

ABSTRACT: An essential component of inference based on familiar frequentist (error statistical) notions p-values, statistical significance and confidence levels, is the relevant sampling distribution (hence the term sampling theory). This results in violations of a principle known as the *strong likelihood principle* (SLP), or just the likelihood principle (LP), which says, in effect, that outcomes other than those observed are irrelevant for inferences within a statistical model. Now Allan Birnbaum was a frequentist (error statistician), but he found himself in a predicament: He seemed to have shown that the LP follows from uncontroversial frequentist principles! Bayesians, such as Savage, heralded his result as a “breakthrough in statistics”! But there’s a flaw in the “proof”, and that’s what I aim to show in my presentation by means of 3 simple examples:

- **Example 1: Trying and Trying Again**
- **Example 2: Two instruments with different precisions**
(you shouldn’t get credit/blame for something you didn’t do)
- **The Breakthrough: Don’t Birnbaumize that data my friend**

As in the last 9 years, I will post an imaginary dialogue with Allan Birnbaum at the stroke of midnight, New Year’s Eve, and this will be relevant for the talk.