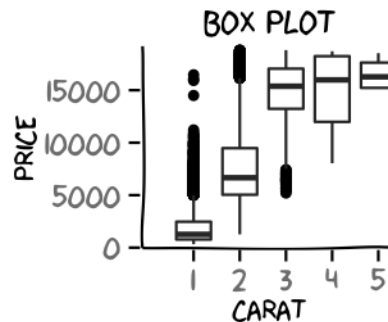
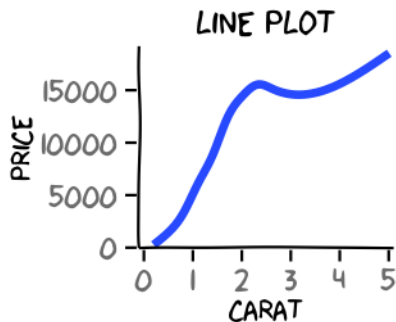


# FIGURE LEXICON

**What is a figure?** If we imagine a **visualization** as a visual interface between the viewer and the data then a figure is a visualization selected to convey a specific **message(s)** present in the data. The lexicon presented below allows us to analyze and discuss the components present in the figure and their contribution to conveying the figure's intended message(s).

**COMPOSITION** Visual information can frequently be represented in multiple ways; the choice of how to view this data is the composition.

*What is the best way to **compose** the image in order to represent the data?*



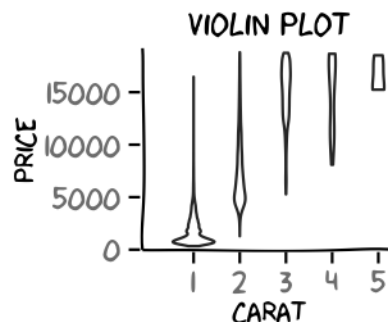
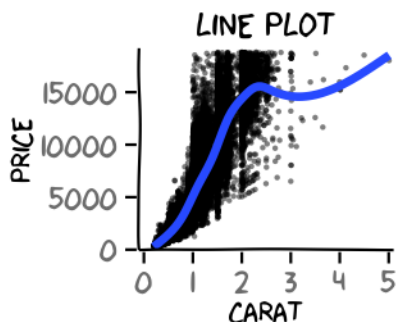
Example 1: Two examples of **compositions** that can be used to represent the same data; in this case the relationship between the carat and the price of a diamond.

Add'l Compositions: bar plot, dot plot, density plot, violin plot

*Message: The price of a diamond increases with size (carat)*

**DETAIL** The detail term reflects the amount information that is presented to the viewer. It is a delicate balance aimed at providing enough information to convey the message while limiting extraneous information that may detract from it.

*What is the level of **detail** required to convey your message?*



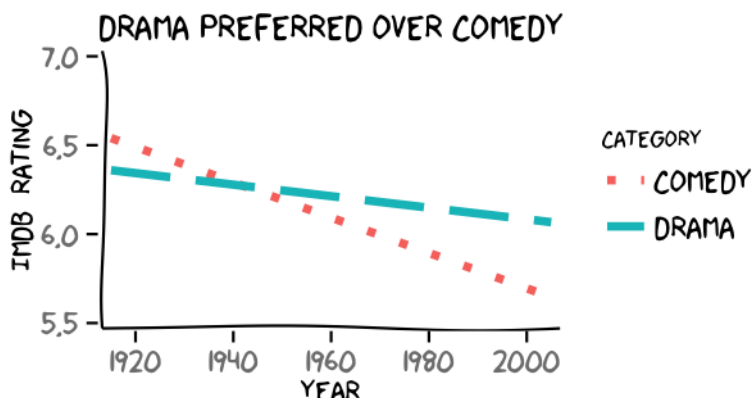
Example 2: The same examples as Figure 1 can be viewed with additional detail. The line plot now has the individual points plotted, the boxplot has been converted to a violin plot (providing us with the additional detail of price distribution).

*Does this additional detail contribute effectively to the message?*

**KEY FEATURES** Abstractly, key features are the ideas present in the figure that directly contribute to the message.

**& GUIDES** Guides are visual cues that direct the viewers attention to the key features.

*What **features** are **key** to convey the message of this figure? & How do you **guide** the viewer to the Key Features?*



Example 3: The best way to understand key features is to determine which elements of a figure convey the intended message. In this example the most prominent key feature is the relationship between comedy & drama over time. The elements **color**, **line type**, **axis labels**, **figure title** and **legend** act as guides by directing attention and providing the necessary context of this relationship.