



Melancholia I (1514) contains the first magic square seen in European art, with the date of the engraving forming the central two numbers on the bottom row

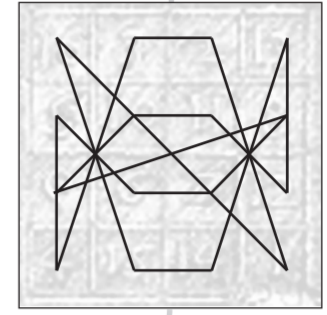
'Dürer saw art as power, and the root of aesthetic power was in number.'  
— Frances Yates

Durer's famous engraving illustrates the notion that focussed 'melancholia' can solve the most intricate problems

one example of these problems is symbolised by the magic square that appears in the top right corner of the picture



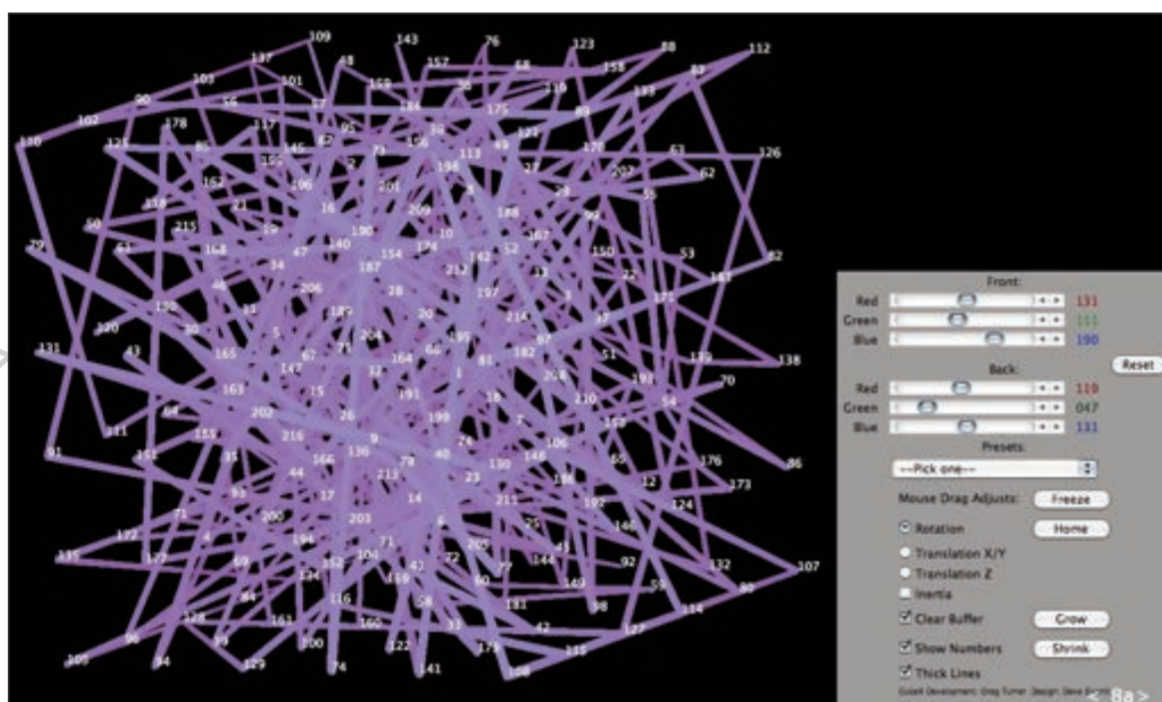
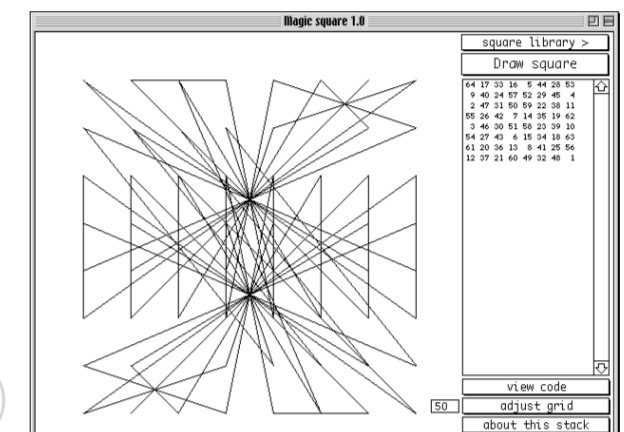
16	3	2	13
5	10	11	8
9	6	7	12
4	15	14	1



magic squares are mathematical matrices in two dimensions in which the total of all the numbers in every line produces an identical sum

magic cubes are similar matrices expanded into three dimensions

I began by writing a simple application to draw magic square patterns



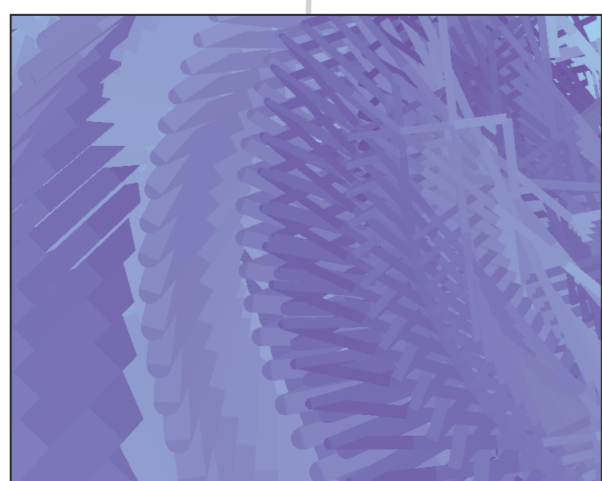
this was developed into a web-based tool for magic cube visualization, in collaboration with interaction designer Greg Turner

it became the basis of a complex application that can be configured to yield an almost unlimited array of images, based on these mathematical patterns

the exhibited version of cubeLife shows a selection of those variations, made to respond to each other through simple artificial life behaviours such as flocking. The sounds are sets of loops prepared to work with each other when triggered by heartbeats



the heartbeat sensor input connects the mathematics of this abstract world to the most basic rhythm in the human body



in a highly-connected and information-crowded culture, the contemplative state is in danger of becoming undervalued

cubeLife therefore invites you and your friends to set it in motion with your heartbeat, then simply sit and watch, for as long as you like

or just observe as the collective pulses shift and change the audio and patterns