ASA Statement on Statistical Significance & P-Values¹:
A look back

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²Opinions are my own
2014:

Q: Why do so many colleges and grad schools teach p = 0.05?
A: Because that's still what the scientific community and journal editors use.

Q: Why do so many people still use p = 0.05?
A: Because that's what they were taught in college or grad school.

— George Cobb, Mount Holyoke College
2015:

The Basic and Applied Social Psychology (BASP) 2014 Editorial emphasized that the null hypothesis significance testing procedure (NHSTP) is invalid, and thus authors would be not required to perform it . . . The purpose of the present Editorial is to announce that the grace period is over. **From now on, BASP is banning the NHSTP.**

— BASP Editors David Trafimow and Michael Marks

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TAS Statement:

6 P-Value Principles
P-values can indicate how incompatible the data are with a specified statistical model.
P-values do not measure the probability that the studied hypothesis is true, or the probability that the data were produced by random chance alone.

👍👎
Scientific conclusions and business or policy decisions should not be based only on whether a p-value passes a specific threshold.
Proper inference requires full reporting and transparency

👍👎
A p-value, or statistical significance, does not measure the size of an effect or the importance of a result.
By itself, a p-value does not provide a good measure of evidence regarding a model or hypothesis.
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- A p-value **without context** or **other evidence** provides limited information. 👎

- A p-value **near 0.05** taken by itself offers only **weak evidence** against the null hypothesis. 👍👎

- A **large p-value** does not imply evidence **in favor of the null hypothesis**. 👎👍

- **Data analysis should not end** with the calculation of a p-value. 👎
And that's why we're here today . . .
(to be continued)