George Cobb's contributions to Stat Ed for Introductory Students

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My experience teaching intro stat

- Fall 2001
- Spring 2005
- First USCOTS
- 2011

From 2011-2020

- Working with George

George’s emails

- **“If our course succeeds, what on day one seemed as subtle as a scalpel may by term's end seem as crude as a meat ax .”**

- **“Are we waist-deep in a fool’s errand? Or valiantly attacking a worthy windmill?**

- **Shouldn't we start with this essential tension? After all, once you have the model, all else is just turning a crank. To paraphrase Pascal, the crank may be hard to grasp at first, but once you've got it, the turning is easy .**

- **As Norman Mailer once said of Ernest Hemmingway, “He needs a built-in bullshit detector.” I don’t presume that I write like Hemmingway, but even Rick Perry can use editorial oversight. In particular, the Grinch v Santa FAQ may be too long for the purpose it's intended to serve .**

George's emails

- **HAIKU**
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- **P is for data**
- **at least as extreme as yours:**
- **the chance from the null.**
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- **When p is tiny,**
- **either the null is false, or**
- **you got weird data.**
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- **Exercises:**
- **(1) Ask students to compose other Haiku definitions.**
- **(2) Ask for Haikus that tell what the p-value does and does not tell you.**
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George's emails

Thoughts about p-values: why students struggle.

- **DEF: There are five essential points (a lot to absorb and keep in mind):**
- (1) P is the chance, — A probability, between 0 and 1,
- (2) given the null model, — computed based on a set of assumptions,
- (3) of getting data — of data (*not* of the hypothesis),
- (4) at least as extreme as — a tail area
- (5) what you actually got. — determined by the observed data.

A dedication

- We dedicate this textbook to George Cobb (1947–2020), who was an inspiration to so many in the statistics education community. He eloquently pushed us and others to teach statistics in ways that have benefited hundreds of thousands of students. His intelligence, thoughtfulness, and humor flowed through his writing, as you will see in many parts of this book (e.g., the Frequently Asked Questions). The guidance and wisdom he provided us as we developed and refined this textbook were immeasurable. He will be greatly missed as both a colleague and a friend.
- George's eloquence is captured in the following analogy, which serves as a continued motivation for us to teach statistics differently and to help students complete our courses with an understanding that statistics is a beautiful way to make sense of the world in which we live.

Few students typically leave a statistics course thinking of Statistics as a beautiful cathedral

The better students may get a fuzzy impression

But, for most students, their noses stay too close to the canvas and they only see disconnected details

We hope that we can all follow George's lead in inspiring students to see the beautiful cathedral of Statistics