Report about Read Alberto Cairo’s work

Read Alberto Cairo’s work, [Graphics Lies, Misleading Visuals](http://infovis.fh-potsdam.de/readings/Cairo2015.pdf)

Locate an example of a misleading visual that uses one or more of the mechanisms for misleading that Cairo outlines in his book chapter: (1) Hiding relevant data; (2) Displaying too much data and obscuring reality; (3) Distorting data through visual forms.

Please upload an image of this visual using a widely accessible graphic format (e.g., PDF, .jpg, .png)

The diminishing financial return of higher education (Graph 2)

The graph is a line graph that intends to demonstrate that acquiring higher education renders an reducing gap between the unemployment on people with a degree and unemployment on people whom did not get a diploma.Briefly describe the context for the visual by addressing the following questions:

1. What is the source of the visual? (e.g., URL or bibliographic citation)
2. Who is the intended audience (i.e., decoders)? How do you know this?

<https://www.businessinsider.com/these-two-charts-prove-a-college-education-just-isnt-worth-the-money-anymore-2012-6>

As this article was originally published by Business Insider, we can say that the audience is everyone. Everyone who has access to the internet can read this article. Nonetheless, both article’s title and its supporting graphs allow us to think that the intended encoder/audience is people considering getting a bachelors degree. This group are expected to evaluate the cost of pursuing higher education versus their ability to increase their income after completing all courses required to get a bachelors degree.

1. Identify the specific component(s) of the visual that is/are misleading
2. For each part(s) of the visualization that is/are misleading, identify the mechanism that is used: hiding relevant data to highlight what benefits us; displaying too much data to obscure reality; using graphic forms in inappropriate ways (distorting the data)
3. Explain how the mechanisms are used to mislead

The purpose of the article is, like the title suggests, to prove that college education just is not worth the money anymore, or in other words, to prove that college education ROI is negative.  To support or prove the point of the article, the author uses two charts.  Both of them misleading.  
  
I picked the second chart from the article.  This chart intends to demonstrate that acquiring higher education renders an reducing gap between the unemployment on people with a degree and unemployment on people whom did not get a diploma.  
  
These are the components of the visual that are misleading:  
  
1) **Hiding relevant data.**   
  
The chart's title "Higher Education, higher unemployment" suggests that unemployment is increasingly high for people with college education.  Besides, the chart's indicates that unemployment levels for people with college education have been consistently increasing to the point that surpasses unemployment levels of people with high school or less.  However, this chart seems to reflect variations in unemployment levels rather than actual ratios.    
  
The the article never explains how this numbers were estimated.  This is particularly contradicting when considering the statistics from the Bureau of Labor Statistics (BLS).  According to BLS, unemployment is just 2.2% for people with a bachelor's degree.  In fact, it also obvious from BLS statistics that the concept of college education is complex and unemployment changes based on the level of education attainment.  Therefore, unemployment rate for someone with some college education differs from the one for someone with a PhD.  This is the link of my graphic analysis: <https://www.dropbox.com/s/3ke73sux0qinke8/Graph_Analysis.JPG?dl=0>   
  
The BLS chart, I refer to can be found here:  <https://www.bls.gov/emp/chart-unemployment-earnings-education.htm>   
  
The information displayed in the BLS's chart is from 2017, but it seems highly unlikely that unemployment rate descended to 2.2% from 50%.  I strongly believe that this graph supports the idea that the Business Insider's graph "Higher Education, higher unemployment" is hiding relevant data. This chart is an example of cherry-picking statistics.  
  
  
2) **Distorting data through visual forms.**   
  
The very title of the chart is distorting per se, but this is not the only distortion in the graph.  The graph has no zero-baseline, which skewed the resulting graph.  As the Y-axis was truncated, the graph trend is distorted to the point that it looks steeper that it is in reality.  I made this  analysis to illustrate the difference when stop truncating the Y-axis: <https://www.dropbox.com/s/p80c7utgfjw3r0x/Actual%20Gap.JPG?dl=0>  
  
In case, you  are interested in the sources I used for my analysis, you may visit the following websites:  
  
<https://www.census.gov/data/tables/2017/demo/education-attainment/cps-detailed-tables.html>   
  
<https://www.bls.gov/emp/tables/unemployment-earnings-education.htm>   
  
In case, you would like to take a look at my spreadsheet. You may found my spreadsheet here: <https://www.dropbox.com/s/ty6wm301yhlj2a0/table-1-1_Adjusted.xlsx?dl=0>