Bush Biographer Suicides: Coincidence or Assassination

by

TR

Brasscheck.com recently created an analysis that has been widely circulated (1) on the probability of 4 Bush biographers committing suicide. Their calculations seemed to indicate that the odds were astronomically in favor of foul play. After analyzing these computations, I decided that they were mistaken and that I would try my own hand at computing the chance of finding 4 Bush biographers dead from suicide.

Brasscheck's analysis is as follows:
"Examining the male U.S.suicide rate for recent years , we can extrapolate a conservative estimate of 17 male suicides per 100,000 people, or 0.017%. The odds of 4 specific, male biographers committing suicide would be the 4th power of 17/100000, or 8.3521 4.913 x 10^-17...roughly 1 chance 10,000,000,000,000,000. About as good a definition of impossible as you can get. A person would stand a better chance of playing the Canadian lottery 6/49 exactly twice in one's lifetime and winning the grand jackpot BOTH TIMES! (That is, picking 6 numbers out of 49 possible numbers and matching all 6 numbers out of 6 random draws, on 2 separate occasions, and having only purchased two Canadian lottery tickets ever.) "

The reasoning is that since the chance of one male suicide in the US population is 17 / 100,000 or 0.00017, the chance of selecting two people from the US population who will commit suicide is 17 / 100,000 x 17 / 100,000, or 0.00017 to the power of 2. Using this logic, the chance of selecting four males who will commit suicide from the US population is 0.00017 to the power of 4. Although technically correct, this calculation does not address the question of interest which is: Of the people who have committed suicide, what is the chance that at least 4 of them will be Bush biographers?

Since Danny Casolaro was the first of the Bush biographers to die in 1991, that gives us a period of 13 years to consider. According to US labor statistics (2), the number of writers in 2002 was 139,000. Given these numbers, we can begin our probability analysis.

Let's take the probability of a suicide in the US, from above, to be 17 / 100,000 or 0.00017. So, given that there is surprisingly no relation between occupation and suicide, we can assume that all occupations have roughly the same probability of a suicide (3). These means that there were 139,000 x 0.00017 or 23.63 suicides in any given year. Multiplying that number by 13, gives us 13 x 23.63 or 307.1 writer suicides in the last 13 years. Let's round up and call it 308.

Of those 308 writers who committed suicide, how many were Bush biographers? That's where we need to estimate. There can't be more than a handful of Bush biographers, so let's say there are 40.

So what is the probability that out of the 308 writers who committed suicide, at least 4 of them were Bush biographers? This is the pertinent question.

This probability is equal to 1 minus the probability that at most 3 Bush biographers committed suicide. We can write this as: 1 – { P(0) + P(1) + P(2) + P(3) }, where P(x) indicates the probability of x Bush biographers committing suicide.

Since P(x) is a basic hypergeometric probability calculation, we can use the following formula:

$$P(x)=\frac{\binom{x}{\text{Bush Biographers}}\binom{\text{WriterSuicides}-x}{\text{TotalWriters}-\text{BushBiographers}}}{\binom{\text{WriterSuicides}}{\text{TotalWriters}}}$$

For P(0), that is the probability that of the 308 writers who committed suicide in the 13 year period, none of them was one of the 40 possible Bush biographers is

$$P(0)=\frac{\binom{0}{40}\binom{308-0}{139{,}000-40}}{\binom{308}{139{,}000}}=0.915$$

Similarly, P(1), the probability that of the 308 writers who committed suicide in the 13 year period, only one of them was one of the 40 possible Bush biographers is

$$P(1)=\frac{\binom{1}{40}\binom{308-1}{139{,}000-40}}{\binom{308}{139{,}000}}=0.025$$

Using the same method P(2) = 0.00128 and P(3) = 0.000101.

So the probability that at least 4 Bush biographers are among the 308 writers who died during the 13 year period is: 1 – { P(0) + (P(1) + P(2) + P(3) } or 1 – { 0.915 + 0.025 + 0.00128 + 0.000101 } = 0.05852. So there is a 5.852 % chance that of the 308 writers who committed suicide in the last 13 years at least 4 of them would be Bush biographers. According to these calculations, there is a 94.2% chance that these suicides were no coincidence. Now this is not the same astronomical number that Brasscheck erroneously came up with but it is still very significant. Moreover, if we reduce the number of Bush biographers from 40 down to, say, 30, the results are even more likely to indicate treachery on somebody's part.

Footnotes:

(1) The original analysis is on Brasscheck.com. It has been referenced by Jeff Rense http://www.rense.com/general60/REPORT.HTM and Alex Jones http://www.infowars.com/articles/us/new_math_bush_reporter_suicides.htm

(2) (http://stats.bls.gov/oco/ocos089.htm). These are non-technical and non-editorial writers.

(3) Experts on suicide say that statistics on its relation to occupation are not clear. There is no national data set on occupation and suicide. Local studies indicate elevated rates in different occupations, but the data usually "turn out to be frail," says prominent suicide researcher David Clark, PhD. And in fact, points out Ronald Maris, PhD, director of the Center for the Study of Suicide and Life-Threatening Behavior at the University of South Carolina, "Occupation is not a major predictor of suicide and it does not explain much about why the person commits suicide."

(4) Thanks to the creator of this handy calculator which was used in calculating the large combinatorics: http://www.ciphersbyritter.com/JAVASCRP/PERMCOMB.HTM
Since the combinatorics were so large I calculated them by log2 method. For instance, P (0) was calculated as follows:

$$P(0)=\frac{\binom{0}{40}\binom{308-0}{139,000-40}}{\binom{308}{139,000}}=\frac{\binom{0}{40}\binom{308}{138,960}}{\binom{308}{139,000}}$$

these 3 combinatorics were plugged into the calculator tool. For instance, log2 C(40,0) = 0; C(138960,308) = 3154.196; log2 C(139000,308) = 3154.324. So,

$$P(0)=\frac{\left(2^{0}\right)\left(2^{3154.196}\right)}{\left(2^{3154.324}\right)}=2^{3154.196-3154.324}=2^{-0.128}=\frac{1}{2^{0.128}}=\frac{1}{1.092}=0.915$$

(5) Thanks also to KevinF of Cryptogon.com for significant help in gathering the necessary data and providing references to back up these results.