

Plotting Breakout

Darren Reger for Galvanize DSI

Basic Ideas to Remember

- If the “story” is simple, the plot should be simple
- If the “story” is complex, make it look simple
- Tell the truth - don't distort data

Concepts

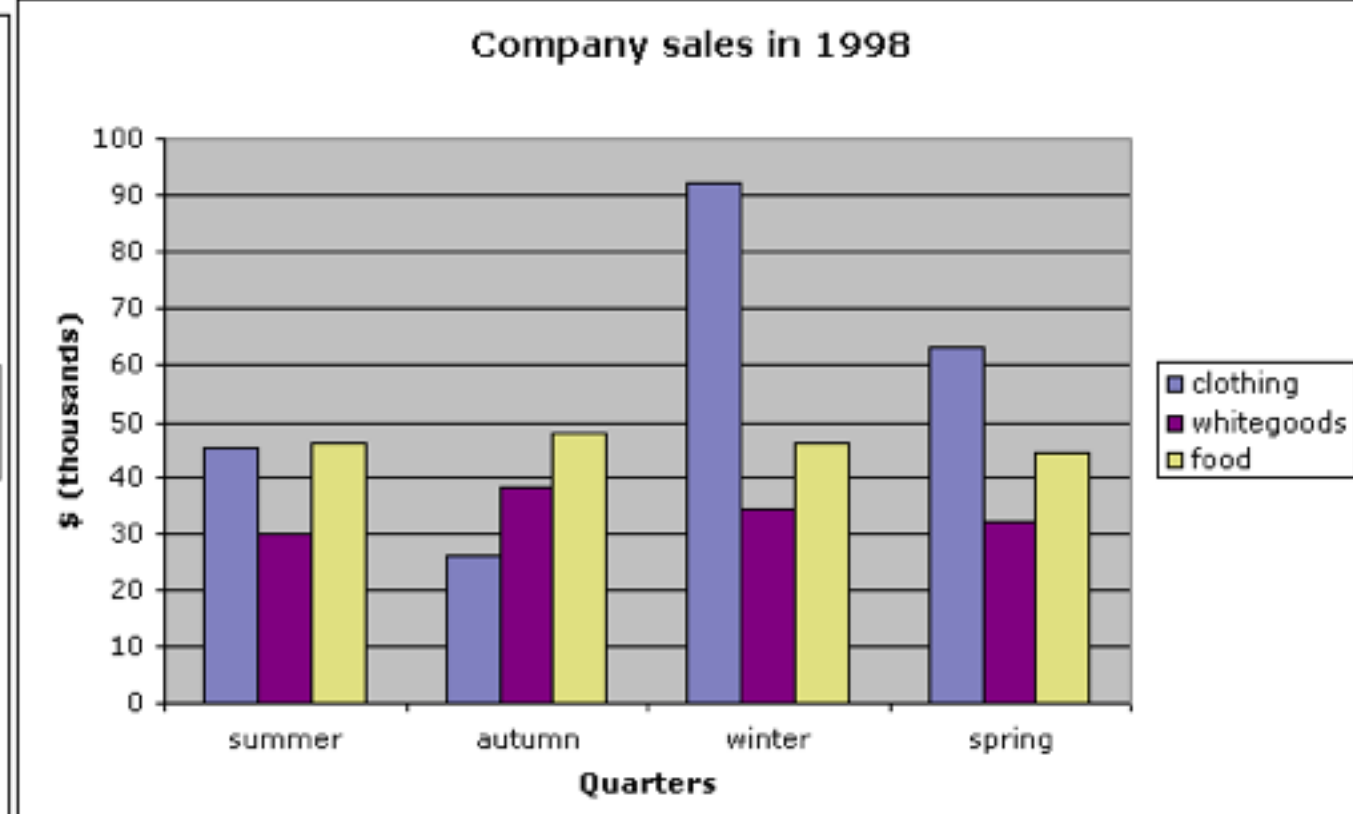
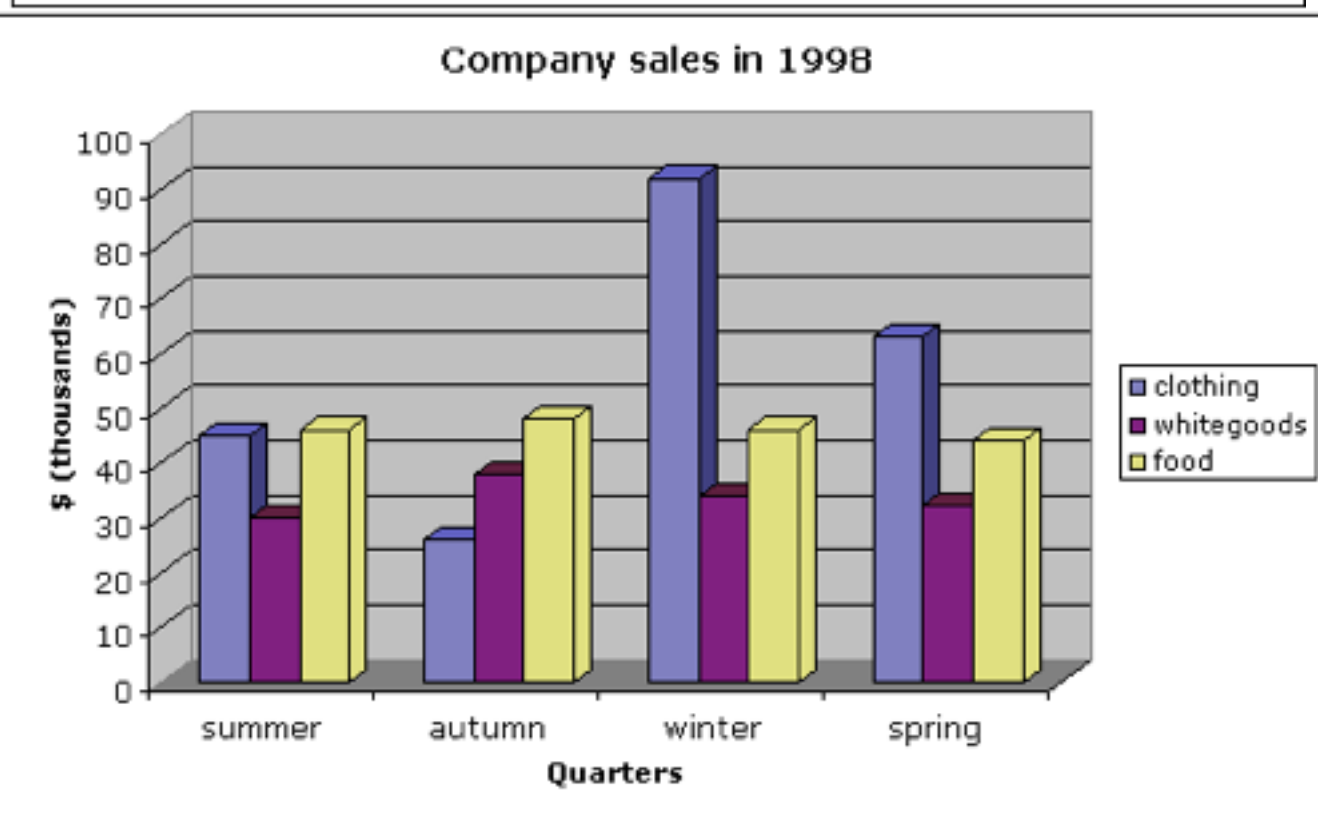
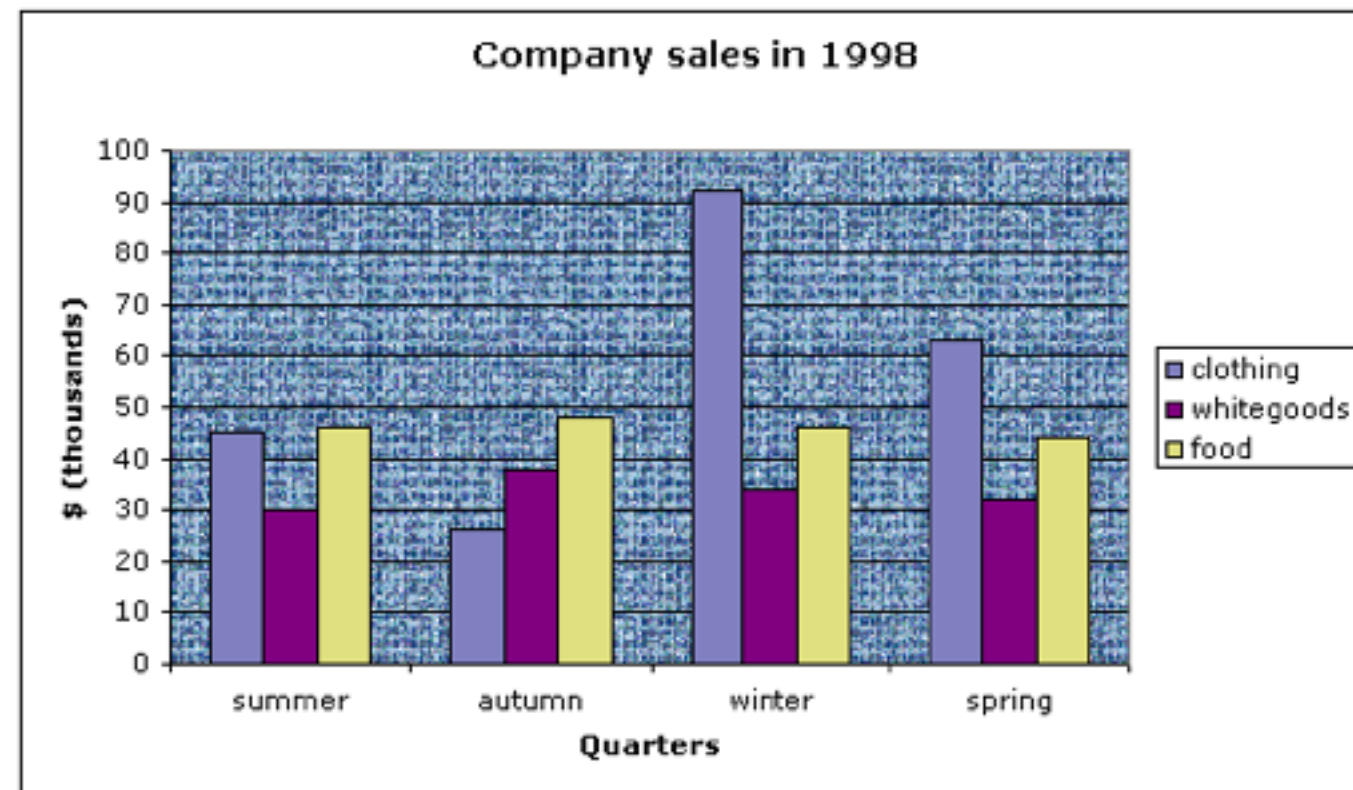
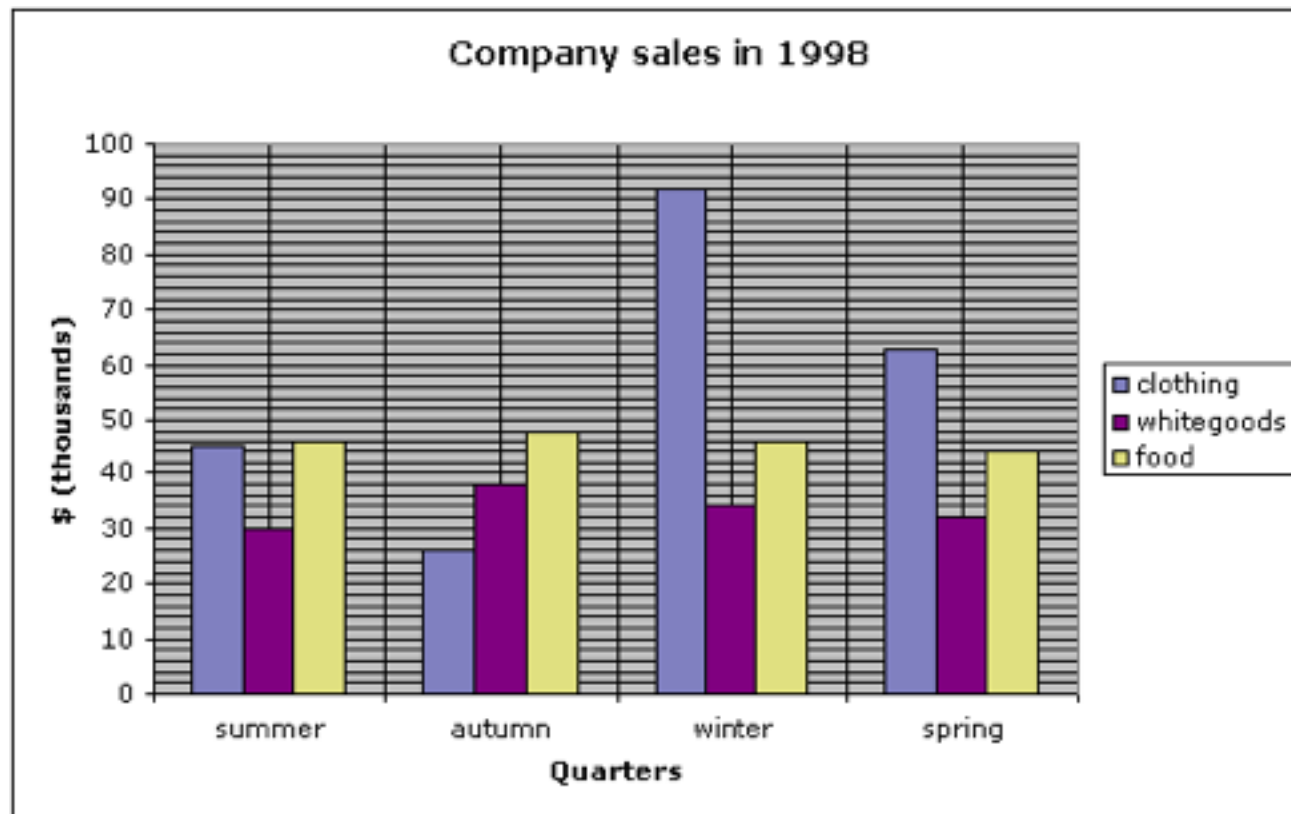
- **Morning Breakout**

- How should we present plots?
- What should we look for in a plot?

- **Afternoon Breakout**

- How do we interpret plots?
- What can we learn from a plot?

Which one of these is the best?
What is wrong with the other charts?

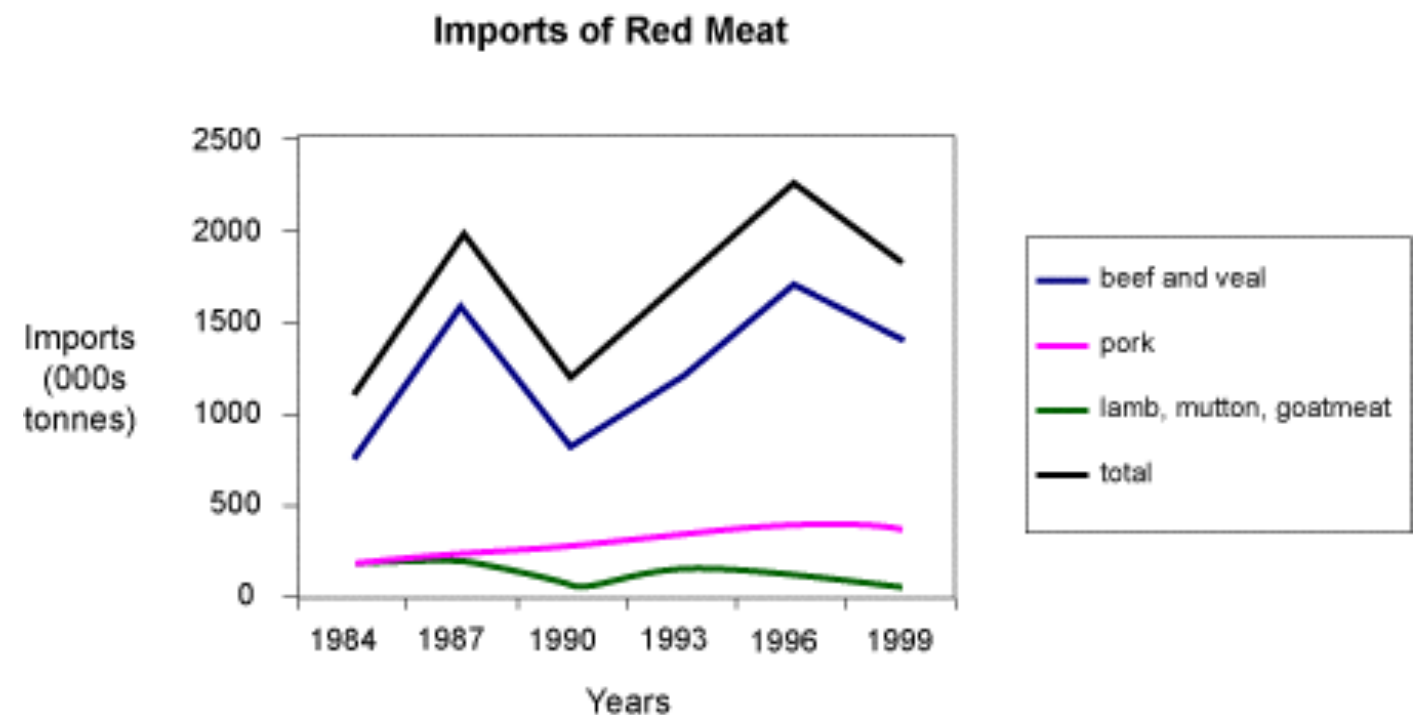
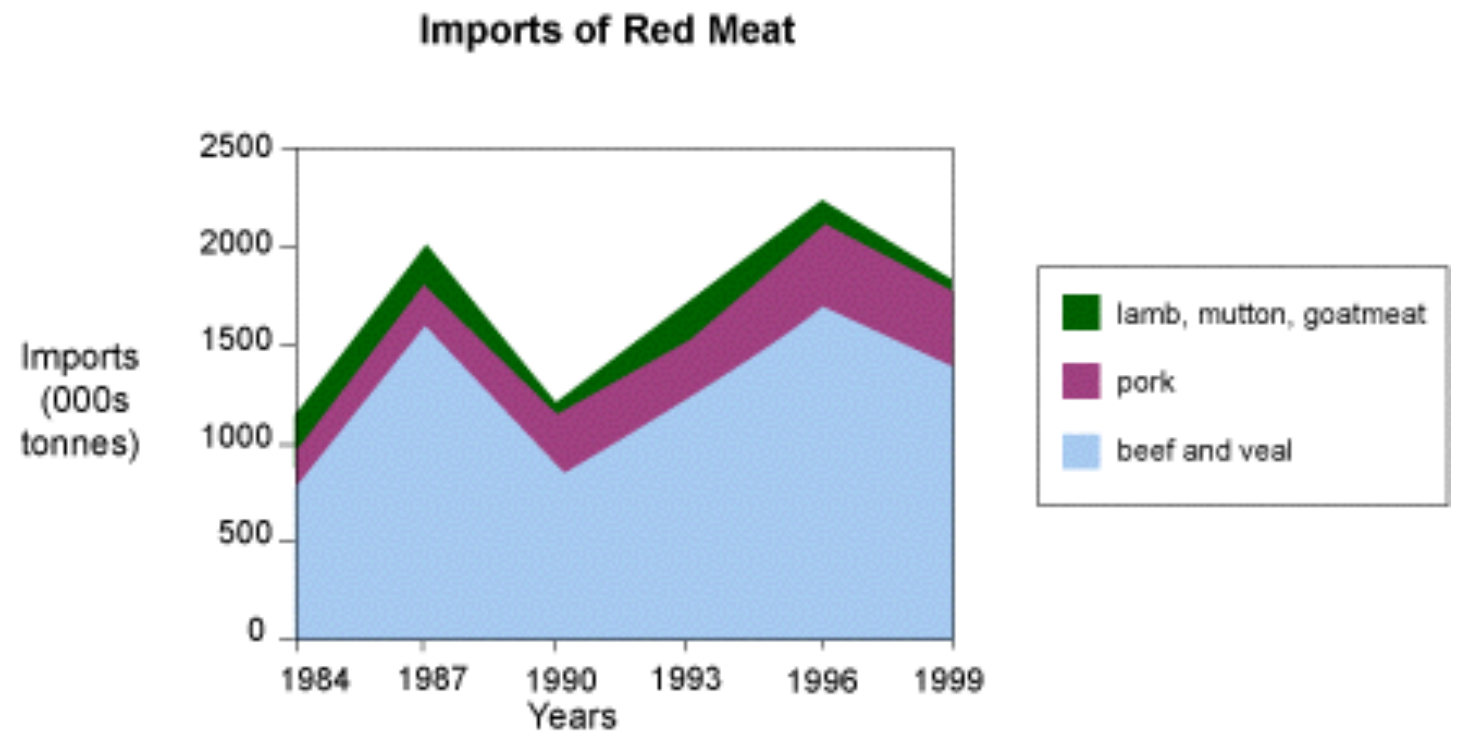


Prompt:

The graphical displays are plots of the US import of red meat taken from the Handbook of Agricultural Charts published by the US Department of Agriculture

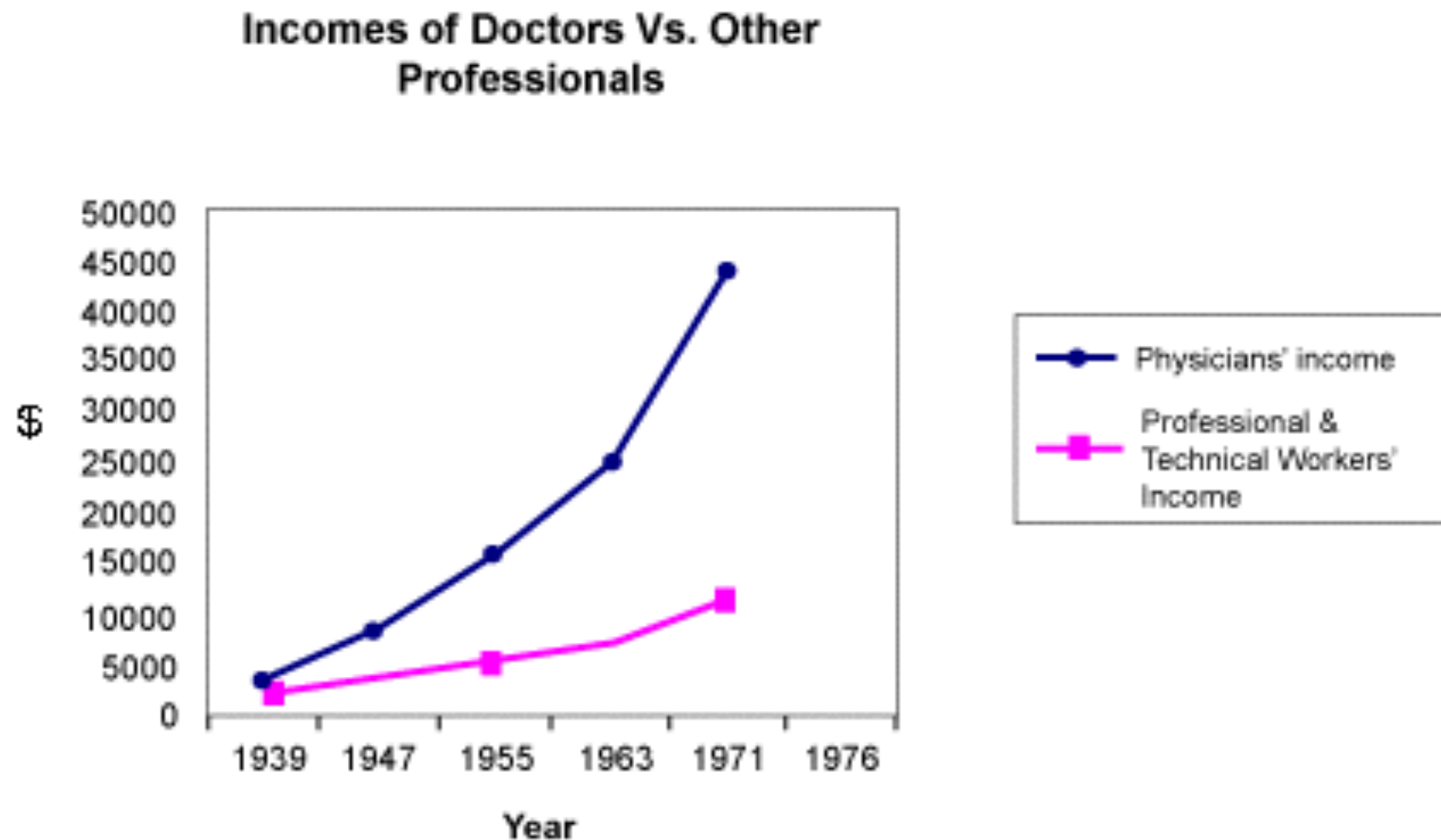
Question:

Which one do you prefer and why?



Plots should stand on their own

What questions do you have about the validity of this chart?

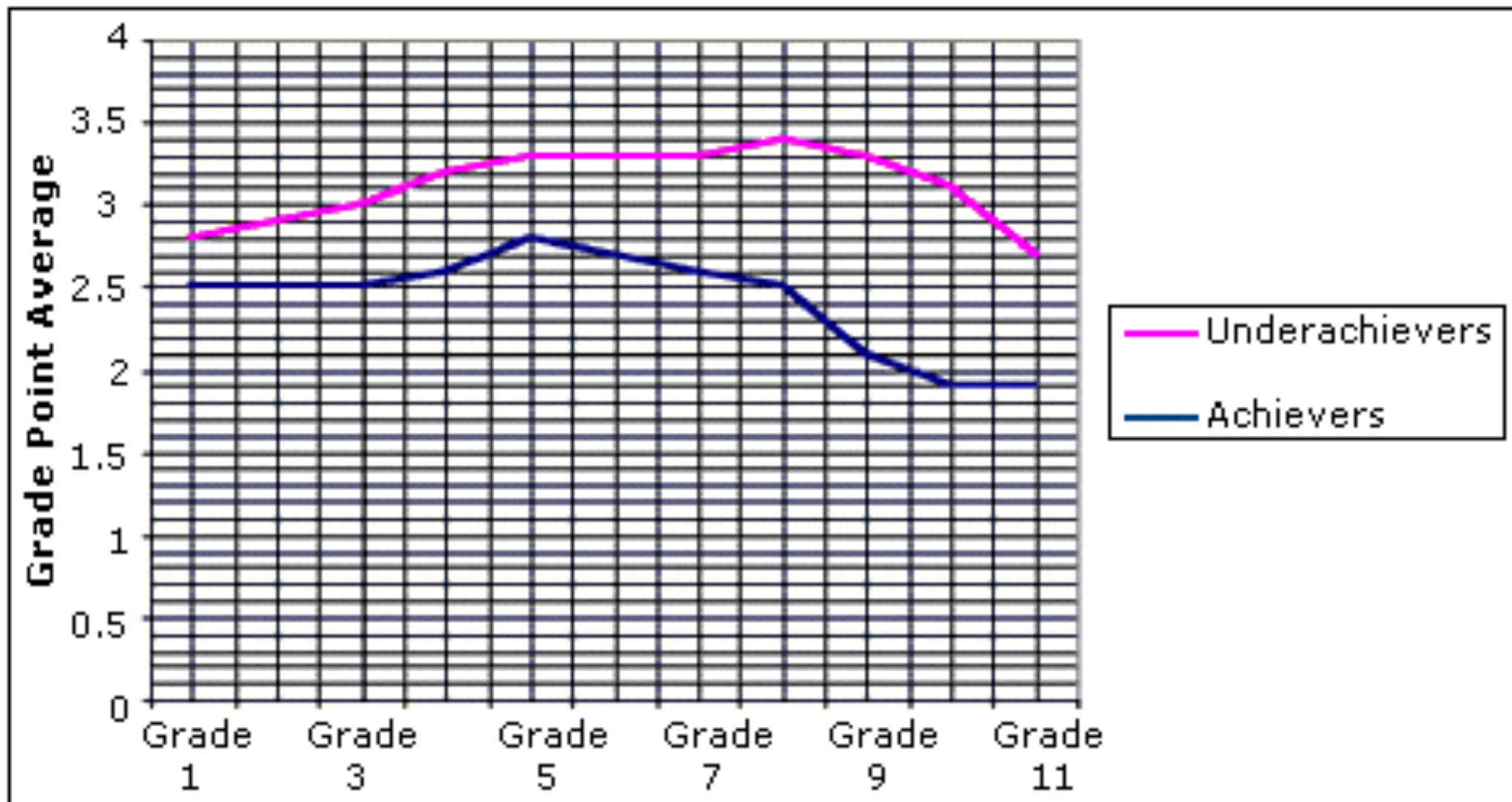


Prompt:

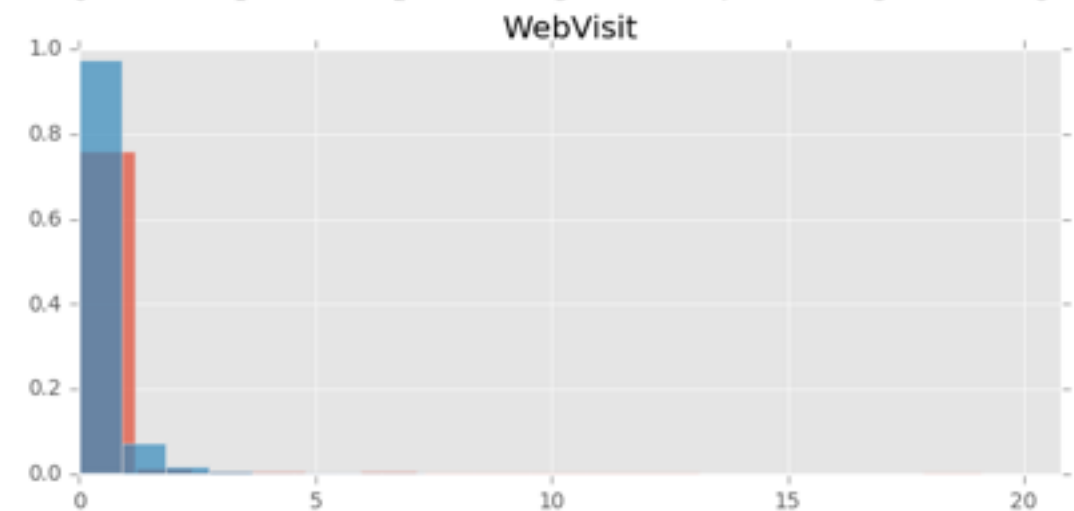
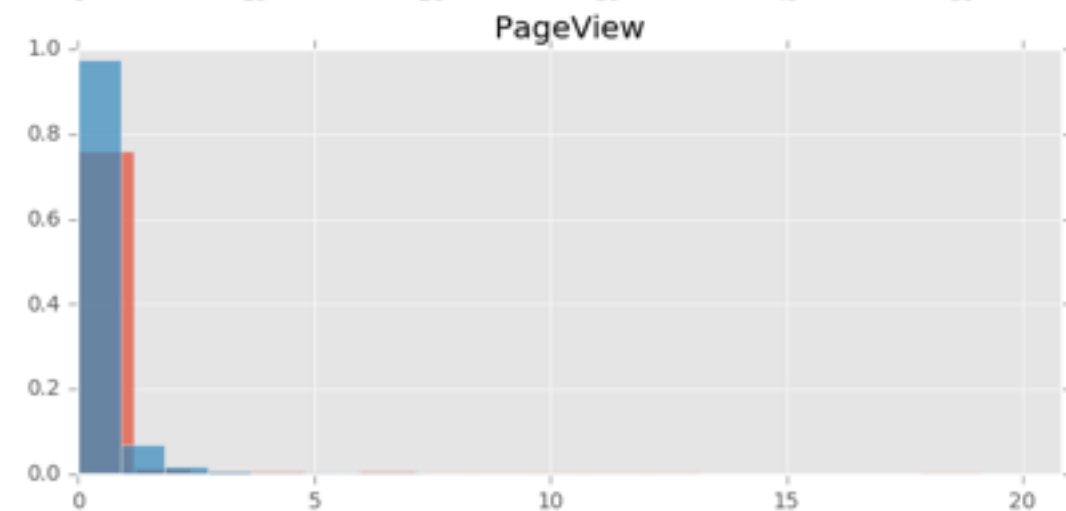
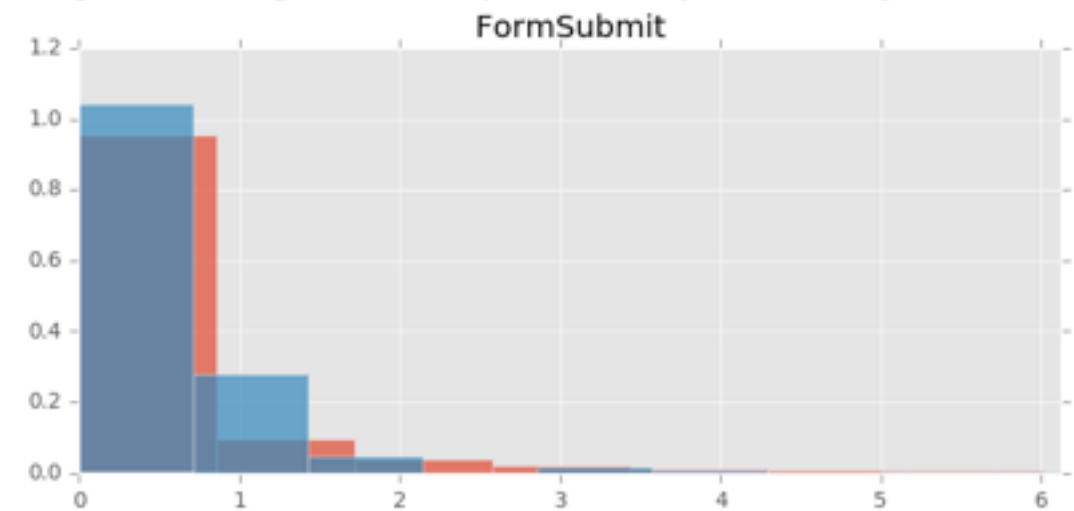
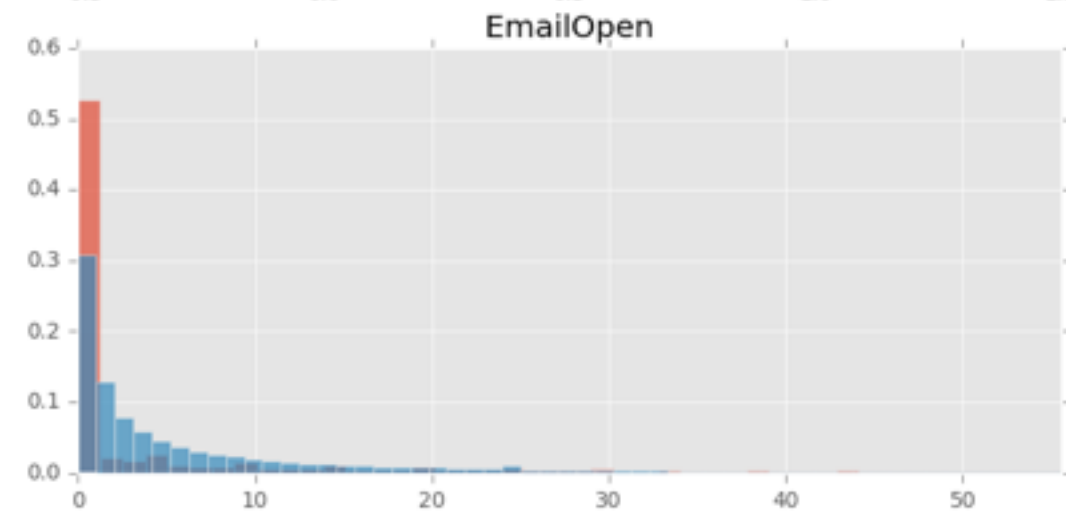
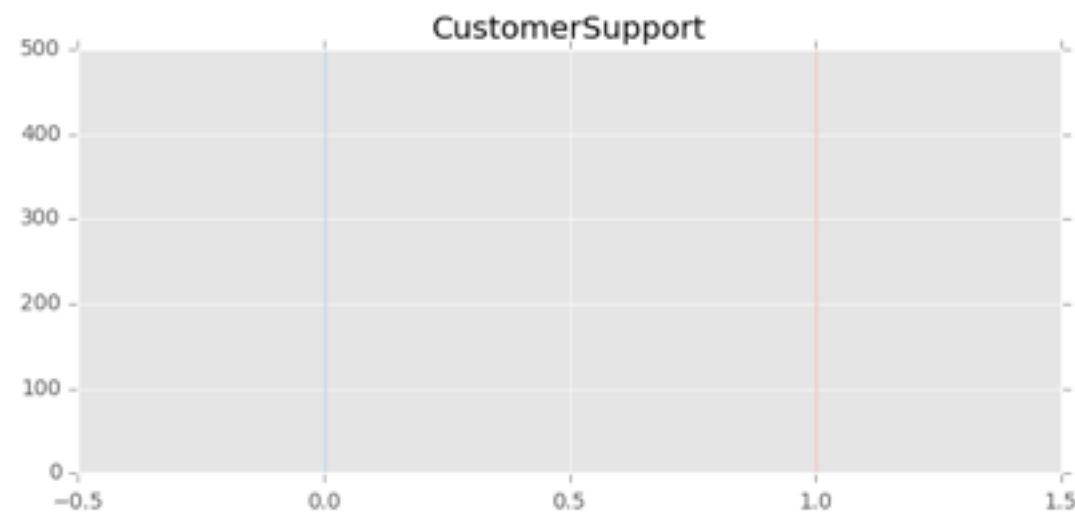
The following graph represents the data that were collected from a study in which teachers were asked to identify underachievers and achievers in their classes and the grade point average of the students was compared to find out if teachers were good judges of student achievement.

Question:

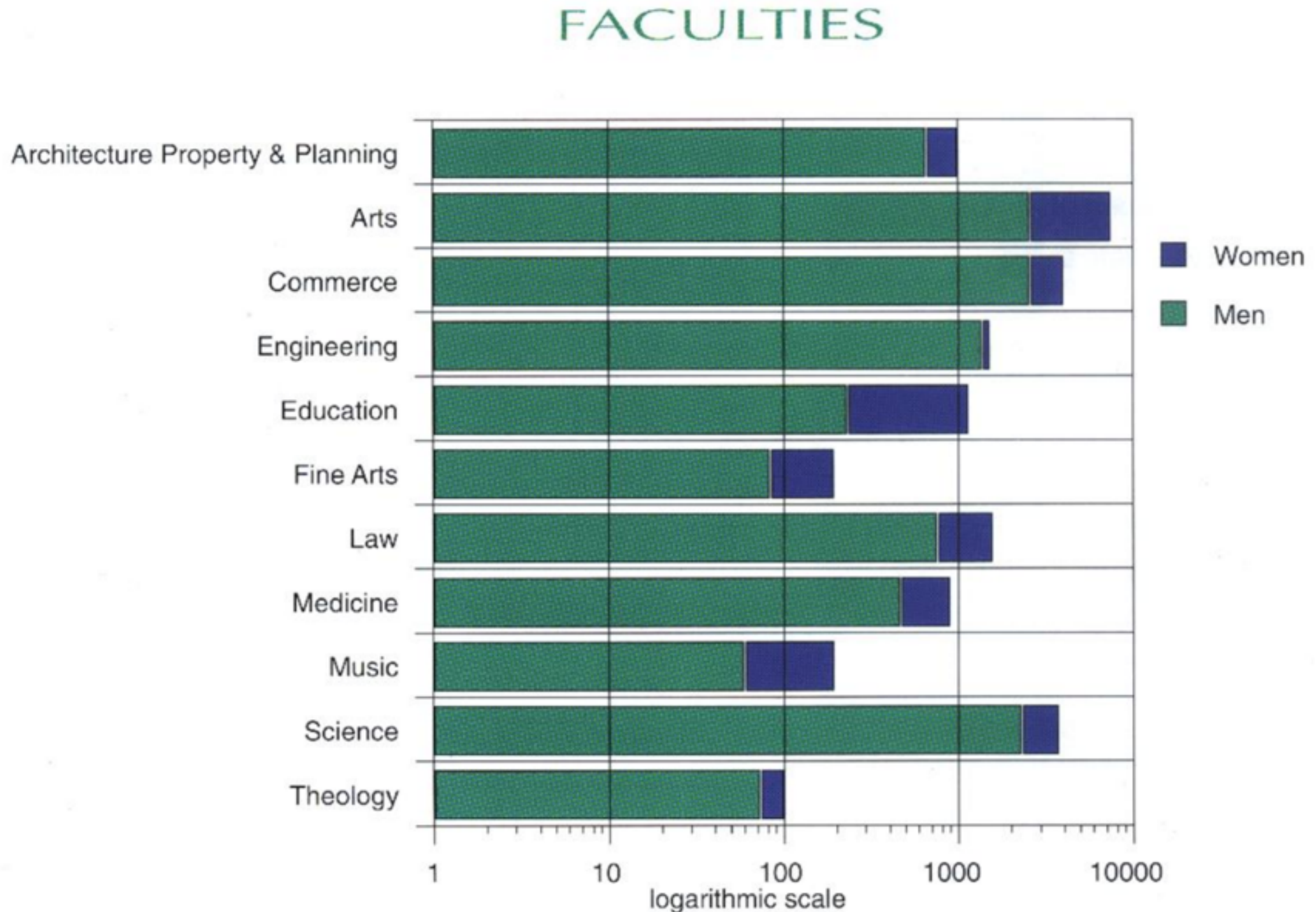
Can you identify any limitations of this graph?



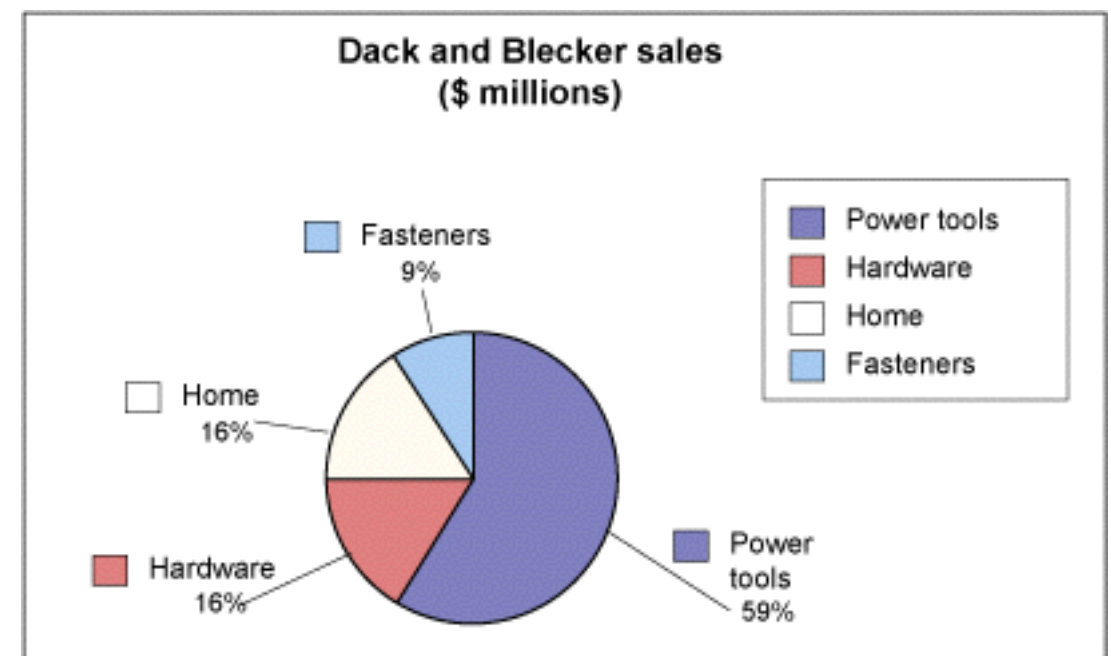
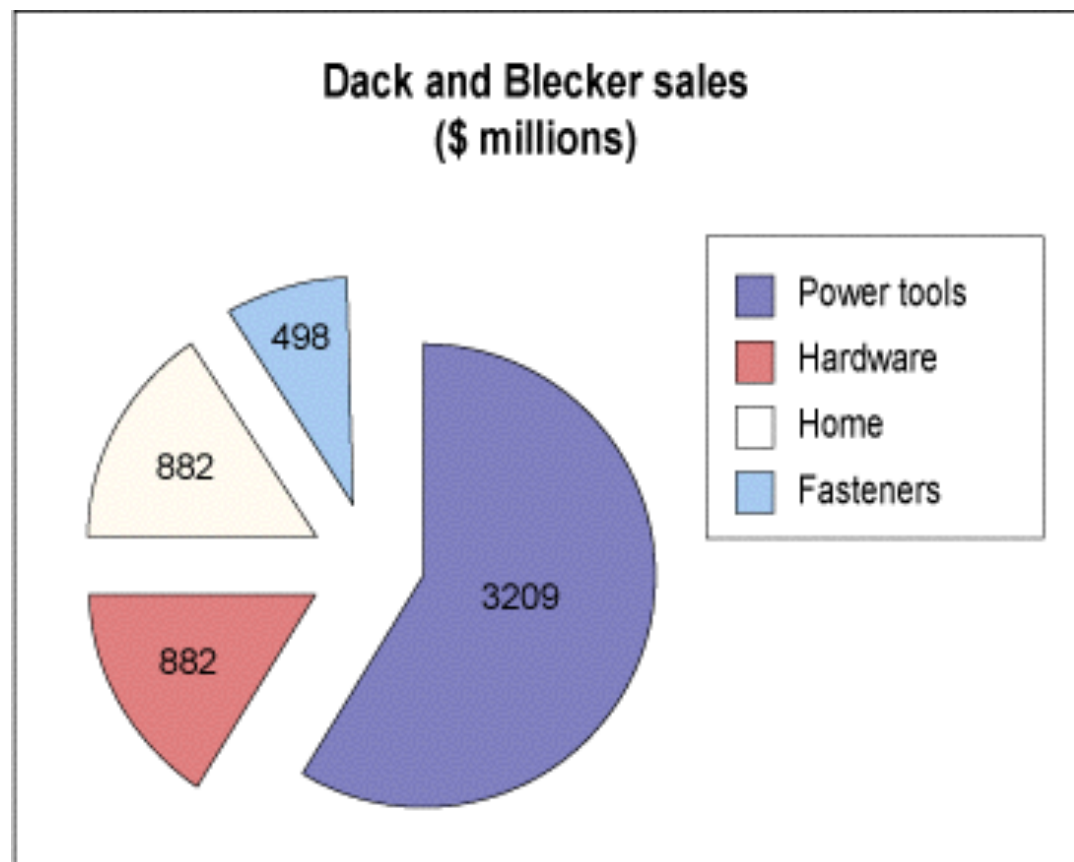
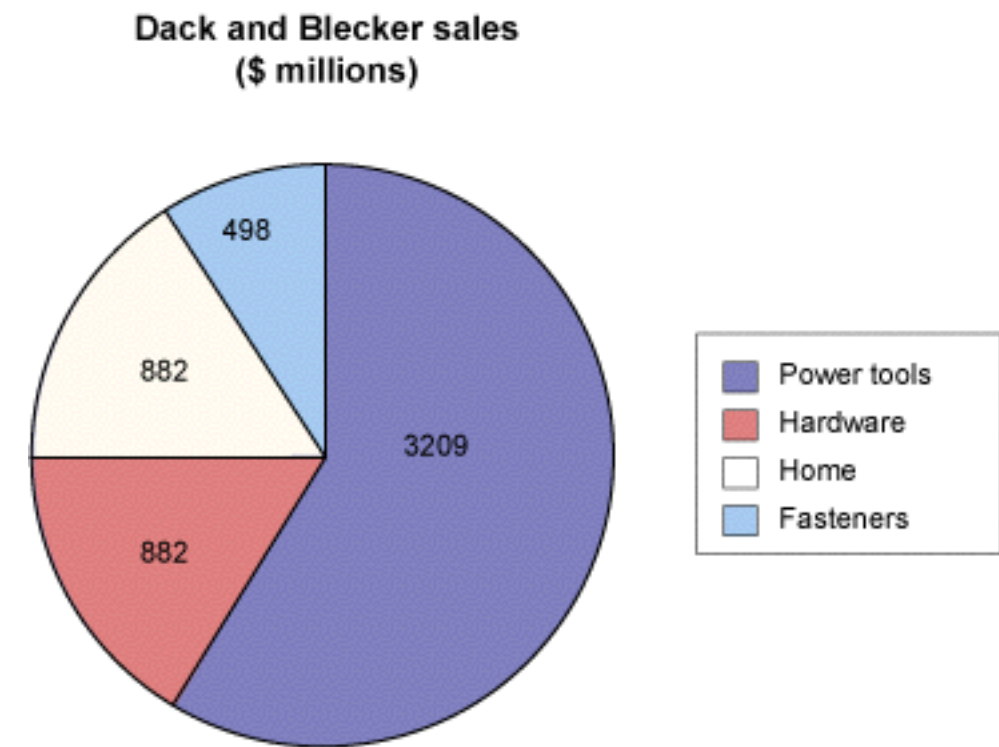
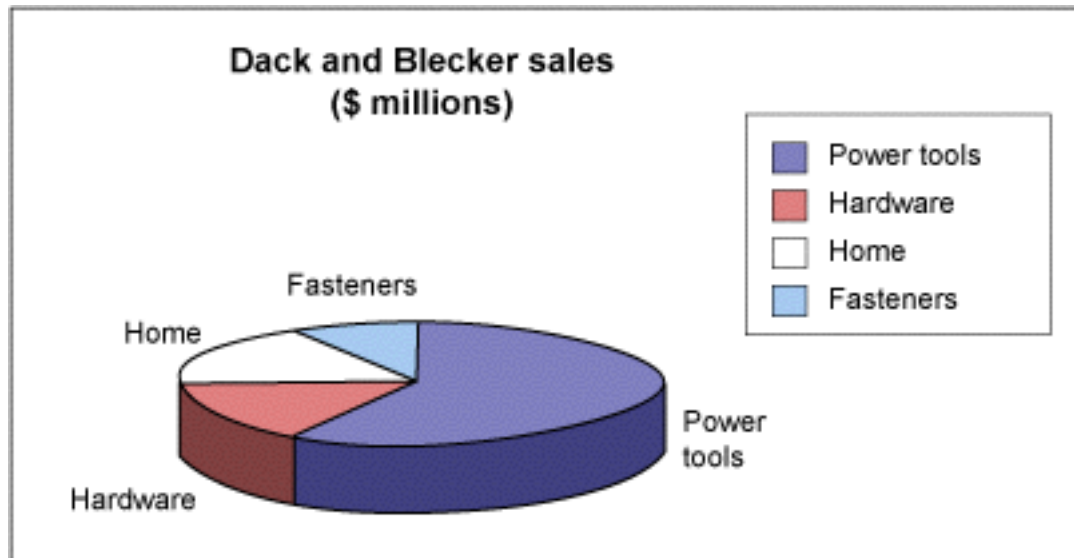
We want to be DRY, but are there pitfalls?
What feedback would you have given this graph?



This is an example of a stacked bar chart gone wrong
Think about the conclusions you'd draw from looking at this
quickly and then discuss what is actually being shown.

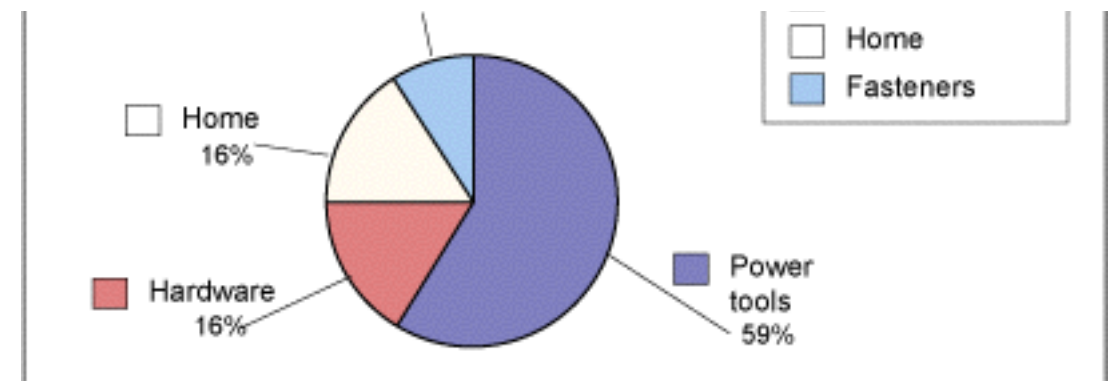
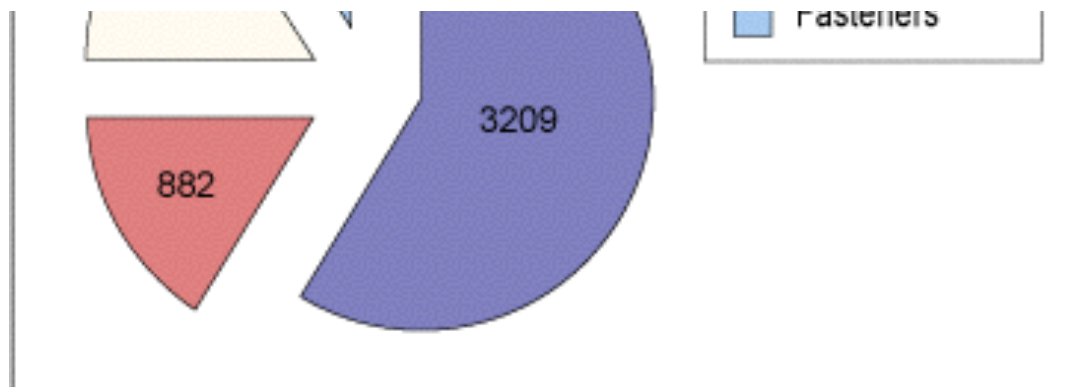


Which one of these is the best?
What is wrong with the other charts?



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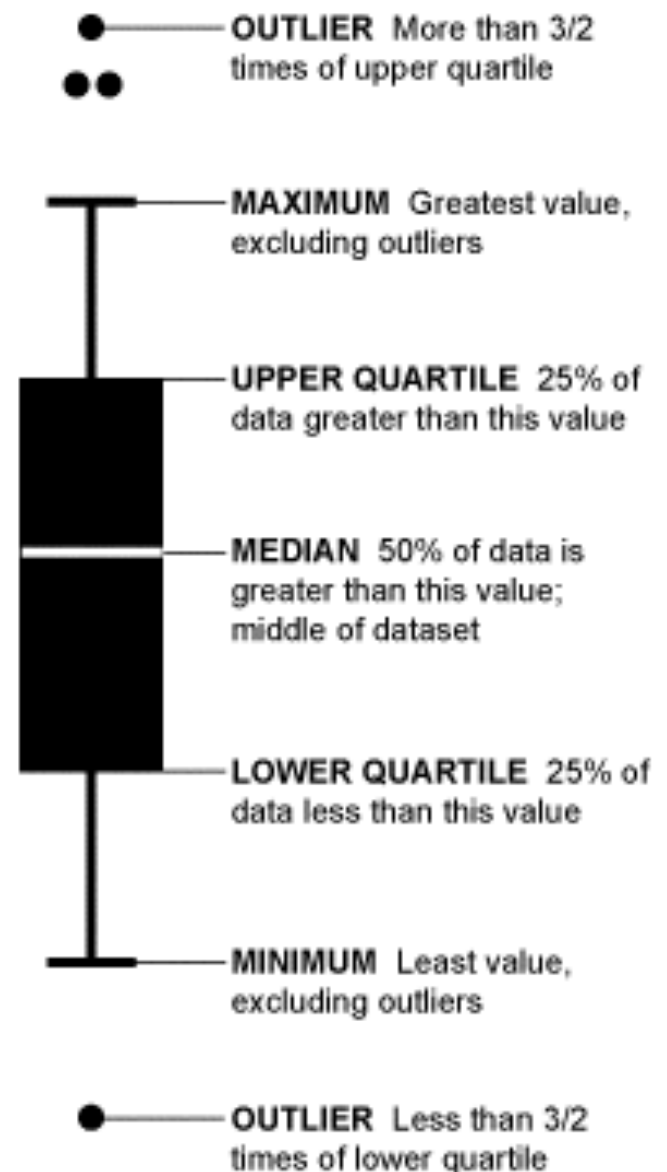
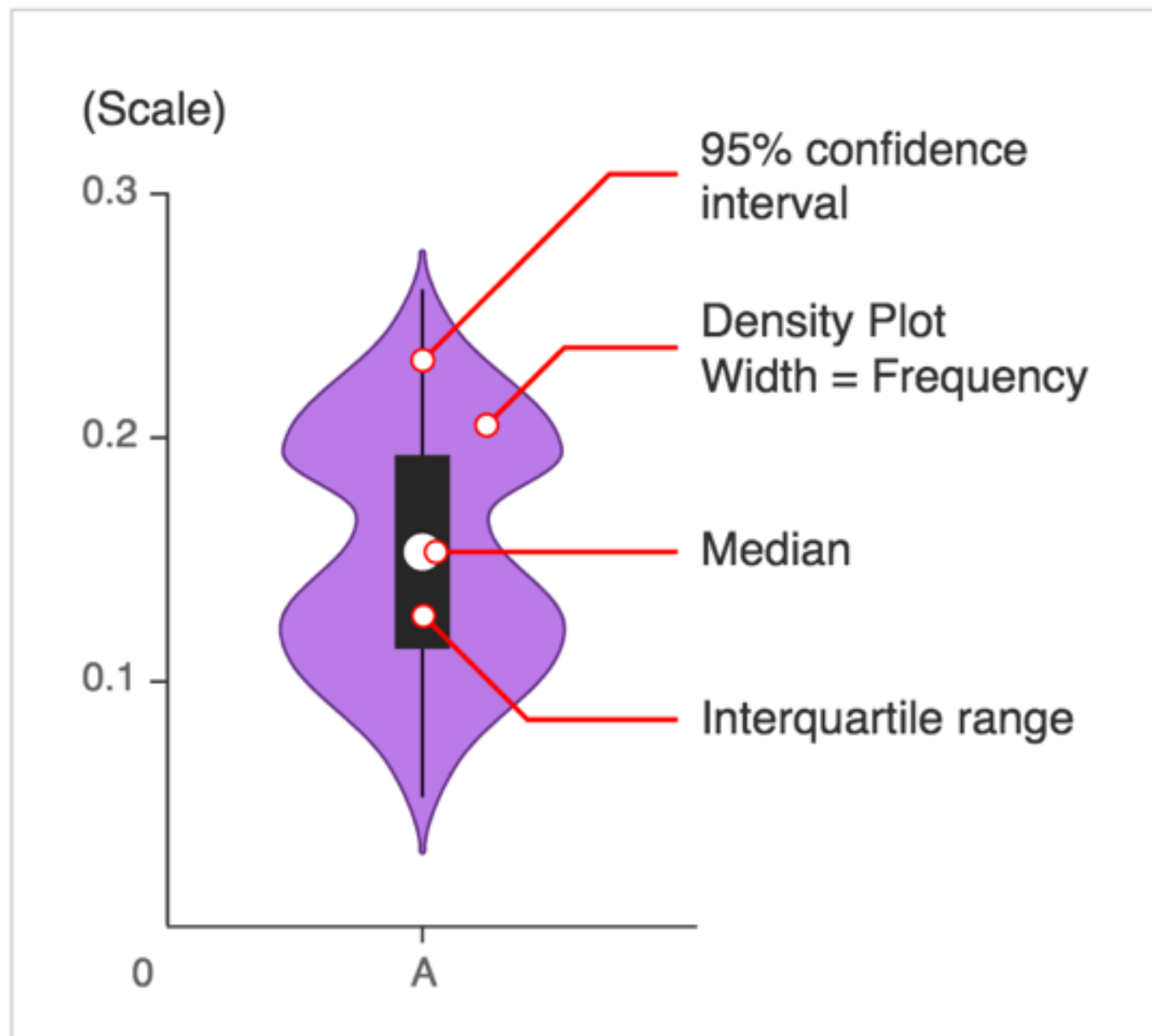
TRICK QUESTION!
NONE ARE THE BEST
NEVER USE A PIE CHART
DARREN DID AND IT WAS A
BAD PLAN



Afternoon Breakout

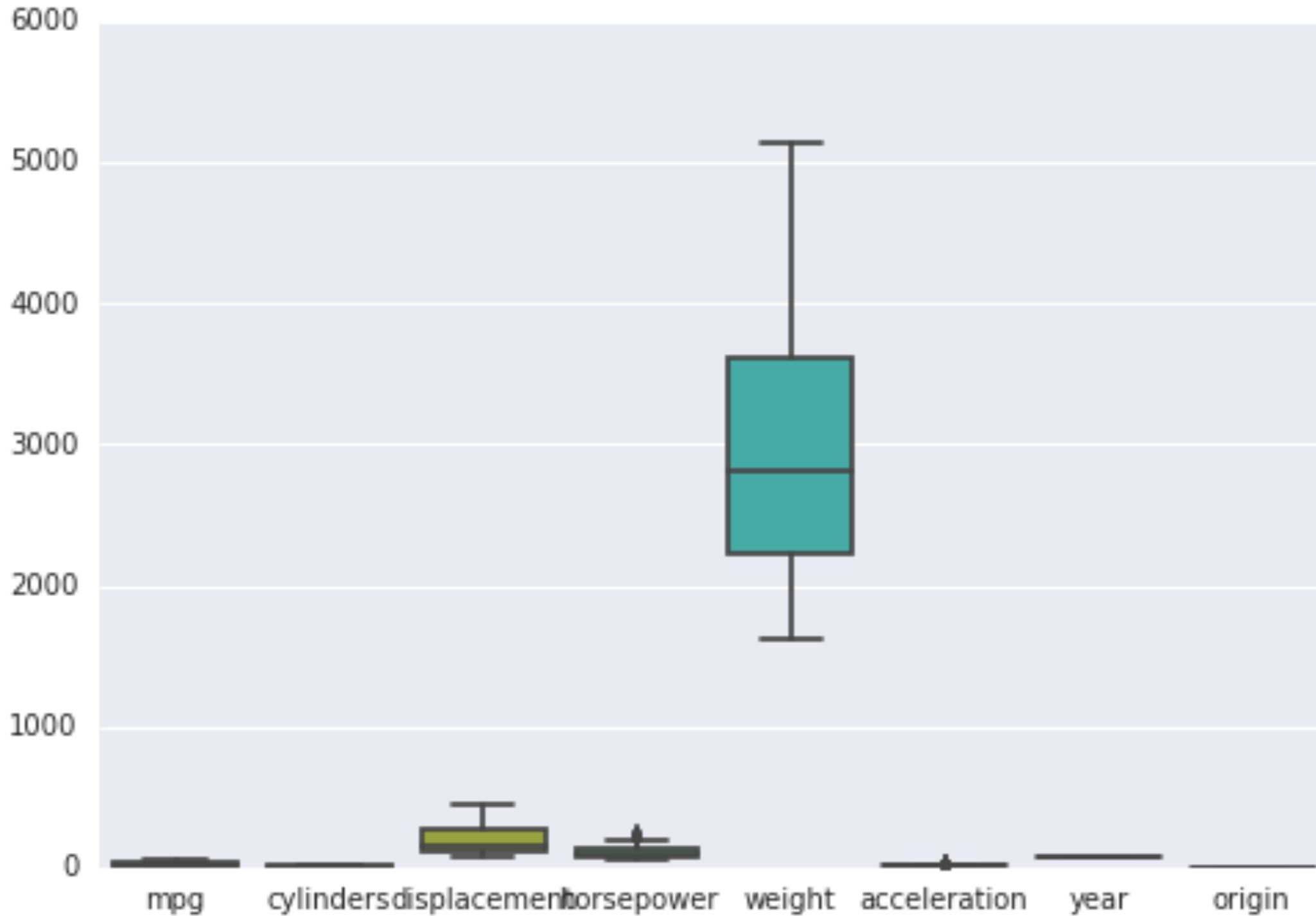
Box & Violin Plot Primer

(Print this or imprint it in your brain)

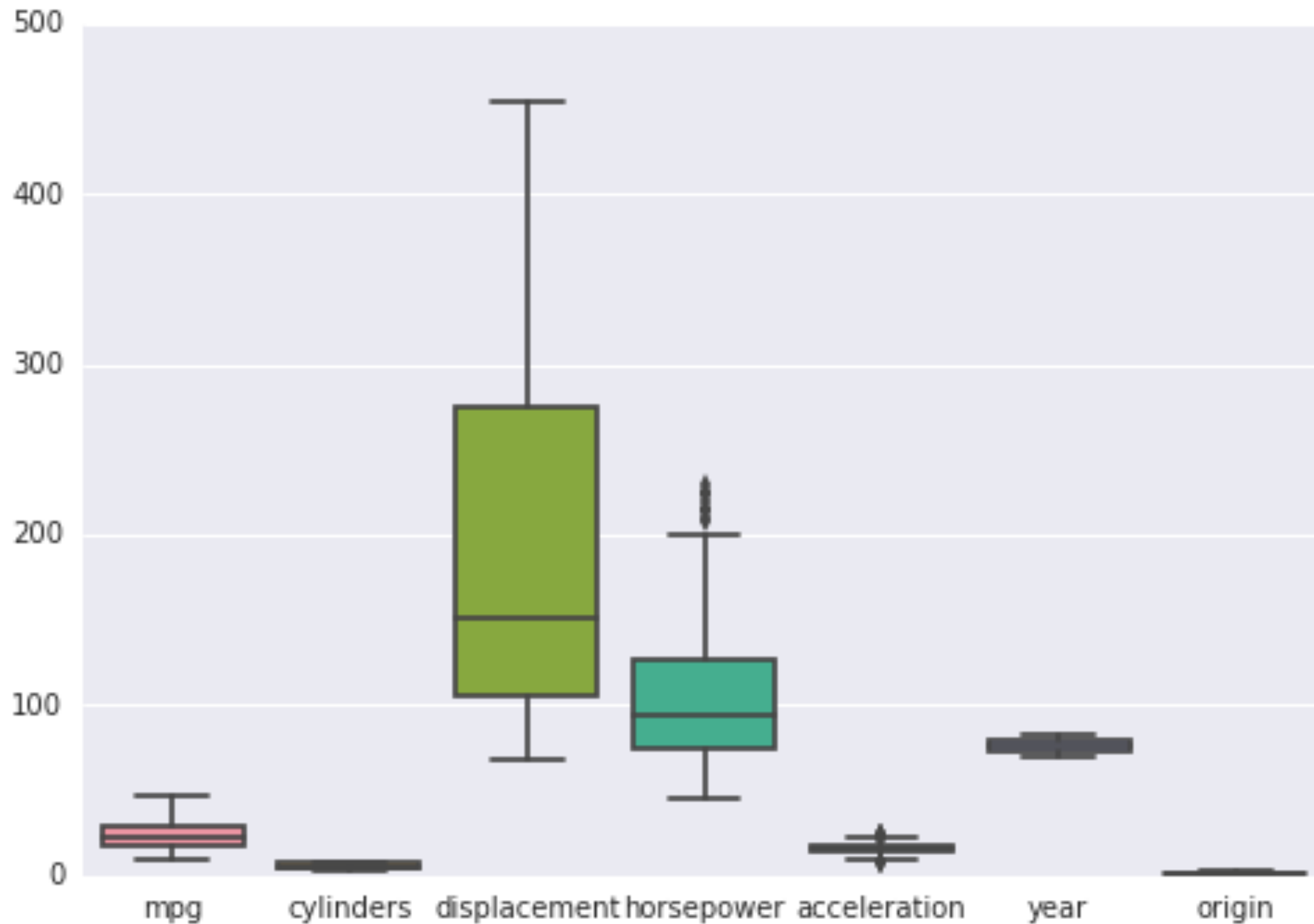


Common Boxplot Mishaps:

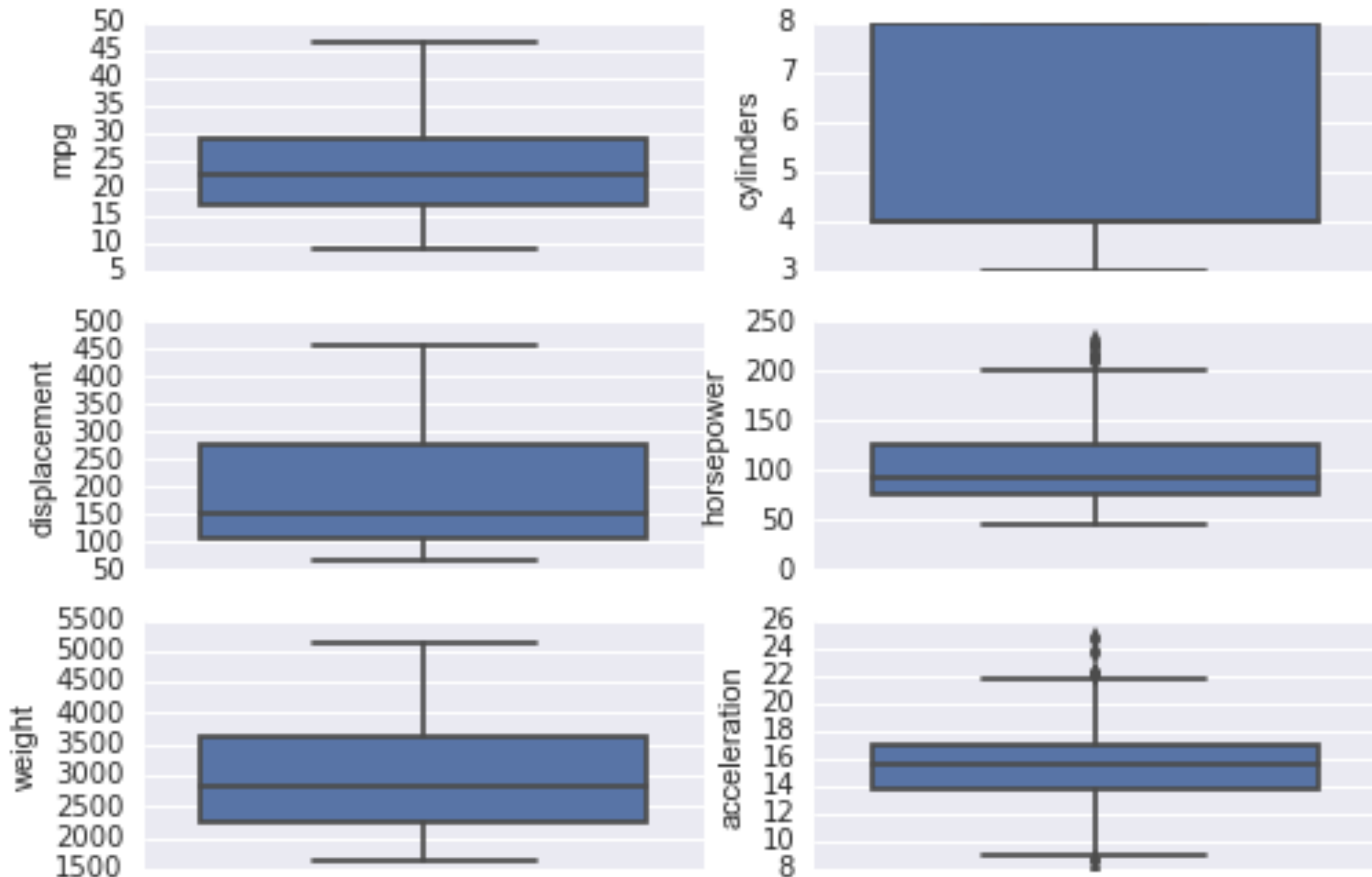
What's wrong with this representation?



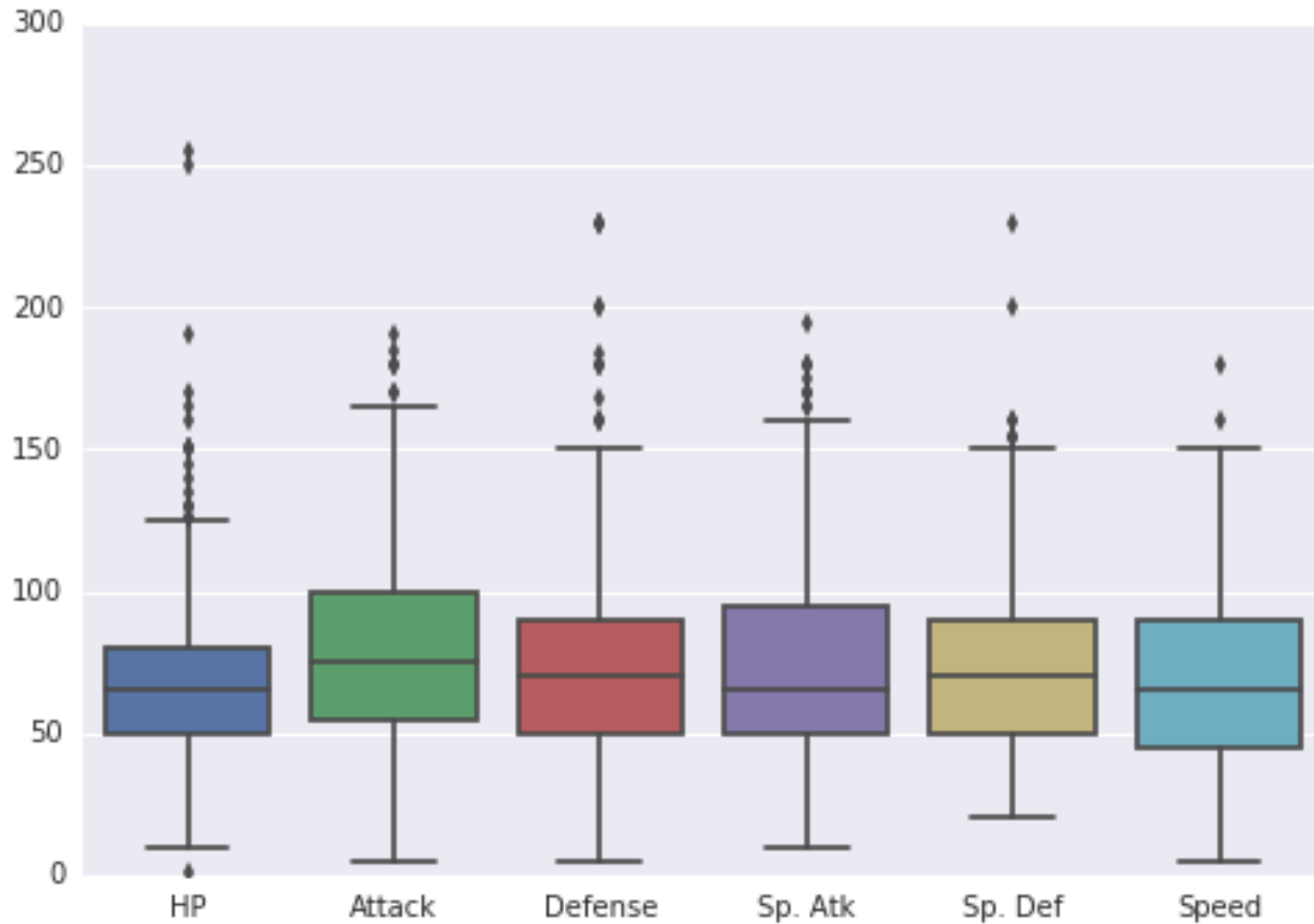
So we removed the bad one...



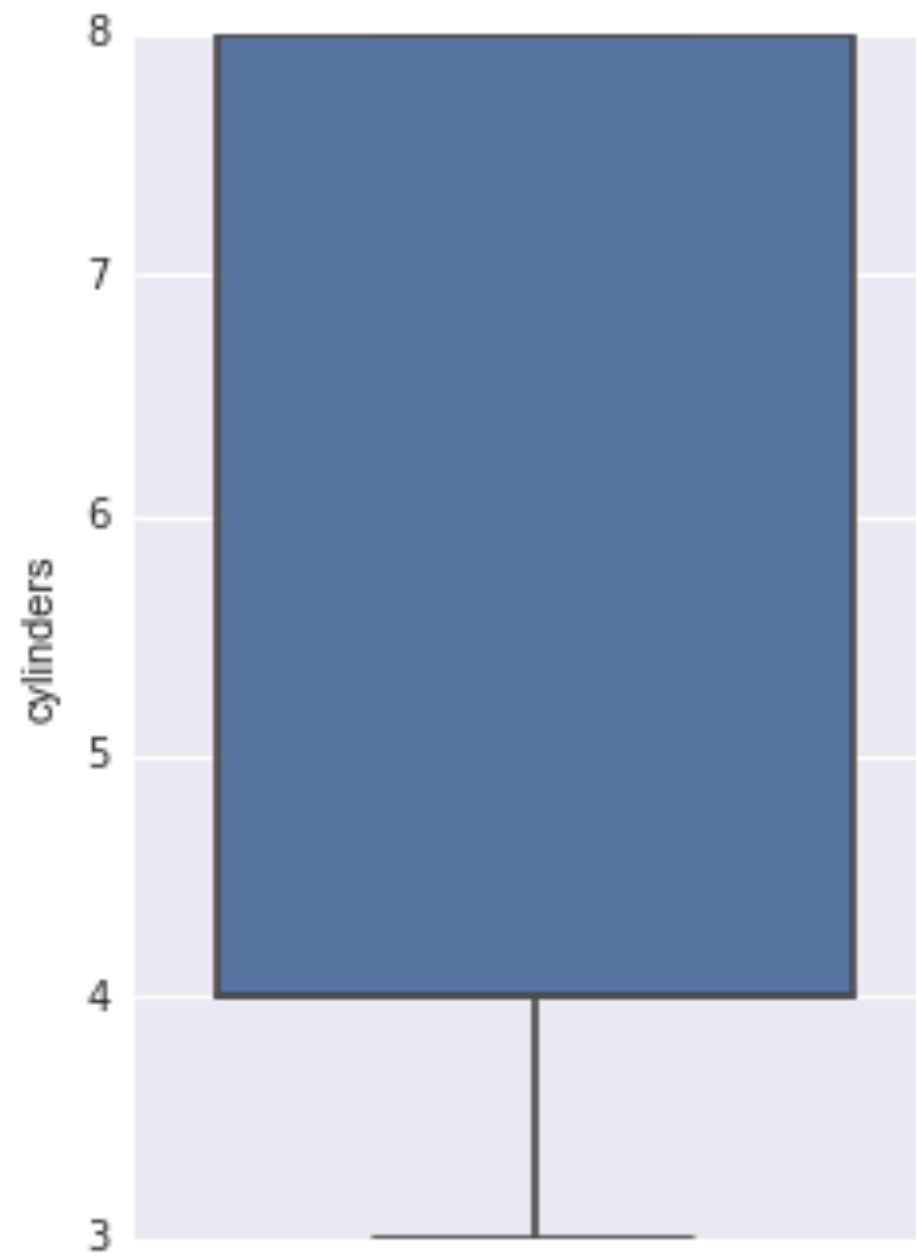
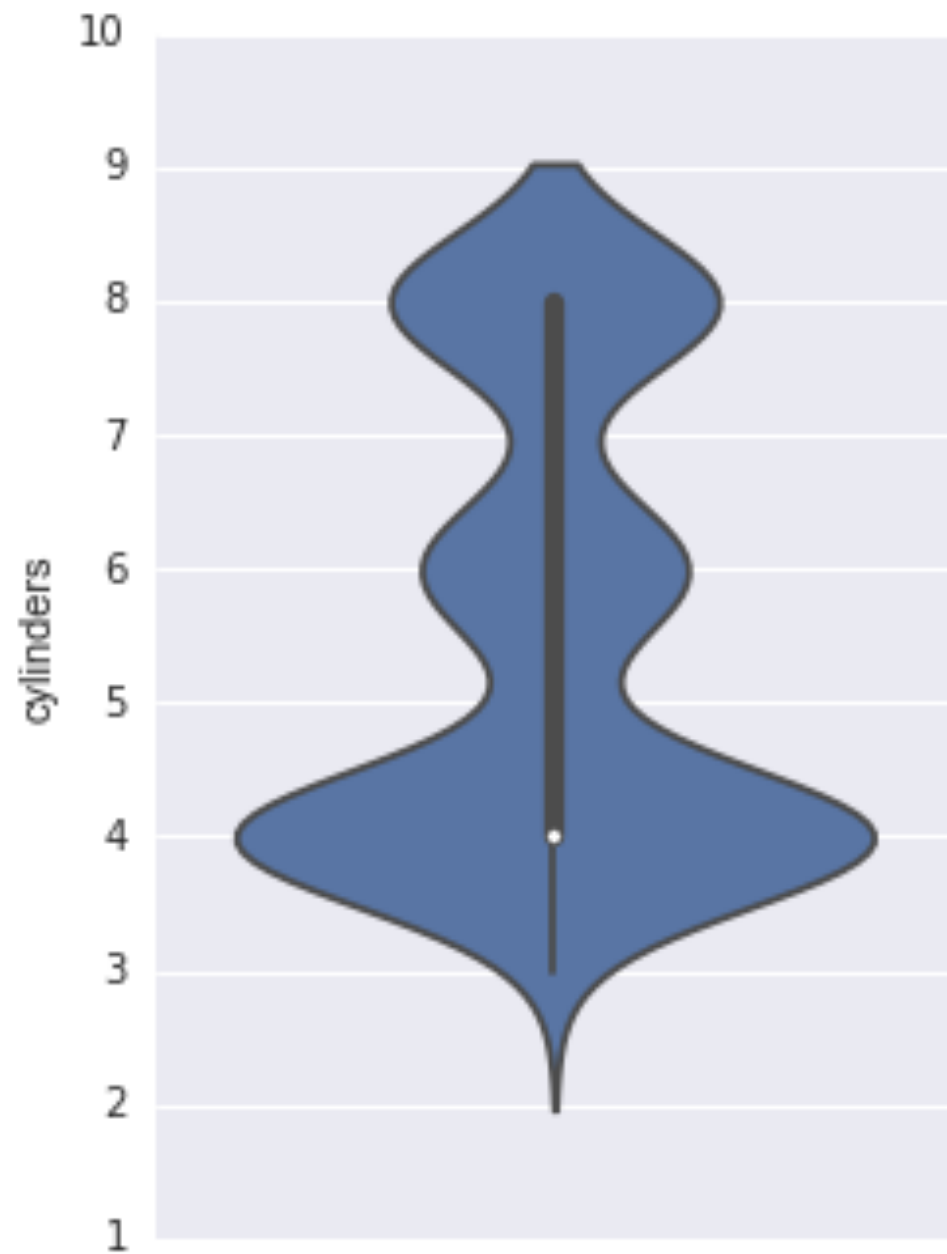
Interpreting Boxplots



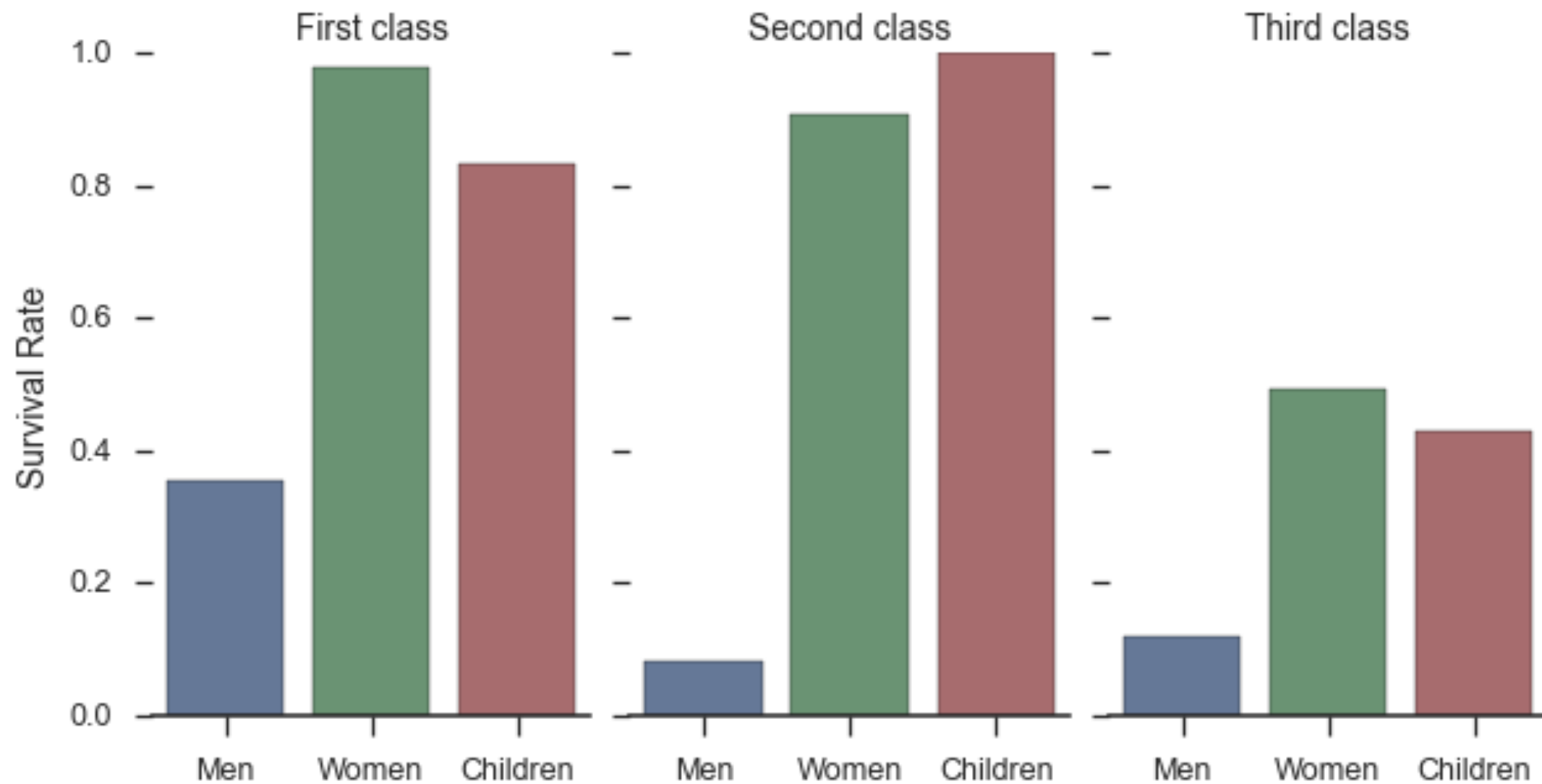
These are all on the same plot, is this okay?



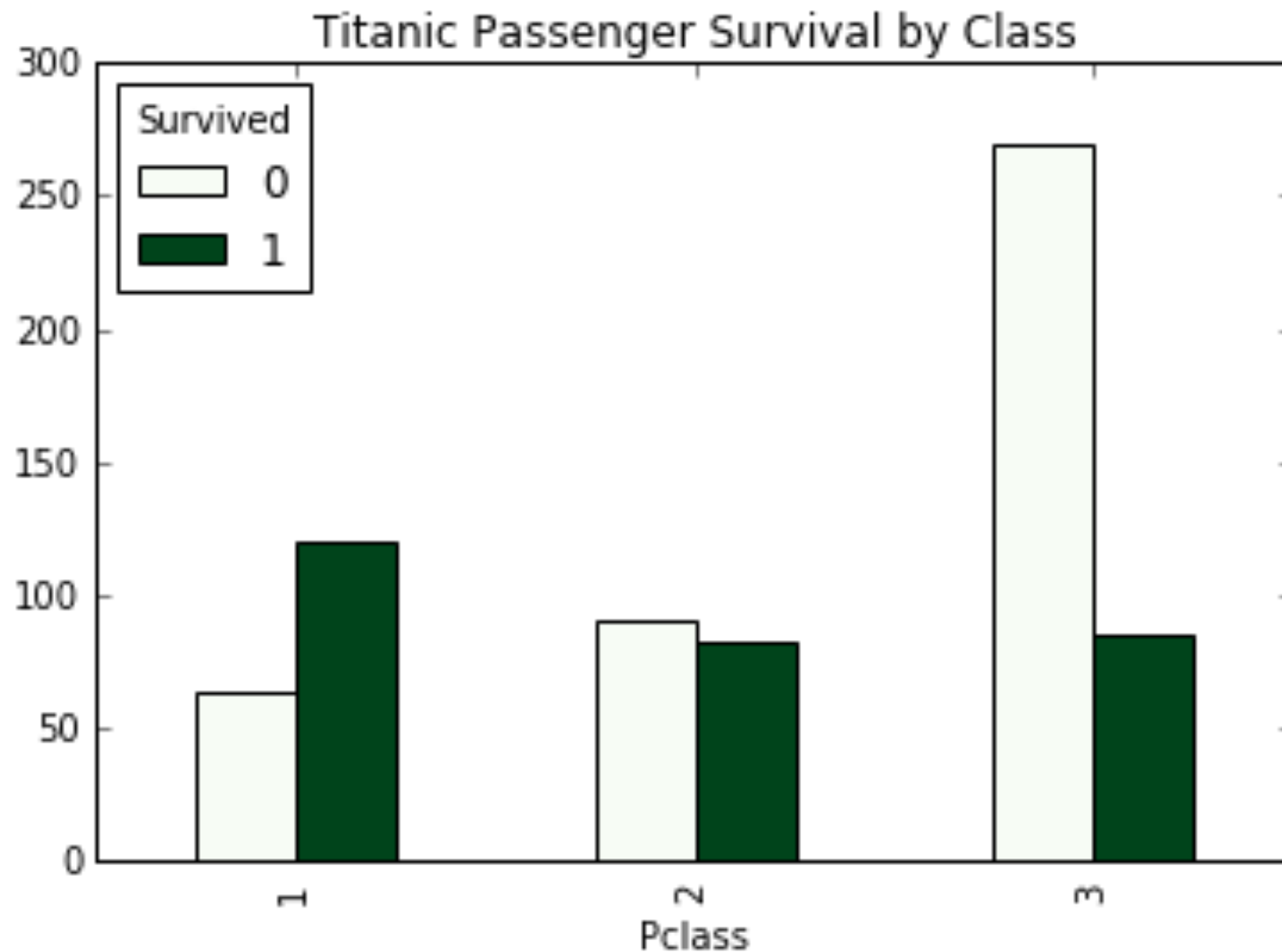
What can we learn from the violin plot we can't learn from the boxplot?



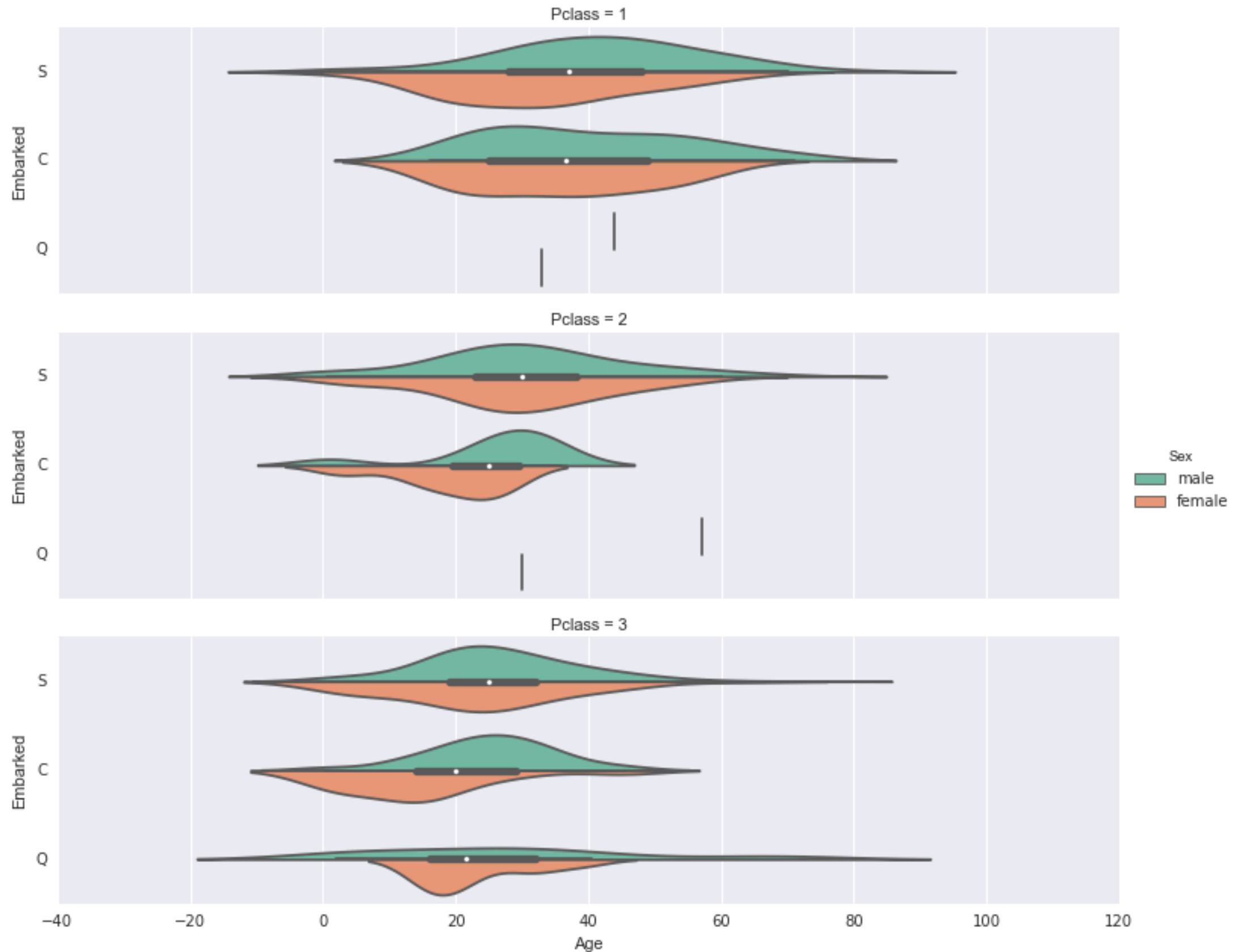
Interpreting Bar Charts



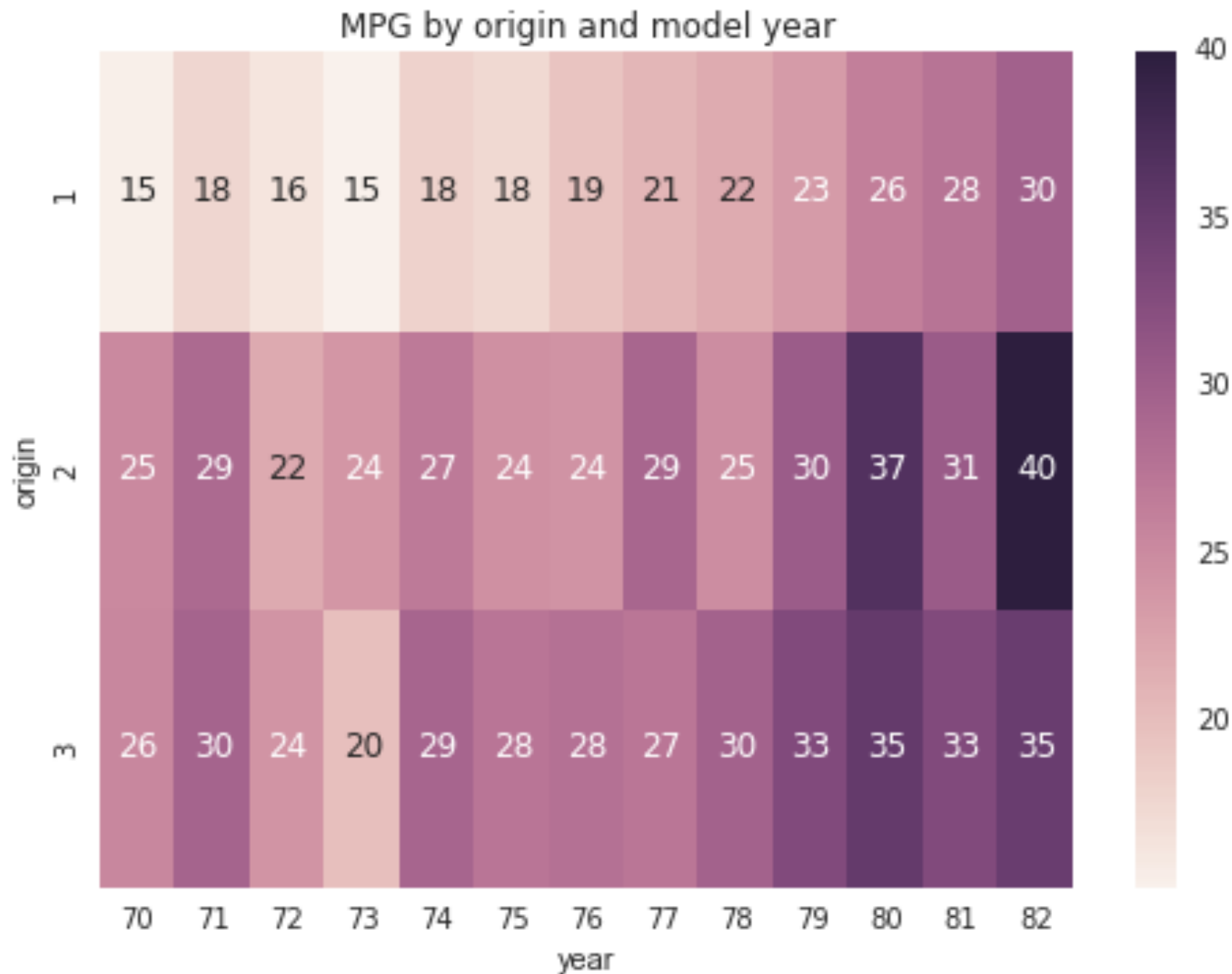
Interpreting Bar Charts



Interpreting Violin Plots



Interpreting Heat Maps



Boxplot XKCD Joke

