THE TEN COMMANDMENTS OF
DATA VISUALIZATION

01 **Thou shalt identify thy message and tell a clear story.**
Every figure should have a clear message; tighten the bond between your message and visual.

02 **Know thy audience.**
Visual should be designed with the audience in mind. Is your figure for specialists or the general public?

03 **Thou shalt consider thy medium.**
Where will your visualization be used? How large will it be, and how will the audience interact with it?

04 **Thou shalt keep it simple.**
Focus on the patterns in your data. Reduce complexity by focusing on what is relevant.

05 **Thou shalt reduce chart junk.**
All graphic elements should have meaning or improve communication.

06 **Thou shalt not mislead the reader.**
Represent your data accurately; pay attention to proportions, axis scaling, and truncation.

07 **Thou shalt not abuse colours.**
Limit your palette - each colour should have a purpose. Remain consistent for all charts in a series.

08 **Thou shalt use chart types that best fit thy message.**
Choose the type of plot that emphasizes your desired message in the data.

09 **Thou shalt avoid 3D plots in static media.***
3D plots are unjustified for data with only two axes - use in interactive media only. *Exception for brain images.*

10 **Thou shalt not trust default formatting.**
Most plots require some customization (e.g. colours, markers). Defaults are okay for any plot, best for none.

MiCM McGill initiative in Computational Medicine