

Re: Power Law of Probability? (The book "Chances Are" by the Kaplans)

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- *From:* "Reef Fish" <large_nassua_grouper@xxxxxxxxxx>
 - *Date:* 27 Nov 2006 09:00:04 -0800
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W. Watson wrote:

Old Mac User wrote:

I've not read this book. But from your citation of "the power law of repeated successes" it sounds like a loser to me. Worse than a loser... a source of infection that we really don't need.

In short... it sounds like it was written by a couple of very confused people.

So who gave it "good reviews". OMU

W. Watson wrote:

I'm reading "Chances Are ... Adventures in Probability" by Kaplan and Kaplan. It's an interesting book for its background, philosophy and history of probability. It is not a text book. Their background is in the humanities. The book is meant for the general reader, and has gotten good reviews. I wonder about how the general reader fares in some instances. Equations appear on only about 5 to 10% (if even that high) of the pages.

They mention the power law of repeated successes as $(1/6)*(1/6)$ of the number of repeated successes. Fine. Later they mention, page 33, "if something can happen with probability a and not happen with probability b in

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each of x trials, then we can say, putting the power law into general terms,
that the chance of this not happening at every trial is:
 $b^x/(a+b)^x$ "

They then go on to equate this to $1/2$ to find the number of trials it will take to produce a fair outcome. They invoke logs and series expansions, and finally 0.7 provides a multiplier to odds in any game that will tell you the number of expected trials. (in dice, $35 \cdot 0.7 = 24.5$ trials)
Well, fine.. For a general audience, this seems quite a bit of math juggling. Has anyone read this book and wants to comment on this?

Wayne T. Watson (Watson Adventures, Prop., Nevada City, CA)
(121.015 Deg. W, 39.262 Deg. N) GMT-8 hr std. time)
Obz Site: 39° 15' 7" N, 121° 2' 32" W, 2700 feet

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"I have made this letter [e-mail] a rather long one, only because I didn't have the lesiure to make it shorter."
-- Blaise Pascal
Web Page: <home.earthlink.net/~mtnviews>

I'll answer both the previous two posts here. See Amazon. In fact, see <http://www.amazon.com/Chances-Are-Adventures-Probability/dp/0670034878/sr=1-1/qid=1164640918/re> 12 reviews, and all 4 to 5 stars (the highest possible is 5). If I'm not mistaken, both or one of, Discover and Sci Am magazines gave it favorable reviews. Aside from the goofiness I pointed out, the book actually is an interesting read--so far. I'm only 70 pages into it.

What you've done in posing your questions with snippets of content from the book was at the old "bait and switch" salesmanship, though probably unintended.

What you described were the WORST of the explanations anyone could possibly give on some simple statistical concepts, and you ask for assessment.

You should get the unanimous review (given what you showed) as mine and that of OMU, by any statistician who is not completely and totally blind. ;-)

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What you showed NOW are some of the features that made the book appealing as light reading for non-statisticians that are amusing factoids or anecdotal accounts (as in the tabloid newspapers) that are appealing to the general public. So, there is no contradiction in the different kinds of reviews over different kinds of material in the book.

An example of an interesting historic observation is that Gauss and Poisson got the credit for distributions that DeMoivre discovered. The DeMoivre story is quite something in itself.

This is the kind of things archeologists (those authors) can do better in writing their stories than writing about probability and statistics. In fact, what is interesting historical observation is WELL KNOWN to statisticians who don't even have ANY interest in the history of statistics (myself!).

DeMoivre and Laplace both preceeded Gauss, and were generally credited with the discovery of the normal distribution, which Gauss got the credit for the name Gaussian distribution. The fact that almost ALL named theorems and important statistical results are named by the LAST (and not FIRST) of the discoverers is a phenomenon that was well-known even before Steve Stigler gave it a name in one of his papers. I knew that even before Steve got his Ph.D. degree. :-)

So, if the authors had read Steve's historical papers, they could have gotten a wealth of historical factoids without doing any real research themselves in historical archeology of statistics.

Another interesting item, to me at least, is the statement, "LaPlace helped shape the future of science ... he broke forever Pascal's hope that faith and scientific inquiry could sit comfortably together." Of course, the Templeton Foundation is trying hard to bridge that (huge) gap. Richard Dawkins ("The God Delusion") has taken them and others severely to task for their attempts.

They missed the story of DeMoivre predicted the exact date of his death:

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*De Moivre correctly predicted the day of his own death. Noting that he was sleeping 15 minutes longer each day, De Moivre surmised that he would die on the day he would sleep for 24 hours. A simple mathematical calculation quickly yielded the date, November 27, 1754. He did indeed pass away on that day.

That's the perfect hindsight prediction that only the ultra-gullible would bite — but it makes interesting reading, doesn't it?

One surprising thing about the book is that it has no references or bibliography. Non-fiction books that do that I usually take one star away from my personal rating.

The book is at best a college senior term paper on elementary statistics.

It would get some points for the the tabloid stories, and would get very negative points of statistical and probability SUBSTANCE —which is basically the COMBINED review of your 12 4–5 star reviews and the 0–negative star reviews OMU and I gave. :-)

Steve Stigler's papers on the history of statistics are much more substantial, and FREE. I am sure his papers would have contained ALL the historical tidbits of these authors, and much much more. Then supplement that with a Statistics for Dummies book and the combination will make much better read than this mother–son combo's dabble in statistics.

— Reef Fish Bob.

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