Visual Deception
How to Spot Misleading Charts

and **see** when people are lying to you

TRUNCATING THE Y-AXIS
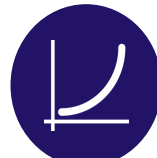*EXAGGERATING AMOUNTS WHERE AREA IS THE ENCODING (BAR AND AREA CHARTS)*

PLOTTING VOLUME VIA RADIUS
RATHER THAN AREA FOR THE UNDERLYING VARIABLE

DUAL AXES
TORTURING THE DATA TO REVEAL CORRELATION. IF YOU MUST, AND AT A MINIMUM, HARMONIZE THE AXES

CUMULATIVE CHARTS
CAN BE USED TO HIDE TRENDS AND FLUCTUATIONS WITHIN

MANIPULATING BIN SIZES
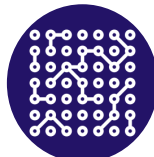*SEVERAL DIFFERENT STORIES CAN BE CONVENIENTLY TOLD WITH VARIOUS BIN SIZES*

3D CHART EFFECTS
ADDING COLOR, SHADING OR AN EXTRA DIMENSION JUST BECAUSE

CHERRY-PICKING TIME RANGES *TO MAKE HIDE RECURRING TRENDS OR ANOMALIES OUTSIDE A SPECIFIC TIME WINDOW.*

HIDING A TREE IN A FORREST *TO MAKE A NUMBER DISSAPEAR BY PROVIDING TO BROAD A SCALE OR SEA OF OTHER DATAPOINTS.*

MAPPING ABSOLUTES INSTEAD OF RATES *AND THUS JUST SHOWING POPULATION*

TRYING TO BE SMOOTH
SMOOTHING LINES TO GIVE THE ALLUSION YOU HAVE MORE DATA

DISREGARDING LOGIC *CHARTING RELATIONSHIPS SUCH AS PART-TO-WHOLE THAT DON'T ADD UP*

2 + 2 = 5

BIG NUMBER SLIDES: *ONE NUMBER ALONE IS CONSPICUOUS, AND AVOIDS MEANINGFUL COMPARISONS*

COMPARING ACROSS VISUAL ENCODINGS *TO DRAMATIZE DIFFERENCES*

THE DATA SPEAKS FOR ITSELF || CHART SAYS IT ALL

HEADLINES CLAIMING DATA INVINCIBILITY *AND POINTING TO A SINGLE SOURCE OF TRUTH*

COMPARING MEANS, MEDIANS AND MODES *SELECTIVELY CHOSEN TO HIDE DISTRIBUTION AND SHOW A GAP.*

NUMBER DECORATION: *DRESSING UP SINGLE VALUES TO "LOOK COOL".*