**What do you know? A podcast exploring the numbers behind our beliefs, and everything in between.**

It seems ironic that in an era of big data, truth sometimes seems more elusive than ever. To make better choices about how to manage our lives, our work, and our environment, we need to use the best possible information to guide us. But even with great data, humans don’t always make great choices- we misinterpret, we oversimplify, we fail to see fallacies in logic or flaws in the data itself- and even our most rational examinations of the numbers are fundamentally human, shaped by culture, prior experience, and our internal biases.

In this podcast, we explore the process of how data becomes information, information becomes knowledge and knowledge becomes belief- and how, in turn, belief shapes the way we take and interpret data. From young learners to practicing scientists, the ways we incorporate information into our worldview is affected by our experiences. We call upon experts across disciplines to join us in discussions of these important concepts, exploring what truth means in different professions and from different perspectives. We will learn about the checks and balances each field uses in turning data and information into knowledge, and the mechanisms by which fields self-correct. We combine social and data science perspectives with the study of how humans learn, in order to examine not just what we know, but how we know it.

**Christie Bahlai, PhD**, is a Data Scientist and Ecologist. Her work focuses on developing and interrogating methods ecologists use to predict processes in ecosystems, particularly population dynamics of organisms, and the ethics of environmental data. She teaches courses in quantitative methods, reproducibility and ecology. She’s currently directing a National Science Foundation funded project examining the concept of trajectory in environmental science.

**Rebecca Catto, PhD** is a Sociologist. Her research is grounded in the sociology of religion and connected by an overarching interest in how the secular and religious interact, particularly in Europe and North America, attentive to power relations and social justice issues in these dynamics. She teaches courses in social problems and religion and society. She’s currently Co-Principal Investigator on a large international research project on science and religion.

**Bridget Mulvey, PhD** is an Education Researcher in Curriculum and Instruction. Her research focuses on scientific inquiry and understanding characteristics of science to improve access to science learning, careers, and action for change for underrepresented groups. She teaches courses in science education for pre-service and in-service teachers. She also has a master’s degree in geological sciences and a background in science research.

**Episodes:**

**What’s the frequency, Kenneth?** There’s lies, damn lies, and statistics? In this episode, we examine how culture shaped how we teach statistics to scientists (don’t worry, no proofs needed), and how the statistical training shapes the type of questions scientists ask, and how they interpret data.

**Water to wine** Is red wine good for you- or not? How do we find scientific consensus? Today we explore what it means for science to be contradictory- and the reasons these apparent contradictions come up so often in science reporting.

**Method acting** What is the scientific method? What is a hypothesis? Today, we examine inductive and deductive approaches to reasoning- and incorporating other ways of knowing into scientific knowledge.