Data Visualization of Global Inequality

You will use the "Gapminder" data visualization chart online to compare three variables related to international development.

1) On the Internet, go to [www.gapminder.org/tools](http://www.gapminder.org/tools) to view the chart. Take a moment to absorb what you are seeing. It should automatically start with the variable "Life expectancy, years" on the Y-axis (vertical) and the variable "Income per person" on the X-axis (horizontal), and the year should read "2018" in gray on the background of the chart. So, the farther a dot is to the top of the chart the higher the life expectancy and the farther right, the more income. The dots represent each nation of the world (color relates to the continent to which the country belongs) and the size of the dot represents the nation’s population. Hovering the mouse over any given country (dot) will reveal the specific information for each nation about region and population size on the right-hand column of the webpage. Finally, the slider at the bottom of the chart will allow you to change the year, going back to 1800 for this particularly set of variables (Life expectancy and Income). Move the slider back and forth to see what happens to all nations over time. There are other features you can play with to make it easier to view the data, but that will not be necessary to complete the assignment.

Explain here what you are seeing in this chart when you move the slider from 1800 to 2018. What conclusions can you draw from this data set?

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2) Answer the following questions related to the data provided for each variable.

**Population:**

What was the largest nation by population in 2018? ________________________ Pop. _______

What was the second largest nation by population in 2018? ________________________ Pop. _______

What was the largest nation by population in 1800? ________________________ Pop. _______

What was the second largest nation by population in 1800? ________________________ Pop. _______

What was the population of the United States of America in 2018? ________________________

What was the population of the United States of America in 1800? ________________________

**Income:**

What nation had the highest income per person in the year 1800? _______________ Income _______

What nation had the lowest income per person in the year 1800? _______________ Income _______

What nation had the highest income per person in the year 1900? _______________ Income _______

What nation had the lowest income per person in the year 1900? _______________ Income _______

What nation had the highest income per person in the year 2000? _______________ Income _______

What nation had the lowest income per person in the year 2000? _______________ Income _______

**Health:**

What nation had the highest life expectancy in the year 1800? _______________ Life Exp. _______

What nation had the lowest life expectancy in the year 1800? _______________ Life Exp. _______

What nation had the highest life expectancy in the year 1900? _______________ Life Exp. _______

What nation had the lowest life expectancy in the year 1900? _______________ Life Exp. _______

What nation had the highest life expectancy in the year 2000? _______________ Life Exp. _______

What nation had the lowest life expectancy in the year 2000? _______________ Life Exp. _______
What happens to life expectancy in nearly ALL countries between 1916-1919? Why?
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3) Click on the chart where it says "Life expectancy, years", then from the list that pops up select "Babies per woman". Using the slider at the bottom, review what happens to the relationship between income and babies per woman from 1800 to 2015. Then answer the following

Babies per woman:

What nation had the highest number of babies per woman in 1800? ___________ BPW ________
What nation had the lowest number of babies per woman in 1800? ___________ BPW ________
What was the babies per woman figure for the United States in 1800? USA BPW ________
What nation had the highest number of babies per woman in 1900? ___________ BPW ________
What nation had the lowest number of babies per woman in 1900? ___________ BPW ________
What was the babies per woman figure for the United States in 1900? USA BPW ________
What nation had the highest number of babies per woman in 2000? ___________ BPW ________
What nation had the lowest number of babies per woman in 2000? ___________ BPW ________
What was the babies per woman figure for the United States in 2000? USA BPW ________

Discussion questions:

A) Why does the “Babies per woman by Income” chart look almost like the reverse of the “Life expectancy by Income” chart? Explain and compare the relationships between life expectancy and income, and babies per woman and income from both charts. In what way does population appear to be related, if at all, to these trends?
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B) What is the more general lesson that can be learned from reviewing 200 years of global data this way? Hint: Watch this video for ideas on how to answer this question (www.gapminder.org/ignorance).

Due Monday April 16 in class