

A Note Correcting Several Mathematical Errors in Skidelsky's

John Maynard Keynes (1992)

Michael Emmett Brady*

On page 78 of Skidelsky (1992), Laplace's rule of succession formula is incorrectly given as

$$"(m+1)(m+1+2)".$$

The correct formula is

$$(m+1)/(m+n+2).$$

At the bottom of page 78, Skidelsky's footnote dealing with Laplace's rule of succession formula makes no sense. Skidelsky states:

"The assumption which underpinned the formula was that if p (the *a priori* probability) is unknown, then Bernoulli's equiprobability theorem ($1+n$) can be applied to any pair of events so that the probability of m/n is $1/2$. Keynes pointed out the fallacy of this in the *Treatise on Probability* (CW, viii, 407-8)."

This discussion has nothing to do with Keynes' discussion. ($1+n$) is not Bernoulli's theorem. Further, "If...we know nothing about a_1 , since a_1 and its contradictory form a pair of exhaustive alternatives two in number, the probability of these alternatives is *equal* and each is $1/2$ " (Keynes, 1921, p. 374). Thus, if $m=1/2$ and $n=1/2$, then $m/(m+n) = 1/2/(1/2+1/2) = 1/2$ and $n/(m+n) = 1/2/(1/2+1/2) = 1/2$. This involves Laplace's use of the principle of indifference and has nothing to do with Bernoulli's theorem or its inversion.

Finally, the reader should note that there is no such theorem called the "Bernoulli equiprobability Theorem".

* 9426 Flower Street, Bellflower, CA 90706-5706, U.S.A.

References

- Keynes, J.M. (1921). *A Treatise on Probability*. London: Macmillan.
Keynes, J.M. (1973). *A Treatise on Probability*. Volume 8 of the Collected Writings of J.M. Keynes. Macmillan.
Skidelsky, R. (1992). *John Maynard Keynes: The Economist as Savior*. London: Macmillan.