

易经测算的概率分析 (Statistical Investigation on I Qing)

鄙人有感于《易》兼卜筮，不知其概率之说，故演算之。末学算得老少阴阳概率有异，而阴阳概率则同。卜筮之法源于《系辞》。末学不知少阴之数甚少为何，望真人赐教。

It is unclear about how probability theory is applied to divination with I Ching, so I performed the calculation. The probabilities for different property of Yao were different, yet the probabilities between Ying and Yang were the same. The methodology is from Xi Chi. I do not the reason behind this result. I hope a master in I Qing can tell me someday.

开始 (Start)	50 -1 = 49 【大衍之数五十，其用四十有九】							
第一次测算 (1 st) 【挂一以象三，揲之以四以象四时，归奇于扚以象闰】	-2	-3	-4	-5				
	-3	-2	-1	-4				
	= 44 (prob = ¾)				= 40 (prob = ⅘)			
第二次测算 (2 nd)	-4		-8		-4		-8	
	= 40 (prob = ½)		= 36 (prob = ⅙)		= 36 (prob = ⅙)		= 32 (prob = ⅙)	
第三次测算 (3 rd)	-4	-8	-4	-8	-4	-8	-4	-8
	= 36 (prob = ⅙)	= 32 (prob = ⅙)	= 32 (prob = ⅙)	= 28 (prob = ⅙)	= 32 (prob = ⅙)	= 28 (prob = ⅙)	= 28 (prob = ⅙)	= 24 (prob = ⅙)
商 (quotient)	9	8	8	7	8	7	7	6
概率 (Probability)	3/16	3/16	3/16	3/16	1/16	1/16	1/16	1/16
爻的属性 (Property of Yao)	老阳 (Descending Yang)	少阴 (Ascending Yin)	少阴 (Ascending Yin)	少阳 (Ascending Yang)	少阴 (Ascending Yin)	少阳 (Ascending Yang)	少阳 (Ascending Yang)	老阴 (Descending Yin)

	老阳 (Descending Yang)	少阳 (Ascending Yang)	少阴 (Ascending Yin)	老阴 (Descending Yin)
概率 (Probability)	3/16	5/16	7/16	1/16
	阳 (Yang)		阴 (Yin)	
概率 (Probability)	8/16 = 1/2		8/16 = 1/2	
变爻之后 (After changing)				
	阳 (Yang)		阴 (Yin)	
概率 (Probability)	1/16 + 5/16 = 6/16 = 3/8		3 /16 + 7/16 = 10/16 = 5/8	

如上表所示，变爻之前的本卦所得概率相同，但是变爻之后的之卦所得概率不同。比如六爻为阳的《乾》卦只有 $(3/8)^6 = 0.279\%$ ，而《坤》卦则有 $(5/8)^6 = 5.960\%$ 。

As shown above, before changing, the Ying and Yang Yao have the same probability; however, the probability becomes unequal after changing. For example, the Qian has six Yang Yao with a probability of $(3/8)^6 = 0.279\%$, while the Kun has six Yin Yao with a probability of $(5/8)^6 = 5.960\%$.