

Welcome to the Kappa Zoo

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1 Welcome

This site—a work in progress—explains rater reliability and how to measure it. Much of the content is new, using a general model to explain the features of existing methods from the measurement literature, in the context of more modern approaches from the machine learning (ML) literature. The sythesis of these two fields is the t-a-p model, which combines the intuitiveness of the measurement ideas with the statistical power of the ML algorithms.

Use the navigation bar at the top of the page to explore the chapters, or jump directly to specific sections using the links below. If you are new to t-a-p models, I recommend starting with the [Chapter 1](#). Then if you want to dive into theory, the subsequent two chapters lay out the statistical derivations and relationship to older methods, for example showing how the Fleiss kappa is a special case of a t-a-p model.

If you'd rather jump straight to applications, you can skip the theory and go to the [The t-a-p App](#) page, which is a user manual for the R Shiny app that accompanies this site. With it you can simulate data or load your own, then model the data for rater accuracy.

The Kappa Zoo includes a growing collection of real-world data sets and the model parameters estimated from them.

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1.1.1 Getting Started

I recommend starting with [Chapter 1](#), which summarizes the problem we want to solve, existing solutions, and how the t-a-p model contributes to that ongoing conversation. For the statistical development of the idea, including the binomial mixture model and its properties, see [Chapter 2](#). The t-a-p model's relationship to several existing rater agreement methods (the kappas) is addressed in [Chapter 3](#). There, for example, we see how the Fleiss kappa is a special case of the t-a-p model with that assumes $t = p$.