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 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.

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

**Population:**

What was the largest nation by population in 1800? ____________________________ Pop.________
What was the second largest nation by population in 1800? ______________________ Pop.________
What was the largest nation by population in 2010? _____________________________ Pop.________
What was the second largest nation by population in 2010? ______________________ Pop.________
What was the population of the United States of America in 1800? __________________________
What was the population of the United States of America in 2018? __________________________

**Health:**

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 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 1800? _________________ Life Exp. ______
What nation had the lowest life expectancy in the year 1800? _________________ 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 lowest number of babies per woman in 1800? ____________ BPW ________
- What nation had the highest 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 lowest number of babies per woman in 1900? ____________ BPW ________
- What nation had the highest 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 lowest number of babies per woman in 2000? ____________ BPW ________
- What nation had the highest 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) Next, Watch this video for ideas on how to answer this question (www.gapminder.org/ignorance).
Then explain why people are no smarter than chimps in understanding global change. What is the more
general lesson that can be learned from reviewing 200 years of global data this way?

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Due in class, at my office or by email (to reymers@morrisville.edu in PDF format with LASTNAME-RR3
as the filename and Subject Line: RR3) by end-of-day (midnight) on Weds, December 4, no exceptions.