

Cu

1297
WILSON, C.A.
1988

JABIRIAN NUMBERS, PYTHAGOREAN NUMBERS AND PLATO'S *TIMAEUS*

By C. ANNE WILSON*

MANY questions still remain to be answered about Jabirian alchemy. One problem is that of the origin and meaning of the Jabirian number formula, $1 + 3 + 5 + 8 = 17$. Kraus explained that 17 was considered to be the very base (*qā'ida*) of the theory of the balance; for the Jabirians it indicated the equilibrium which governs the constitution of everything in the world.¹ He believed that its source lay in Pythagorean numbers, and he quoted Plutarch's observation that the Pythagoreans held the number 17 in general reverence. Aristotle had earlier cited some reasons given by Pythagoreans for favouring the number 17, for instance that in musical harmony the two median chords were the ninth and the eighth ($= 17$ together); and Alexander of Aphrodisias added the comment that the hexameter verse-line contained 17 syllables.² Again, the Greek alphabet comprised 17 consonants and 7 vowels.³ 17 could also be regarded as the sum of 10, the total of the Pythagorean tetraktys ($1 + 2 + 3 + 4 = 10$), and 7, another number highly esteemed by the Pythagoreans. Yet it is clear that none of these explanations is of sufficient cosmic significance to account for the Jabirians' choice of $1 + 3 + 5 + 8 = 17$ as the foundation of their entire system.

Stapleton approached the problem by examining the Pythagorean square built up of gnomons.⁴ The arrangement of the gnomons supplies an example of the type of figure which the Pythagoreans liked to set out as a pebble pattern on the ground. *Gnōmōn* was the Greek word for the carpenter's square, and the Pythagorean gnomons comprised the series of numbers created by laying out a single pebble, adding three more as a gnomon on two sides of that pebble to form the first square number after 1 ($2 \times 2 = 4$), adding five more as a gnomon on two sides of the first square to form the second square number ($3 \times 3 = 9$), and proceeding to build up square numbers by adding gnomons in the form of the ensuing odd numbers. The square numbers increased in the progression 1^2 ; 2^2 ; 3^2 ; 4^2 , etc. as each new gnomon was added. The numerical series of the gnomons was that the odd numbers, 3, 5, 7, 9, etc. As 1, 3, 5 are the first three terms of the Jabirian formula, the odd-number series is suggestive as source-material for that formula; but since the series could continue indefinitely, and since it has no special connection with 8, the fourth Jabirian term, it is difficult to define a specific relationship between the gnomons and $1 + 3 + 5 + 8 = 17$.

It is true that, as Stapleton demonstrated, a magic square can be made in which the base number is 8, to which is added a first gnomon of 1, 5, 3 and a second gnomon of 6, 7, 2, 9, 4 ($= 28$, another important Jabirian number; its importance may be due in part to the fact that it is a perfect number, i.e. it equals the sum of all its divisors, since $1 + 7 + 4 + 2 + 1 = 28$).

in: AMBIX 35
p. 1-13

6	7	2
1	5	9
8	3	4

The magic square itself is composed of all the numbers under 10, but it also has close links with 10, 5, which is half 10, is at its centre, and all opposite pairs of numbers, either at the corners or at the centre of the sides, add up to 10. It is a more sophisticated arrangement