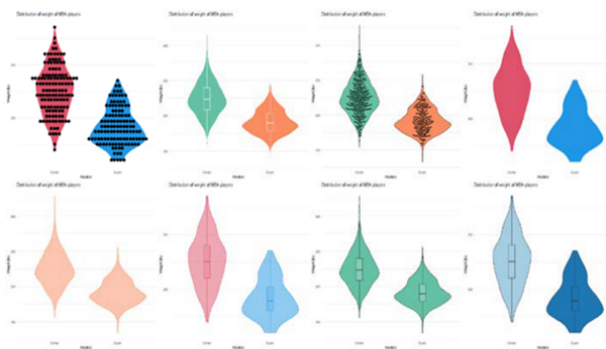


# How should we use violin plots?

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One way to illustrate distributions of samples is through the use of violin plots. The original design is a combination of boxplot and density plot mirrored and plot around the boxplot. However, there are other designs in literature. Although they seem a powerful way to illustrate distributions, the fact that they encode distributions makes them difficult to read. Users have problems comparing two different distributions, and certain basic statistics such as the mean can be difficult to estimate properly.

To get more insights on how people interprets violin plots, we have carried out an experiment to analyze how the different

configurations affect judgments over values encoded in those plots.