

Lecture 14 – 3D Plotting

Today's Learning Objectives:

1. Describe when the use of 3D cues is appropriate in visualizations.
2. Practice different methods of implementing 3D cues.

Discussion: When do you use 3D?

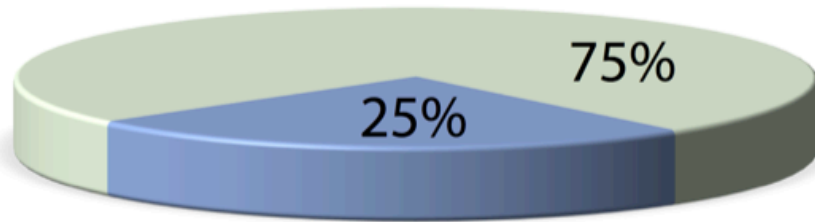
Question 1: What are data/plot types that would benefit from using 3D elements?

Question 2: What are data/plot types would adding 3D elements make the visualization less clear?

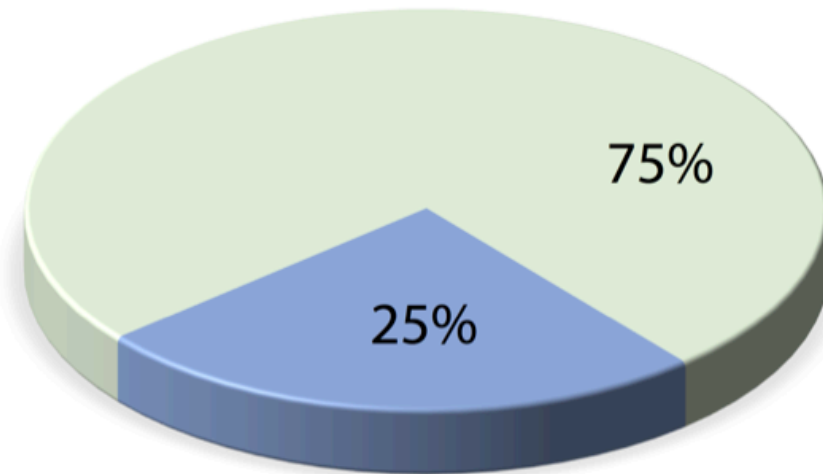
When not to use 3D

Gratuitous use can mislead

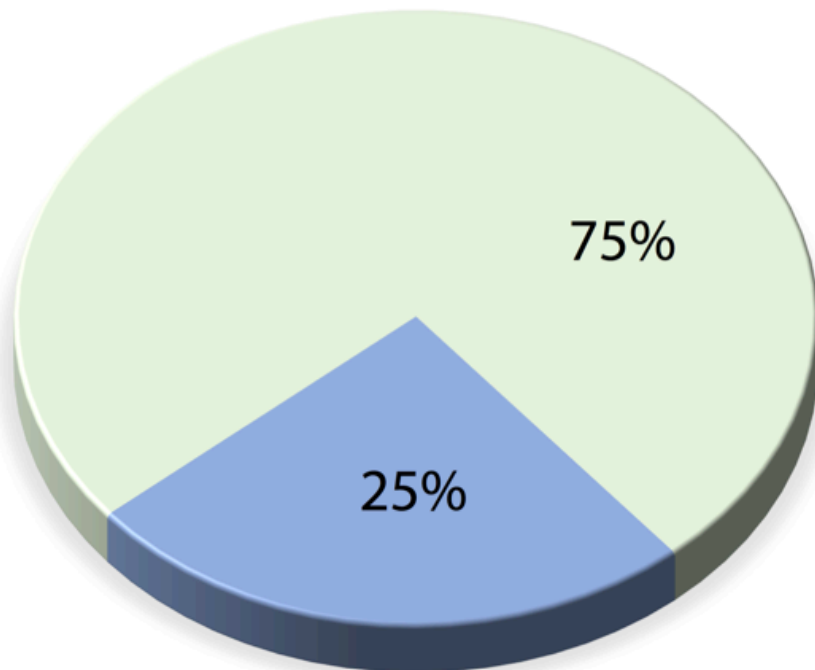
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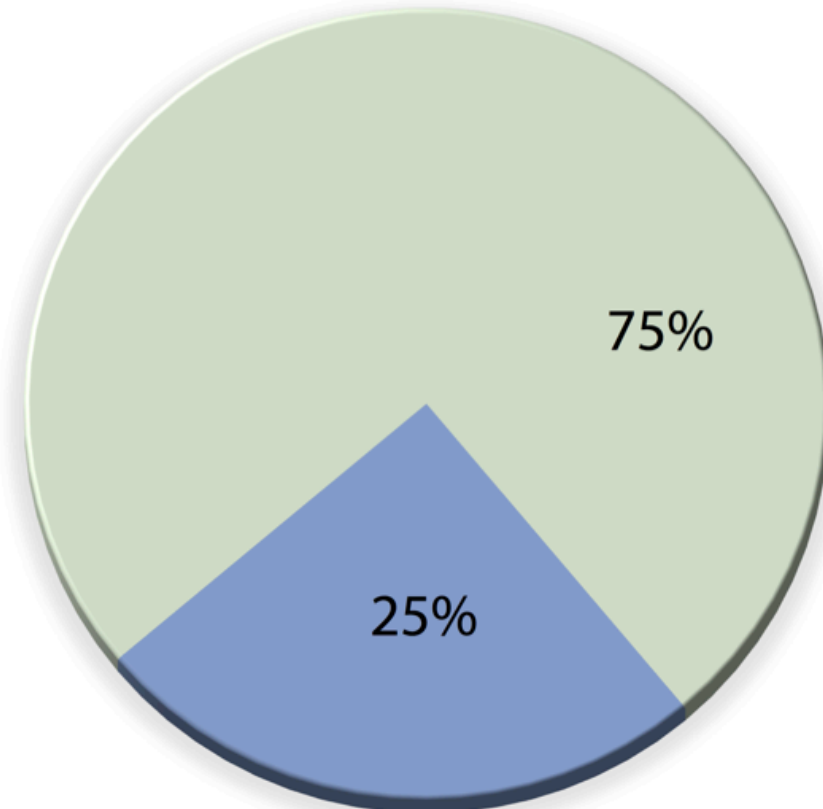
b



c

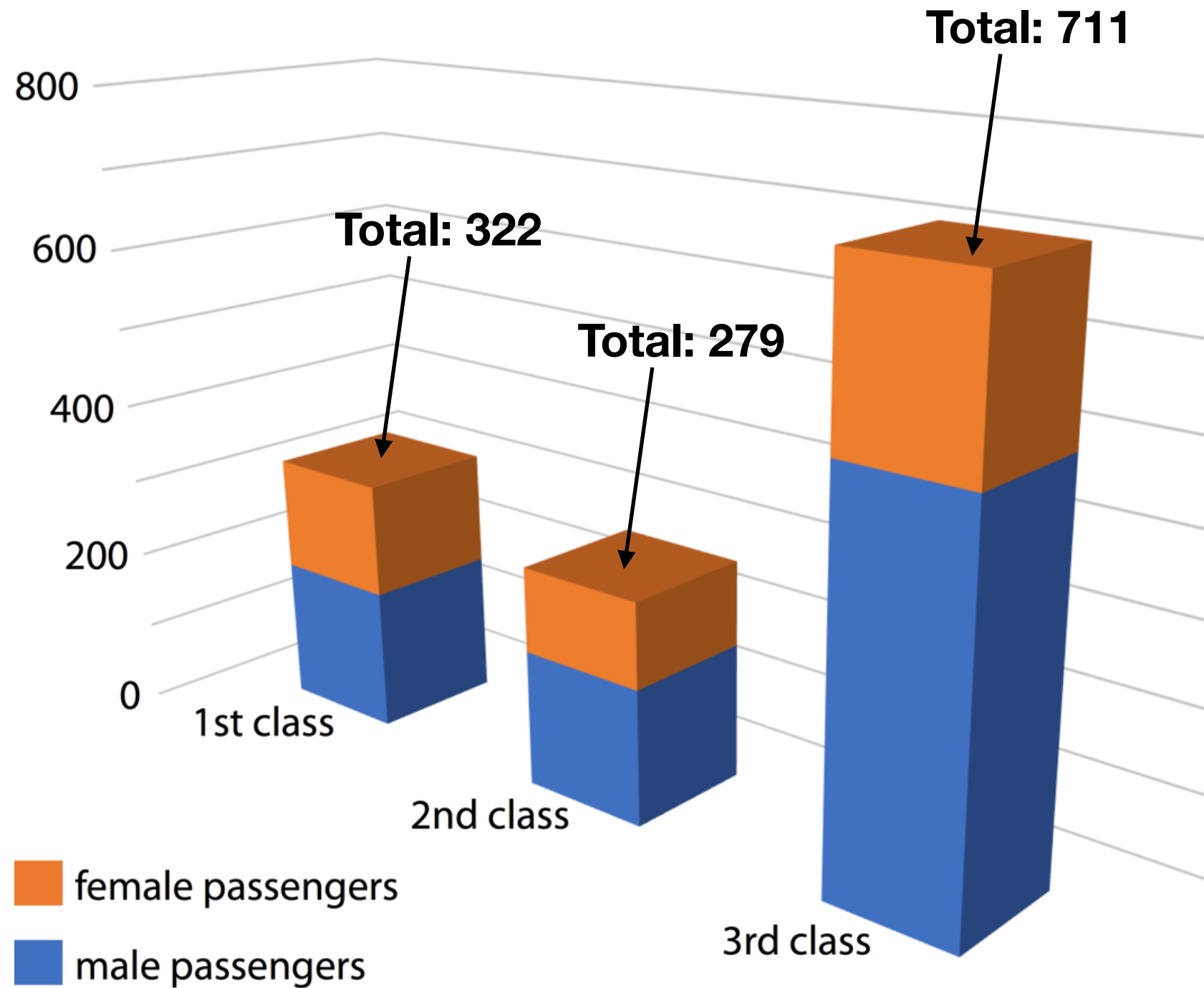


d



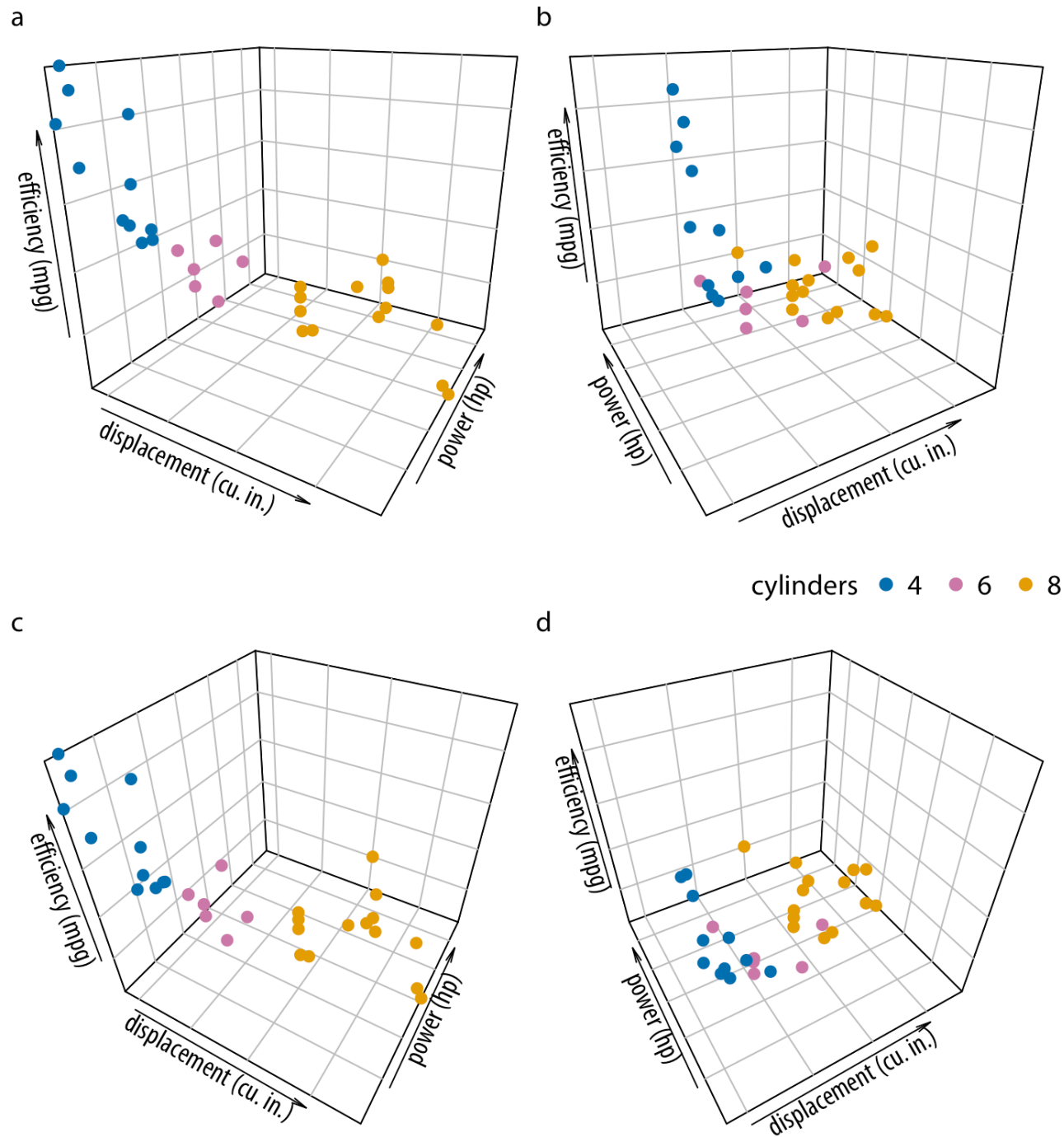
When not to use 3D

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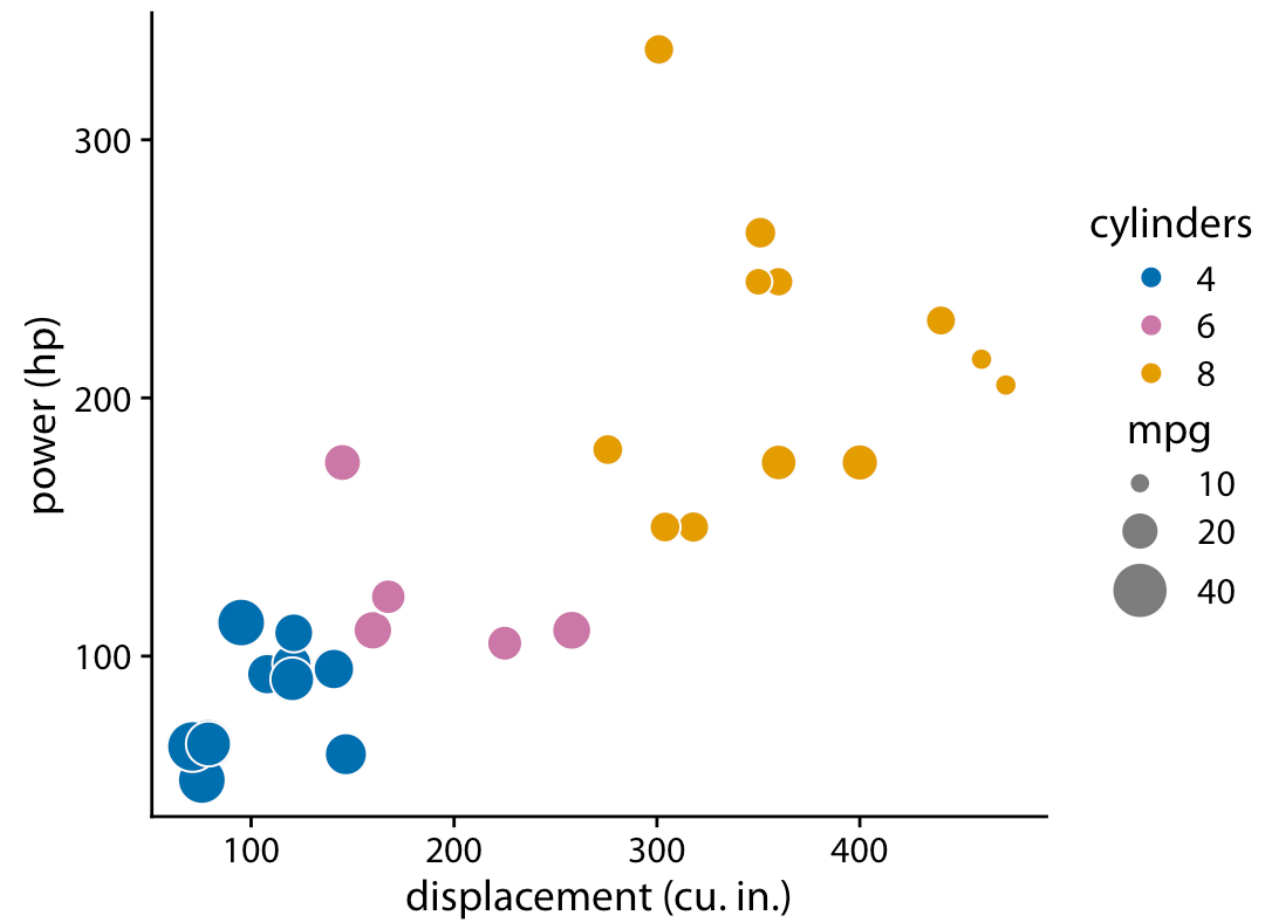


When not to use 3D

When another way to encode works better



Wilke Fig 26.3 *Fundamentals*



Wilke Fig 26.5 *Fundamentals*

When to use 3D: representing 3D objects

Topographical relief maps



Wilke Fig 26.9 *Fundamentals*

Protein folding structures



sequence conservation



Wilke Fig 26.10 *Fundamentals*

Install rayshader package

- For Mac Users:
 - Install Xcode before attempting to install rayshader
 - Install XQuartz before attempting to run
- For Windows Users:
 - Install Rtools before attempting to install rayshader
- Install rayshader:
 - `install.packages("rgdal")`
 - `install.packages("rayshader")`