CHAPTER 3: CLUTTER IS YOUR ENEMY

Clutter : The thing that can contribute to excessive or extraneous cognitive load is known as clutter. These are visual elements that take up space but don’t increase understanding. The chapter aims to reduce clutter since it makes our visuals appear more complicated than necessary.

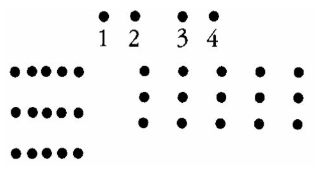
Cognitive load:

Gestalt principles of visual perception:

When it comes to identify which elements in our visuals are signal and which might be noise(also known as clutter), we consider the Gestalt Principles of visual perception. They are rules of the organization of perceptual scenes

There are six principles included on it:

1. Proximity:

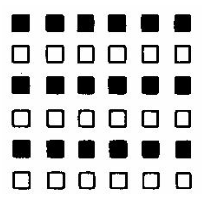


As we can see in figure,  elements tend to be perceived as aggregated into groups if they are near each other.

1+2 = as one group

3+4 = as another group.

1. Similarity:



Tendency to see groups which have the same characteristics. This principle state that things which share visual characteristics characteristics such as shape, size and color.

1. Enclosure:

The enclosure principle is to draw a visual distinction within our data.

1. Closure

The closure concept says that things to be simple and to fit in the constructs that are already in peoples head. Because of this people tend to perceive a set of individual elements as a single, recognizable shape.

1. Continuity

The principle of continuity is similar to closure: when looking at objects, our eyes seek the smoothest path and naturally create continuity in what we see even where it may not explicitly exist

1. Connection.

We tend to think of object that are physically connected as part of a group. The connective property typically has a stronger associative value than similar color, size or shape. One way that frequently leverage the connection principle is in line graphs to help our eyes see order in the data.

Decluttering:

The following steps are taken for decluttering:

1. Remove chart border
2. Remove gridlines
3. Remove data markers
4. Clean up axis labels
5. Label data directly
6. Leverage consistent color

Visual clutter creates excessive cognitive load that can hinder the transmission of our message. The Gestalt principle can help understand how our we sees and allow you to identify and remove unnecessary visual elements.

CHAPTER 4: FOCUS YOUR AUDIENCE ATTENTION

This chapter tells about how people see and how we can use that to our advantage when crafting visuals.

Memory :

1. Iconic memory
2. Short term memory
3. Long term memory

Preattentive attributes signal:

If we use preattentive attributes strategically, they can help us enable our audience to see what we want them to see before they even know they’re seeing it. Similarly we have as follows:

1. Preattentive attributes in text.
2. Preattentive attributes in graphs.
3. Size
4. Color and how to use it.
5. Position on page.

CHAPTER 5: THINK LIKE A DESIGNER

This chapter says how traditional design concepts can be applied to communicating with data.

Creating a clear visual hierarchy of information:

We can visually pull some items to the forefront and push other elements to the background, indicating to our audience the general order in which they should process the information we are communicating,

Accessibility:

The concept of accessibility says that designs should be usable by people of diverse abilities. Applied to data visualization, it is as design that is usable by people of widely varying technical skills. You might be engineer but it shouldn’t take someone with an engineering degree to understand your graph.

Don’t over complicate:

The steps are as follows

1. Make it legible
2. Keep it clean
3. Use straightforward language
4. Remove unnecessary complexity.

Aesthetics:

Steps taken as follows.

1. Be smart with color.
2. Pay attention to alignment
3. Leverage white space.

Acceptance :

The steps are given below:

1. Articulate the benefits of the new or different approach.
2. Show the side by side.
3. Provide multiple options and seek input.

CHAPTER 6: DISSECTING MODEL VISUALS

This chapter tells about the several model visuals and discuss the thought process and design choices that led to their creation. This also discusses about the choice of visual, relative ordering of data, alignment and positioning of elements, and use of words.