A 5-DIMENSIONAL MAGIC DIE

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This extends the 3-dimensional HOT-PAD and the 4-dimensional SALT-MINE dice described in "Magic Word Dice", May, 2007 to a fifth dimension (see also J. Puder’s remarks in the August 2007 Colloquy). A schematic (2-dimensional!) drawing of the 5-cube follows. It is based on the word pair POLAR-MINES and every node word uses exactly one each of the five pairs 1 = P-M, 2 = O-I, 3 = L-N, 4 = A-E and 5 = R-S.

On the back cover is the double torus representation that will be easiest to use for the magic.

The 32 nodes. All words in N12 unless noted

1 POLAR
3 POLAS (Beans, Sp )
5 POLES
7 POLER
9 PILER
11 PILES
13 PILAS (Batteries, Sp )
15 PILAR
17 PINAS
19 PINES
21 PONES
23 PONAS (Lith. Slave owner)
25 PONAR (Device to scour river beds)
27 PONER (To put, Sp.)
29 PINER
31 PINAR

2 MOLAR
4 MOLAS
6 MOLES
8 MOLER
10 MOLER
12 MILES
14 MILAS (Mines, Sp )
16 MILAR (Vintage Recordig Tape)
18 MINAS
20 MINES
22 MONES (Nicole, novelist)
24 MONAS
26 MONAR (Polish help group)
28 MONER
30 MINER
32 MINAR
The magic trick is performed as follows. The subject starts on a word-node of his choice and moves in 5-dimensions as often as he pleases, calling out the number (dimension) of the edge he travels as he does so. When he is finished, he gives the magician either the start or end node word and the magician immediately gives the missing word.

The Method. The magician simply keeps track of the five dimension numbers noting that $x+x = 0$ for all $x$. For example, suppose the subject calls out $4, 3, 2, 4, 1, 5, 2$ and stops. The $4$s and $2$s cancel leaving only $3, 5,$ and $1$. This means that the two terminal words differ in the $1^{st}$, $3^{rd}$ and $5^{th}$ places. So if one word was POLAR the other word would have to be MONAS.