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How the Sausage is Made? Tips & Tricks for Communicating Results and a case study

Wednesday, 18 September 2024 10:05 (30 minutes)

As a collaborative statistician you have been charged with completing a complicated toxicology analysis regarding levels of harmful chemicals in groundwater. At the conclusion of your presentation, an audience member asks, ‘So, should my cows drink the water?’ At least half the audience nods and comments that they, too, would like to know the answer to that question. Clearly, something went wrong with your communication strategy. You go back through your charts and graphs, repeating your previous words. Half of the audience still appears confused.

To prevent this situation, most of us have been advised to tell a story, explain results in common language, use a visualization, etc. Yet, there is a big gap in knowing what to do and knowing how to do it. In this talk, we will present practical tips and tools for communicating statistical results at the right level to your audience. We will cover the 4Cs Framework which helps you transition from communicating ‘what you did and how you did it’ to ‘what it means for decision makers’. The first three Cs stand for Comprehensive, Collaborator, and Circulation. The last C varies depending on your role and audience and could stand for Citizen, Chair, or C-Suite.

We will also discuss ADEPT: Analogy, Diagram, Example, Plain English (or your native language), and Technical Definition for communicating complex statistics and data science concepts. Finally, we will touch on some techniques for visualization and slide design that can make you instantly more effective in your next project meeting. All techniques will be accompanied by statistics and data science examples. This talk is appropriate for all levels of collaborative statisticians and data scientists including students, novices, professors teaching collaborative skills, and experts mentoring or managing those early in their careers.

Frøydis presents a case study on fat% variation in salami production, and shows how variance components are investigated, and visualised to different audiences, reflecting the issues from Jennifer’s introduction. In the talk, some ways of illustrating the fat% variation within and between batches of salami green mass are presented and discussed.

Type of presentation

Talk

Classification

Mainly application

Keywords

Communicating Results, Visualization

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Session Classification: Education and thinking