais qui, en vertu des lois de la fiction, gagne en extension ce qu'il perd en compréhension'. Such numbers occur as much at a trivial as at a cosmic level. They are, however, particularly significant when they exceed by 1 a power of 2, perfectly formed by the process of binary multiplication. This analysis makes the number 32 particularly

of principles nor a consistent system, but was a set of superstitious beliefs derived from various origins. Different writings of the court nobles show that both their public and private lives were strictly conditioned by the taboos of *on'yō dō*. The application of fate calculation attracted the people, not the theory itself.' The present position is perhaps not very different.

15. The year 1966, the 43rd in the 60-year cycle, was marked by a very low birth-rate because of a superstition, arising in the Edo era, that girls born in such a year would kill and eat their husbands. This was taken to be the result of the combination of the *kan* 'hinoe' and the *shi* 'uma' (Anon. 1983), representing a fatal juxtaposition of fire and the horse. The 'uma' is one of the twelve animal signs of the Chinese calendar referred to by Beillevaire (in the present volume).

16. This special case (based upon Marshall 1983) should be distinguished from the general case of *kanreki iwai*, which means rather more than simply celebrating one's 61st birthday, in that the *kanji* components of *kanreki* import 'returning to the calendar'. It is worth noting that in 1986 the 60-year cycle will begin for the second time in the Showa era, provided that the present emperor survives until then. This will be an event without precedent in Japanese history, whose consequences for number mysticism are inponderable.

17. Is there a *phonetic* parallel here in that *hyaku* (100) less *i* (1) becomes *haku* ('white')?

significant for Gerschel (1962: 706), for with this number the limit attainable with four equal blocks of 8 is reached, so that 33 becomes 'un nombre marginal'.

The significance of the number 33 in Buddhism manifests itself in a number of ways. A particularly striking example is given by Shorto (1963: 573-4) in his examination of the 32 *myos* of the medieval Mon kingdom of lower Burma:

... we may note first the widespread tradition that Thaton, the early Mon kingdom which was overrun by Anawrahta in 1057, had 32 *myos* like the later provinces, each the seat of a subordinate prince, and united by a *cetiya* cult. This tradition was current at least as early as the reign of Dhammaceti. In inscriptions at the Hpayaywa, Hsudaungbyè and Mokhainggyi pagodas which he repaired near Pegu—the first named dated B.E. 848 or A.D. 1486—Dhammaceti recorded how on the death of the Buddha the arahat Gavampati brought one of His teeth to Sirimāsoka, king of Thaton. In fulfilment of a promise made by the Master when He visited Thaton 37 years earlier, the tooth multiplied into 33, which the king enshrined in as many small stone *cetiyas*. (1963: 573-4)

This is but a particular case of the *mandala*, or 'geometrical and topographic "formulas"'. . . usually fused with cosmological principles, which provided the design for the constitution of [a wide range] of communities [in Southeast Asia]' (Tambiah 1976: 102), and as Tambiah goes on to point out,

It is possible to see Indian and Chinese precedents, Hindu and Buddhist sources, for these ideas, but one thing is clear: they could have taken root in Southeast Asia only because indigenous conditions and social practices favored their incorporation or because they represented a 'literate' culture's formalization of images already experienced and emergent in local conditions, a convergence that makes the quick and ready borrowing of classical Hindu-Buddhist charters readily understandable.

In the Japanese Buddhist tradition the *mandara* connotes a representation of the Buddha,<sup>18</sup> and as such still plays a role in modern sects like Risshō Kōseikai (Takaki 1960: 128 f.). The most prominent manifestation of the number 33 is almost certainly in the well-known temple of Sanjūsangendō in Kyoto, where 'thirty-three' is actually incorporated into the name, exemplifying the Pythagorean equation between names and numbers.<sup>19</sup> The correspondence with

18. See, for example, in the National Museum in Tokyo, the Ryōkai Mandara tapestry from the Kojima Temple, dating from the Heian period.

19. The Kannon Buddha, otherwise known as the 'Regarder of the Cries of the World', is a perfected *bodhisattva* characterized by boundless compassion and mercy. Chapter 25 of the *Lotus Sutra* (known in Japanese as the Fumombon chapter), after describing a number of catastrophes in which the Kannon Buddha will come to the rescue, goes on to list 33 bodies in which the living will be saved. This is the mystical basis of the number 33 in the Temple of Sanjūsangendō. In Japanese Buddhism the number 33 is almost always connected with the Kannon Buddha. Another example is provided by the *sanjūsansho* (literally, '33 places'), which refers to 33 temples in and around Kyoto (starting with Nyoirin-ji on the Kii peninsula). It was believed in medieval Japan that anyone who had visited all of these temples would be preserved from hell. The number is ultimately derived from the 33 heavens situated on the top of the mystical Mount Sumeru, which is ruled by Indra, whose own heaven is located on the central peak, with the 32 other heavens being divided equally between the four cardinal points, after the pattern of the *mandala* (*The Threefold Lotus Sutra* 1975: 147). It is not surprising, therefore, that the number 33 connotes 'boundless'. It is also a 'nombre marginal', relating

the case of the Buddha's tooth, described in the passage cited from Shorto above, is very striking. The question is whether, not only in this case but in others also, these ideas 'could have taken root. . . only because. . . local conditions' were favourable according to the principle established by Tambiah (1976: 103).

What, then, in Japan, were the 'indigenous conditions and social practices [which] favored [the] incorporation' of a 'Pythagorean' number mysticism? The question is almost impossible to answer: the written record begins only with the adoption of the Chinese method of writing, which was but one part of the Chinese culture incorporated into the autochthonous tradition. Since the adoption of Buddhism—in which number mysticism has always been central—was part of the same process, there is hardly any need to establish that Japan, *ecologically* speaking, was particularly 'receptive'. In so far as 'indigenous conditions and social practices' were favourable, were they significantly different from those prevailing in China or Korea? If, however, the question is cast in a somewhat different form, so that it relates to the indigenous conditions and social practices *as they developed* under the influence of the culture imported from the mainland, then in terms of both time and space Japan does present particularly favourable conditions for a Pythagorean cognitive system to prevail—even if these conditions were largely the result of Chinese influence. In the first place the organization of space is based upon a permanent division into a number of discrete units, of which the ricefield (*ta*) may be taken as the prime example of the institution of *bun*, or 'part'. Wet-rice cultivation imposes a human geography composed of such fixed *bounded* elements, which in social terms are related to the *ie* as a *corporate* group (Bachnik 1983: 162). The world comprised of such elements may be comprehended in terms of the concept *uchi*, connoting 'inside', in contrast to that of *soto*, connoting 'outside'.<sup>20</sup> *Uchi* as cosmos, and *soto* as chaos, combine to provide an image of Japan familiar to any visitor.<sup>21</sup>

The interdependence of the bounded elements comprising the spatial universe

directly to the 32 signs distinguishing the body of the Buddha (ibid.: 7 f.), for by adding to the number 32, with its earthly connotations, the number 1, one enters into the realm of heaven, or *unbounded* perfection.

There are altogether 1001 statues of the Kannon Buddha in Sanjūsangendō, and this is another 'nombre marginal'. (Compare 1001 with 10001, the binary representation of 33.) There is one large central statue, with 500 identical but smaller statues on either side. The number 1000 (of the smaller statues) is equal to  $25 \times 40$ , the number 25 representing the 25 sorts of the life and death of man. The derivation of the number 40 is more involved. Each statue should in principle have 1000 hands, but in fact each hand is taken to represent 25 hands: in practice each statue has 42 hands, but this number is reduced to 40, since one pair of hands is clasped together in prayer, while another pair holds a small bowl.

The significance of the number 33 in Sanjūsangendō is also to be found in the 33 different figures into which the Kannon Buddha can be transformed, so that the 1001 separate statues in fact represent 33033 manifestations of the Kannon Buddha. It is also worth noting that the Buddha with 1000 hands (depicted in the same way) is to be found in seventeen of the temples comprising the *sanjūsansho*.

20. Note for instance the *shimenawa*, the ceremonial rope marking off a patch of holy ground.

21. Note also the *on* compounds of 外, such as *gaijin* (外人), 'a foreigner'.

is determined and regulated by the time factor.<sup>22</sup> Once again, wet-rice cultivation provides the ideal type. The fact that the whole cycle of cultivation must be coordinated, in terms of time, over any integrated system of terraces, is decisive for the form of social organization.<sup>23</sup> It also puts a premium upon the organization of time in cosmic terms, which puts the ordering of the cycle beyond the caprice of any individual involved in it. This explains the Japanese preoccupation with calendars<sup>24</sup> and with all forms of mystical practice directed towards determining what times and periods are auspicious, or towards avoiding the consequences of the three 'calamities', or *sansai*, of fire, flood and storm.<sup>25</sup> In this respect the Pythagorean cosmos accords well with that of Shintoism.

The point could certainly be further laboured, but what has been said is sufficient, in the present context, for the first part of Tambiah's precept. As for the second part, the question is to what extent, in the case of Japan, a Pythagorean world-view represents a 'literate' culture's formalization of images already experienced and emergent in local conditions. The 'literate' culture, in the present case, can only be that of China, and in the case of China itself there can be no doubt that the extraordinary durability of its 'literate' culture must be related to its continuous capacity to 'formalize images already experienced and emergent in local conditions'. Everything said above in the context of the human ecology of Japan confirms that the position there is no different.

Although the significance of the use of *kanji* has already been discussed, there is one particular point still to be made. This is that only the Chinese 'have succeeded in devising numerals that represent their verbal numbers' (Menninger 1969: 53)—or, to put it another way, only in Chinese is there a perfect one-to-one correspondence between the written and spoken form of numbers. The significance of this point is that it is no more than one instance of the way in which *anything* in spoken Chinese is represented in writing. The case of the numerals may indeed have been decisive for the survival of the logographic form of written Chinese,<sup>26</sup> for were it not for the extreme simplicity of the algorithm for generating the *spoken* numbers, the *written* forms would have been too opaque to allow for the necessary 're-arrangements' mentioned by Goody (see above, at note 12), which are requisite for any sort of arithmetical operations, however elementary.<sup>27</sup> At the same time, the requirement of Chinese syntax that numbers

should also be combined with one of a limited number of 'classifiers', equivalent to the Japanese *josūshi*, must be regarded as a factor tending to obscure their logical nature and enhance their mystical connotations.

If the conclusion is that the Pythagorean potential of Chinese numbers has a linguistic basis, this is even more pronounced in the case of Japanese. For although for ordinary counting purposes, and in the expression of numbers larger than 10, Chinese numerals supplanted the autochthonous Japanese numbers, the latter still survive as 'names' in the Pythagorean sense. According to Shiratori (n.d.: 27), the basis for this practice was established before the introduction of Chinese culture.<sup>28</sup> The present-day survivals are to be found in such words as *yaoya*, for 'greengrocer', whose written form, 八百屋, makes clear its literal meaning of the '800-shop'.<sup>29</sup> The cases are in fact so numerous that it needs a whole dictionary (Mori 1980) to list them, and if proper names are included the length of the list is much increased. This is indeed no surprise to anyone with a command of Japanese.

The distinctive form of *kanji*, combined with a fixed order for writing the strokes comprising any character, also provides the basis for the popular science of *seimeigaku* (姓名学), or 'full-name science'. The principle that names must be auspicious is to be found in the furthest reaches of Japanese history, as witness the constant changes in the name of an era in the course of the reign of a single emperor, generally as a desperate reaction to some natural disaster. At the present day the bestowal of a new name after death, for which the family must resort to the priests of the local Buddhist temple, is a modern example of the same tradition. *Seimeigaku* provides a means of evaluating the fortunes to be associated with a given name according to the number of strokes in the different characters comprising it. This most common form of Japanese name, consisting of four *kanji*—two for the family name and two for the given name—provides, therefore, four numbers, which in combination, and in relation to each other, determine in what respects the name is auspicious or inauspicious.<sup>30</sup> The complete method is explained in countless cheap paperbacks sold in supermarkets and station bookstalls.<sup>31</sup> In the early days of the Buddhist sect Risshō Kōseikai, it also played

22. Compare the use of spatial symbolism in Ryūkyūan folk culture described by Beillevaire (in the present volume).

23. For the Japanese context, this is described and explained in Beardsley, Hall and Ward 1959: 114 f. The exchange of labour (*kattari*) is described in Embree 1946: 99 f.

24. This is apparent not only in the variety of calendars stocked in stationery shops and bookshops, but also in shops specializing in wedding gifts.

25. Described in detail in Yoshino 1983: 132 f.

26. If Kindaichi (1967: 18) is correct, 'the Japanese first imitated Chinese in counting numbers'. On a similar point in relation to the Spanish presence in the Maya area of southern Mexico, see Crump 1978.

27. This point is discussed in greater detail in Crump 1981: 3 f.

28. But Shiratori goes on to note that the Japanese, 'once in contact with the Chinese [were led by] their wonder at the excellence of Chinese customs and institutions... to a thorough-going imitation of everything Chinese. This tendency even affected the Japanese numerical conception until the odd numbers came to be valued and the even numbers to be slighted.'

29. Note also Shiratori (ibid.: 33): 'As to the frequent occurrence of eight in the mythologies, a question was raised by Japanese scholars of the Tokugawa period. Motoori Norinaga, in answering this question, says that this number eight simply means many, and should not necessarily be taken as the numeral eight.' There follows a long discussion of the mystical significance of the number eight in relation to the original Japanese pantheon.

30. The point made by Hughes (1967: 86) in relation to the Chinese, that they 'concentrate more on categories of relationship than on categories of substance', applies also to the Japanese.

31. One of many examples is a book entitled *Seimei handan nyūmon*, bought in a Toyama supermarket in the summer of 1983. It is significant that there is little variation in the explanations given in such books, suggesting a definite common origin. Quite how the necessary lore was first established is never made clear.



a role in attracting adherents (Takaki 1960: 127) who, by obtaining a new name according to the principles of the science, would enter into a new and more promising life (McFarland 1967: 187). This form of onomancy was an early preoccupation of Niwano, one of the two co-founders of the sect: his mastery of the relevant mysteries was an early source of his power. If now, as the appeal of the sect is becoming more sophisticated, and less reliance is placed on the practice of onomancy, this only means that it flourishes elsewhere.

This authentic 'Pythagorean' mystery, combined with the I Ching and the mystical use of the five elements, provides for four pages of entries under the heading *eki* ('divination')<sup>32</sup> in the Kyoto classified telephone directory, and the position is certainly little different in other Japanese cities. But what is its relevance to the themes of time and space in the cognitive universe of contemporary Japan? This question is most usefully examined in terms of Bachnik's (1983) discussion of recruitment strategies for household succession. The key is to be found in the relation of the household, or *ie*, seen as a continuing corporate group, to its position, or *tachiba*, in time and space (Bachnik 1983: 162 f.). A solution to the problem of succession, as the occasion arises and as it relates to individual members of the *ie*, is essential to its continued existence. If the problem, which is always critical, can be reduced to a choice between *names*, then its solution is moved out of the realm of domestic politics into that of supernatural forces governing the destiny of the *ie*. Here one sees, once again, the significance of the new names conferred by the Buddhist priests at the death of a member of the *ie*, who will be assured a permanent position as an ancestor commemorated in the tablets preserved on the shelves of the domestic altar.<sup>33</sup> But when it comes to the recruitment of new living members of the *ie*, the decision cannot be left to the priests—which explains the presence of the diviners listed in the Kyoto yellow pages, or the popular manuals of *seimeigaku* on the supermarket shelves.

The fascination with numbers is even more widespread. Auspicious licence numbers for cars are advertised in the press, and games with a high potential for numerical legerdemain are particularly popular. Whiting (1977: 6) gives an idea of the Japanese obsession for baseball statistics, which would be confirmed by anyone who has looked at televised baseball during the summer season. Golf, the supreme status symbol among the elite, lends itself equally readily to this sort of analysis, with 18 holes to the course of varying lengths, determining whether they are bogey 3, 4 or 5, ranked in a predetermined order so as to decide each player's own handicap. Golf is the Pythagorean game *par excellence*: for not only is the 416-metre 7th hole (bogey 4) at the Ichimatsu Country Club a statistical entity, it also has its own identity, and even its own folklore. And if golf and baseball are exogenous, they provide, as much as *go* and *shōgi*, the means for ranking the players, reaffirming the Japanese obsession with hierarchy.<sup>34</sup> The analysis, if it

32. See note 14 above.

33. In the summer of 1983, three Buddhist priests of Higashi Honganji in Kyoto insisted that number mysticism, in whatever form, played no part in choosing the names to be given to the recently deceased.

34. For the subtleties of ranking in *go* see Kawabata 1972. It is interesting to note how hierarchy as a spatial concept corresponds to succession as a temporal concept.

goes too far beyond the themes of time and space, threatens to become trivial, but the phenomena observed are nonetheless dominant in popular culture.

How, then, does all this fit into the way in which the individual Japanese experiences life? One must start with a vision of life as a journey, mapped out in advance, with frequent if sometimes ambiguous signposts. It is a game with only one strategy indicated for the individual player, and that is laid down by the 'group' to which he belongs. There is always safety in numbers, so that individual choice is foreboding. At the domestic level, questions of marriage and succession nonetheless require that such choice be made. The conflict can best be resolved by an appeal to the occult: the apparent merits of a potential daughter-in-law can be confirmed by the science of *seimeigaku*. The I Ching oracle can be consulted when it comes to questions of business strategy, such as opening a new branch. Calendric ritual, with all its means for predicting natural disaster, can ensure that 'forewarned is forearmed'.<sup>35</sup> If the signposts encountered on the journey through life lead in the wrong direction, the map can always be redrawn, so that the integrity of the structure is preserved. The accumulated store of mystical connotations provides the scope for endless reinterpretation, so that being 'wise after the event' can be transformed into being 'wise before the event'. The system, once established, can always be brought up to date—in the best Shinto tradition.<sup>36</sup> It can also provide the means of temporary escape from the straitjacket of destiny, in the form of *pachinko* parlours, driving ranges,<sup>37</sup> *manga* (comics), or Suntory whisky from street-corner vending-machines—all institutions providing solace to be enjoyed in solitude.<sup>38</sup>

The picture is not meant to be bleak. It represents, rather, a continuing and successful adaptation to the exigencies of Japanese life, making use of traditional symbols of very long standing. The key to the symbolic system is to be found in the concept of 'guidance', best expressed by the Japanese *annai*. This represents the security of the beaten path,<sup>39</sup> and is in the authentic Pythagorean tradition. If, occasionally, the need to escape from 'guidance' cannot be denied, so that the transition is made from *uchi* to *soto*, that is no more than an instance of a process of reversal all too familiar to anthropologists. The full significance of this process in the Japanese context is, however, far beyond the scope of this paper.

35. This explains the enormous attention paid throughout Japan's pre-modern history to the predicting of eclipses. The tendency was always to over-predict, so that the astrologers could claim the credit for averting the catastrophes which an eclipse which had failed to occur would have brought with it.

36. McFarland, in his choice of 'The Rush-hour of the Gods' as the title of his book (1967), evokes the chaotic religious situation in modern Japan.

37. This point is made very forcibly in Barthes's analysis of *pachinko* (1970: 43).

38. Such expressions as *jibun de* or *hitori de* suggest that the Japanese concept of solitude emphasises doing something by oneself, no matter how many other people may actually be present.

39. This recalls, in the Christian tradition, the line of a well-known hymn: 'Be thou my guardian and my guide'. The longing for certainty can be very deep-seated in human kind.

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