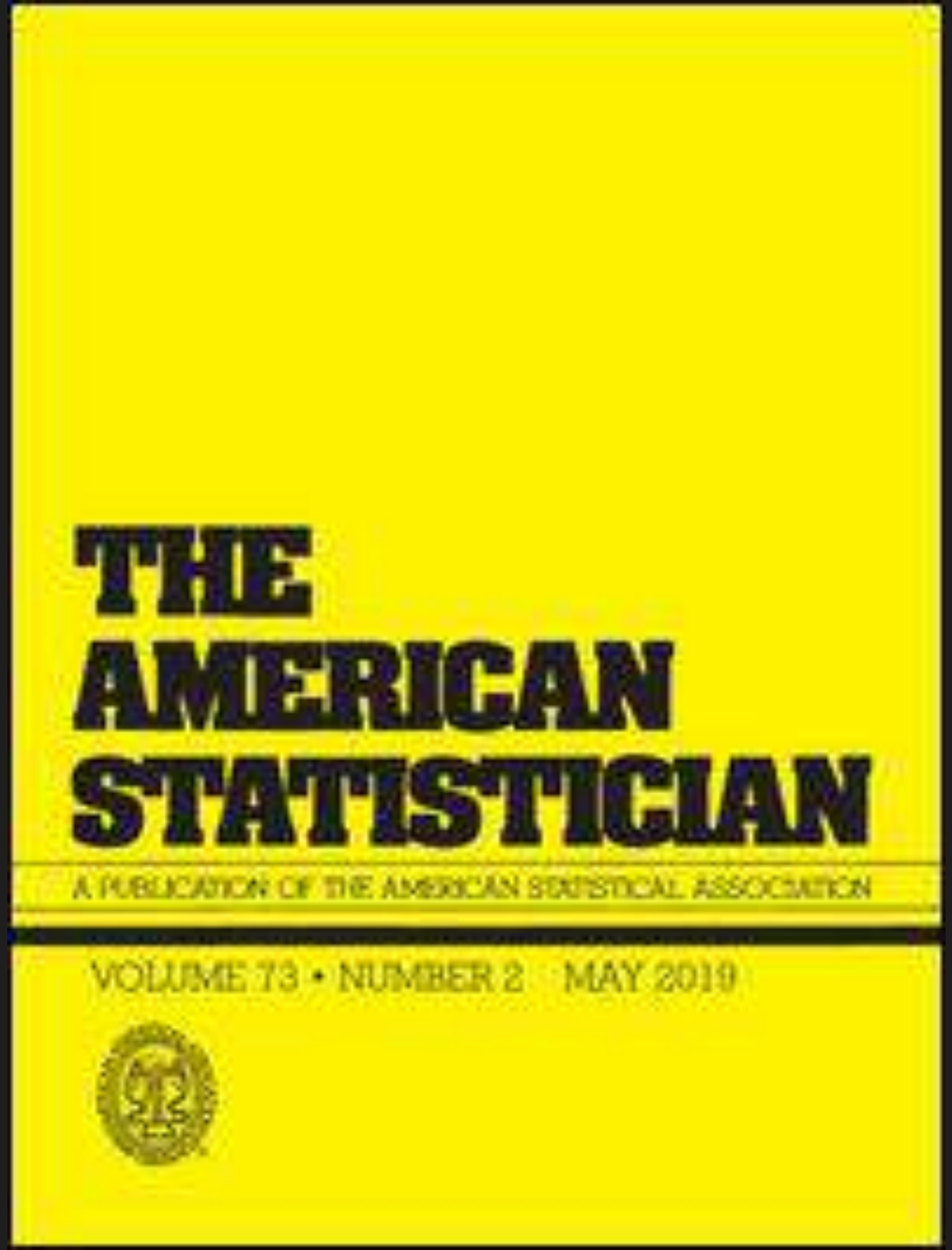

ASA Statement on Statistical Significance & P-Values[1]: A look back

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[1] Wasserstein, Ronald L., and Nicole A. Lazar. "The ASA statement on p-values: context, process, and purpose." (2016): 129-133.

[2] Opinions 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**.[3]

— BASP Editors David Trafimow and Michael Marks

[3] Trafimow, David, and Michael Marks. "Editorial in Basic and Applied Social Pschology." Basic and Applied Social Psychology 37 (2015): 1-2.

TAS Statement:

6 P-Value Principles

P-values can indicate how **incompatible** the **data** are with a specified statistical **model**.

2️⃣

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**.

👍👎

3️⃣

Scientific conclusions and business or policy decisions should not be based only on whether a p-value **passes a specific threshold.**

👍

4️⃣

Proper inference requires **full reporting** and **transparency**

👎👍

5️⃣

A p-value, or statistical significance, does not measure the **size of an effect** or the **importance of a result.**

👍

6️⃣

By itself, a p-value does not provide a good measure of evidence regarding a model or hypothesis.

6️⃣ By itself, a p-value does not provide a good measure of evidence regarding a model or hypothesis.

- 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. 👎

Tally

👍 2

👍👎 4

👎 3

And that's why we're here today . . .
(to be continued)