

# -- Bayesian Correlations

---

*Source:* <http://sci.tech-archive.net/Archive/sci.math/2008-01/msg02077.html>

---

- *From:* The Dougster 22044 <[DGoncz@xxxxxxxxxxxxx](mailto:DGoncz@xxxxxxxxxxxxx)>
  - *Date:* Mon, 14 Jan 2008 18:52:58 -0800 (PST)
- 

In my quest for an understanding of modular arithmetic, number and group theory, and abstract algebra I have used my fascination with cryptograms, FLT, and video encoders as ways to maintain progress, but always there seems to be a special project.

Quasi and I have abandoned the Computability thread on FLT but this remains unconsidered from that thread.

A black box accepts an input and provides an output. Its process is unknown. Feed it (in this case)  $(x,y,z)$  and it says out  $(0, 1, 1, 0, 1, 0)$  or similar binary codes (five of 'em) that indicate in this case the truth of logical propositions about whether  $(x,y,z)$  might be a candidate for an FLT counterexample and in the general case any testable thing; it could be a patient's HIV status....

The Bayesian part of it is in figuring out, of course "What is in the damn box".

What I am thinking is that with an integer input and two binary outputs, we might see a pattern develop relating the two outputs. We'll call them a and b. Like this

Input	Output
5	1, 0
6	0, 1
7	1,0 ....

In this example, we see that a excludes b and vice versa, or at least "tends to" in the cases we've tried.

So I am wondering about phase space, correlations, and Bayesian stastics.

Try another example:

Box = Do you like to dance with a man or a woman?

Subject	Answer
1	Y N

2 N Y  
3 Y N  
4 N Y  
5 N N  
6 Y Y

5 doesn't like to dance; 6 might be bisexual or just likes to dance a lot! Can you imagine polling a huge population and getting the Bayesian relations from the data? Was that what Bayes had in mind?

There are an infinite supply of triples  $(x,y,z)$  but only a finite number of statements related to them; at least I can only come up with finite number. So I am thinking of writing a sort of Bayesian Probe into  $Z$  "space" and  $\{ (x,y,z) \mid x,y,z \text{ are in } Z \}$ , a larger "space" to see if the space is heterogeneous, that is, to see if there are correlations between the statements.

I do have my stats I text.

Doug Goncz  
Replikon Research  
Seven Corners, VA 22044-0394  
.