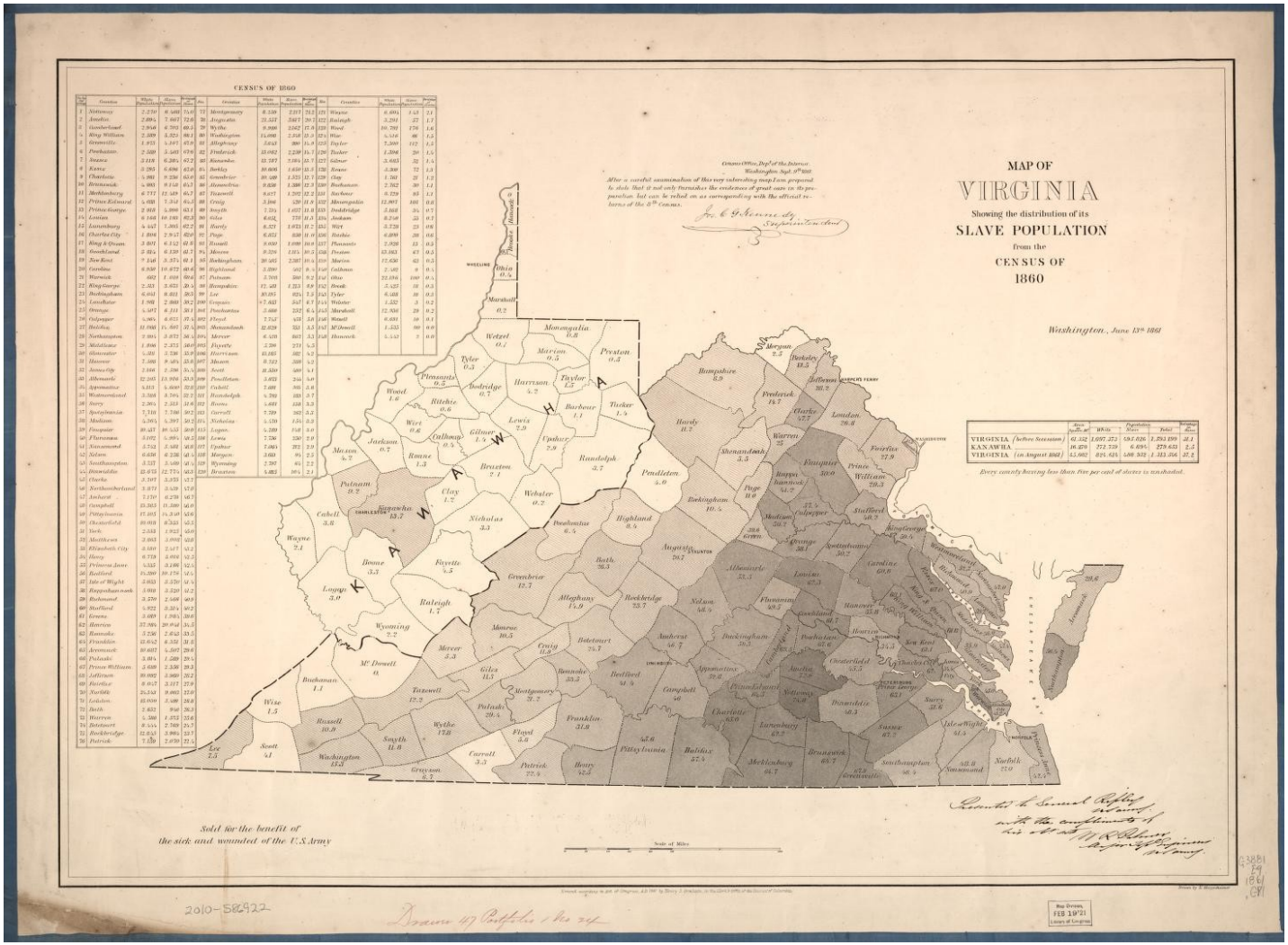
DSI Dataviz Assignment #2

GOOD: Map of Virginia Showing the Distribution of its Slave Population from the Census of 1860 (Henry, 1861)



For larger version, please refer to online file; link in citations list

Despite its age, the map in this early visualization looks modern, is drawn to scale, and is easy to understand and is strong aethetically, substantively and perceptually. It is beautiful to look at, represents the data accurately and immediately shows a general trend of increasing slave ownership the further east one moves in the state of Virginia. As well, counties with high percentages of slave ownership (in which up to 74% of the population was enslaved) suggests the dependence of white slaveowners on the labour of enslaved Black people and indicates ways further research into the American economy at this time might be approached. In a historical context, this visualization was used to inform military strategy by showing how Virginian residents may have been divided in terms of attitudes toward slavery.

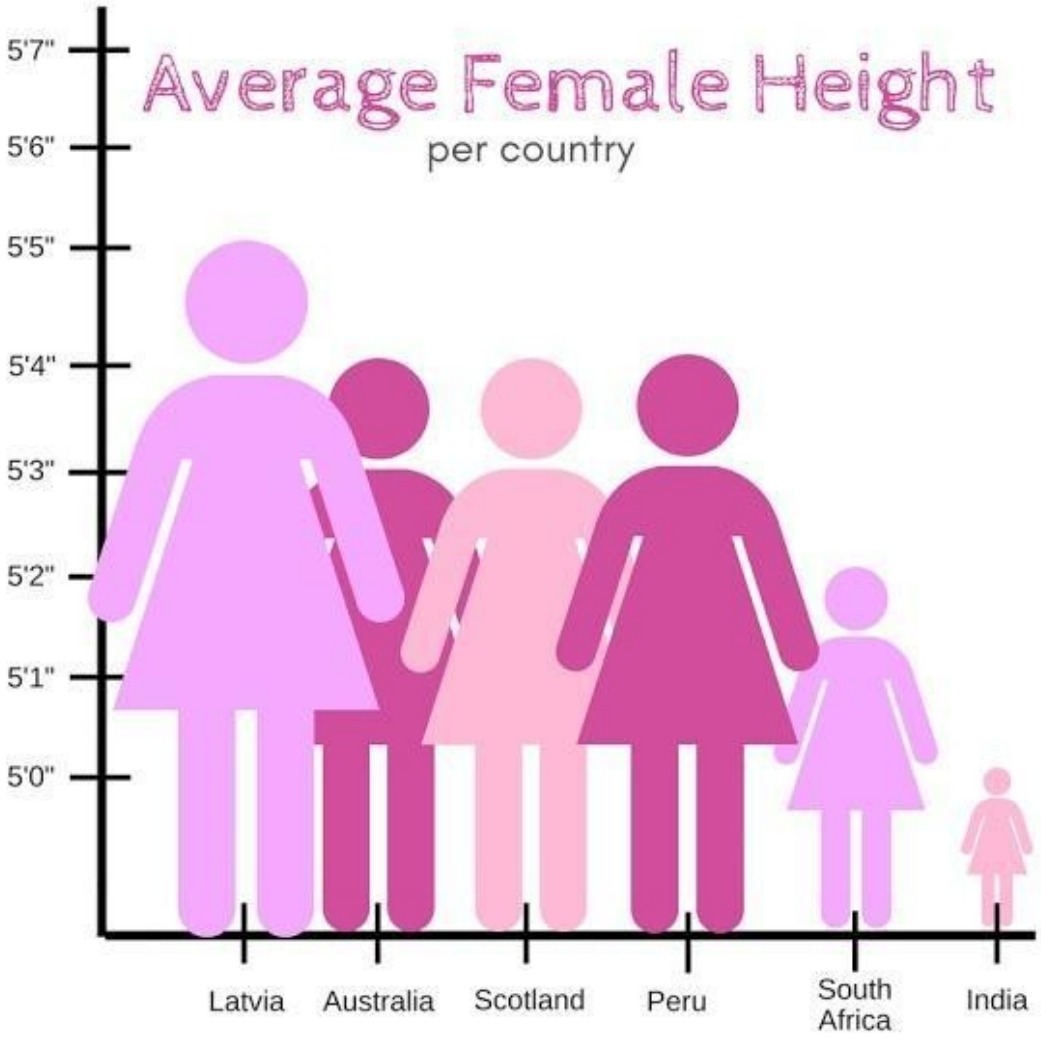
Visualization strengths

1. [Aesthetic + Substantive + Perceptual] Use of a grayscale sequential palette illustrates a clear trend.
2. [Aesthetic + Substantive] Each county and % of enslaved is clearly labeled in the map with key cities (and a port) labeled to orient viewer.
3. [Substantive] Data is verified through various means:
    1. Includes table of 1860 census data with original figures.
    2. Dates for when the data was pulled and published (along with city) are provided.
    3. Verification statement provided by Superintendent is personally signed and governmental department and city are provided (increased transparency, accountability and gives clear path for viewer to verify data independently).
    4. Change in geographic boundaries due to secession accounted for with additional figures provided.
4. [Perceptual] Purpose of visualization and audience are clearly indicated in the bottom left and right corners of the image.
5. [Substantive] Author of the visualization is cited at bottom right corner.

Possible Improvements

1. The visualization could provide a legend for the value represented for each “binned” shade (ie. cut -ffs for each percentage).
2. Supplementary table with census figures a bit too cramped and image of Virginia could be moved further right.
3. The categorizations we choose in data science – particularly categories used to segment populations – are deeply political. Here, the categories used – White Population, Slave Population – illustrate how the concept of a free and liberal subject was constructed according to the boundaries of race (Hartman, 2022). In other words, this map is but one example among many that “naturalize” the construction of the modern, rational, individual and liberal/liberated self as a white (male) subject that owns private property while Black people (but also, anyone racialized) are excluded from these qualities of subjecthood – they are slaves/slavish/objects/other.

BAD: Average Female Height Per Country (Ibrahim, 2020)



The original author of this visualization could not be verified, but it was published by @reina_sabah on Twitter with the text, “As an Indian woman, I can confirm that too much of my time is spent hiding behind a rock praying the terrifying gang of international giant ladies and their Latvian general don't find me.” (Ibrahim, 2020). This dataviz fails aesthetically, substantively and perceptually.

Visualization weaknesses

1. [Aesthetic] Unprofessional appearance (thought possibly made for children?)
    1. Handwritten looking font for a title.
    2. X-axis ticks look crude, as if they were drawn by hand in Microsoft paint.
2. [Aesthetic + Substantive] Colour:
    1. Why the use of pink for the title and figures? This seems gender essentialist.
    2. Gestalt theory teaches us that we group by colour. What is the mystery relationship being suggested between Latvia and South Africa? Scotland and India?
3. [Aesthetic + Substantive] Deviation from viewer expectation of a rectangular bar:
    1. Use of a symbol instead of a rectangular bar suggests actual human figures (emphasizing the absurdity noted in the original tweet). As well, the use of a skirt is gender essentializing and not universal/culturally relevant.
    2. Using the top of a circle instead of the top of a horizontal line (of a rectangular bar) as well as imprecise ticks means the graph has low accuracy.
    3. Deviation from expectation creates an unnecessary cognitive load.
4. [Substantive] Y-axis ticks start at 5'0" and then rises by inch which means the "bars" are not drawn to scale. This makes South Africa appear to be roughly twice as tall as India when the difference in height is roughly two inches.
5. [Substantive] Lack of reproducibility:
    1. Data is not cited. We don't know where this data comes from, what year, etc.
    2. Image is likely not reproducable using code.
6. [Perceptual] Intention is unclear. Why are such disparate countries chosen? It doesn't appear to me that this is showing outliers.

Possible Improvements

1. Use code to plot image.
2. Use a different colour for each country. Avoid pink.
3. Use rectangular bars instead of symbols and start y-axis from 0.
4. Provide some kind of rational for chosen countries.
5. Cite data.

Bibliography

Hartman, S. (2022). *Scenes of Subjection: Terror, Slavery, and Self-Making in Nineteenth-Century America*. WW Norton & Company. (Original work published 1997)

Henry, G. (1861). *Map of Virginia : showing the distribution of its slave population from the census of 1860*. Library of Congress, Washington, D.C. 20540 USA. https://www.loc.gov/resource/g3881e.cw1047000/?r=0.045

Ibrahim, S. (2020, August 6). *https://twitter.com/reina_sabah/status/1291509085855260672*. Twitter. https://twitter.com/reina_sabah/status/1291509085855260672

Zogheib, C. (2023). *Data Visualization: Graphing Our Data: Choosing the Right Visualization* [PowerPoint slides]. Data Science Institute, University of Toronto. https://github.com/UofT-DSI/07-visualization/blob/main/lessons/DSI_DataViz_3.2_ChoosingTheRightVisualization.pdf