

Harmonious hexagrams.

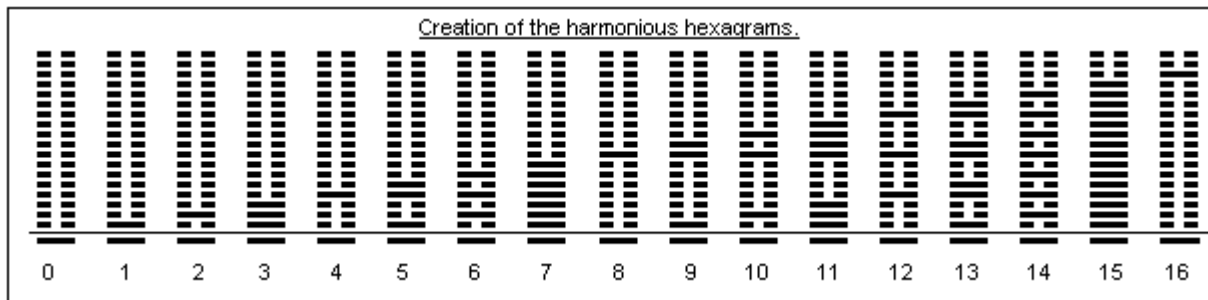
by D.H.Van den Berghe

The biggest mystery in life is the miracle of creation . How this vast universe came into being ? Is there a way we can visualise this phenomenon of creation ?

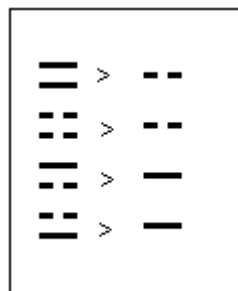
Lao Tzu wrote(Chapter #42):

*Tao gave birth to One,
 One gave birth to Two,
 Two gave birth to Three,
 Three gave birth to all the myriad things.
 All the myriad things carry the Yin on their backs and hold the Yang in their embrace,
 Deriving their vital harmony from the proper blending of the two vital Breaths.
 What is more loathed by men than to be "helpless," "little," and "worthless"?
 And yet these are the very names the princes and barons call themselves.
 Truly, one may gain by losing;
 And one may lose by gaining.
 What another has taught let me repeat: "A man of violence will come to a violent end."
 Whoever said this can be my teacher and my father.*

This appears to be a kind of formula for creation , but it is not immediately clear where it comes from . Now look at this picture :



This may be exactly what Lao Tzu is talking about . It is derived in a simple mathematical way , using the boolean "exclusive OR" operation (XOR) , like this:



Between two yin or yang lines a new yin line is created in the next step ; between a yin and a yang line a new yang line is created in the next step .

The lowest line in the picture represents the ever creating , never changing , unmanifest Tao . Of course it is not really a yang line , as it represents the One , the creative principle . Above it are yin lines ad infinitum . The proces of creation can start . In the first step the XOR operation between the Tao line and the first yin line creates a yang line on the first line . Then the proces continues in the next steps . Always : Line n+1 XOR Line n = New Line n+1 (The lines start counting from below , the Tao line being Line 0) . In the picture you see the first sixteen steps of this proces , which of course continues forever .

So, now it's easy to see how : "Tao gave birth to One , One gave birth to Two , etc..." . And we can see that "All the myriad things carry the Yin on their backs and hold the Yang in their embrace" .

If we look at the hexagrams that are formed at any level during this proces we find something very interesting : only 32 hexagrams ever appear . These are 16 of the 32 hexagram pairs : 1/2 , 3/4 , 7/8 , 11/12 , 15/16 , 17/18 , 19/20 , 23/24 , 27/28 , 33/34 , 35/36 , 39/40 , 43/44 , 45/46 , 61/62 , 63/64 . I call these hexagrams "Harmonious" hexagrams : *"Deriving their vital harmony from the proper blending of the two vital Breaths"* .

This means the other 32 hexagrams are created only when the natural flow of chi is blocked , when the Tao is interrupted , for example when the human being is violent upon nature . These hexagrams indicate forms of disharmony . Among these hexagrams (5/6 , 9/10 , 13/14 , 21/22 , 25/26 , 29/30 , 31/32 , 37/38 , 41/42 , 47/48 , 49/50 , 51/52 , 53/54 , 55/56 , 57/58 , 59/60) we indeed find things like : "War" , "Beautifying" , "Calamities" , "Clinging" , "Marriage" , "Opposition" , "Gain" , "Loss" , "Drought" , "Revolution" , "Flood" So, these hexagrams we could call "Disharmonious" hexagrams .

The animation on the homepage , a very basic cellular automaton, is based on this creation proces.

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