Visualizing Density of Healthcare Workers Across Time and Countries

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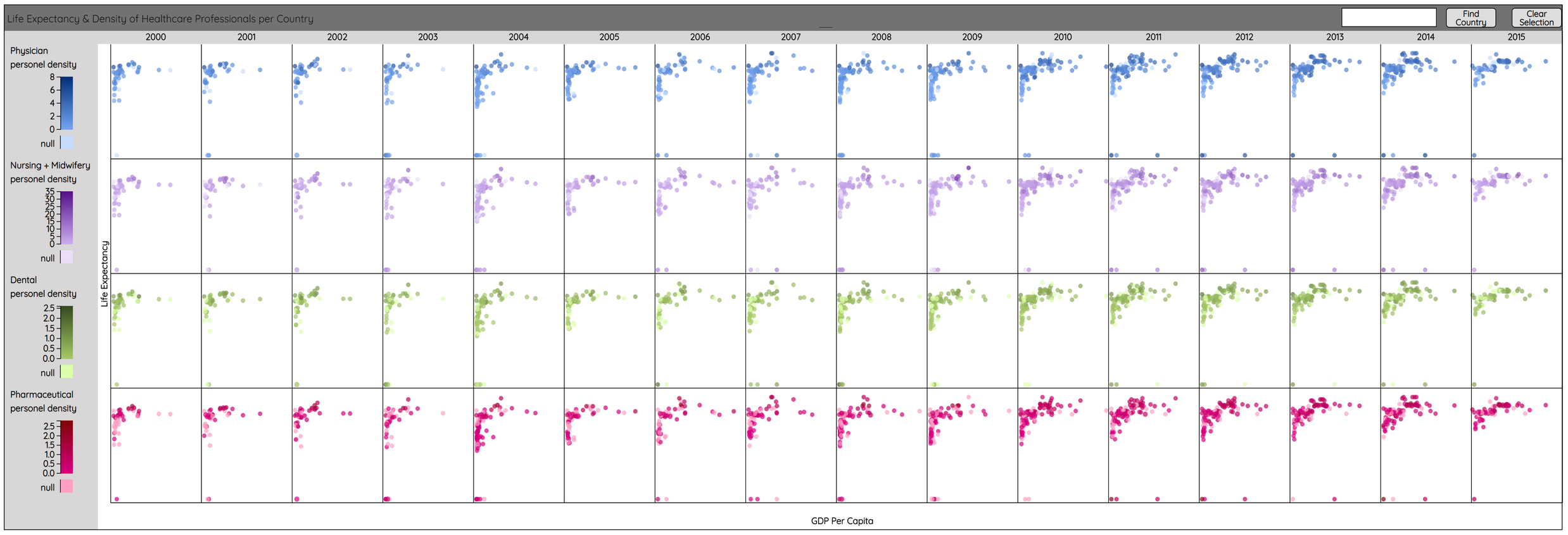


Goal

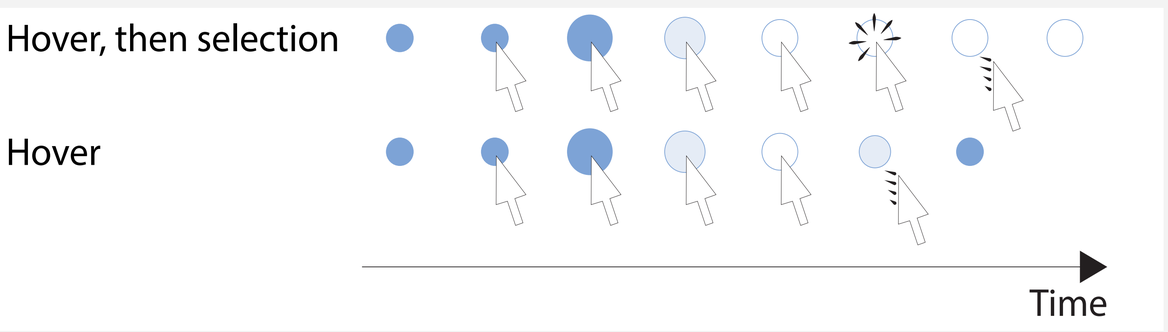
Show data about healthcare services, and specifically to increase their knowledge about the impact of the amount of healthcare workers per capita. We use novel animation and highlighting techniques. Animations helps convey changes within an individual country across several years. Our highlighting technique facilitates comparisons between multiple countries.

Healthcare Professionals

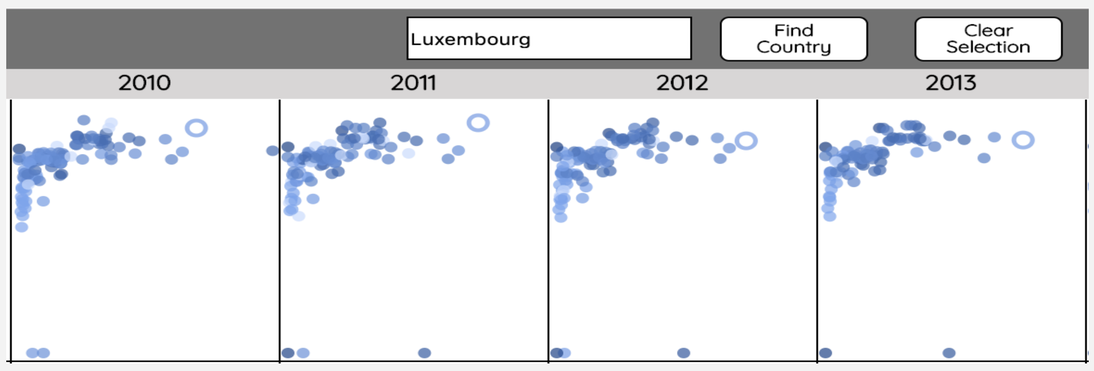
We considered four types of healthcare professionals based on data gathered from the World Health Organization.

- **Physicians**
- **Nurses and Midwifes**
- **Dentists**
- **Pharmacologists**

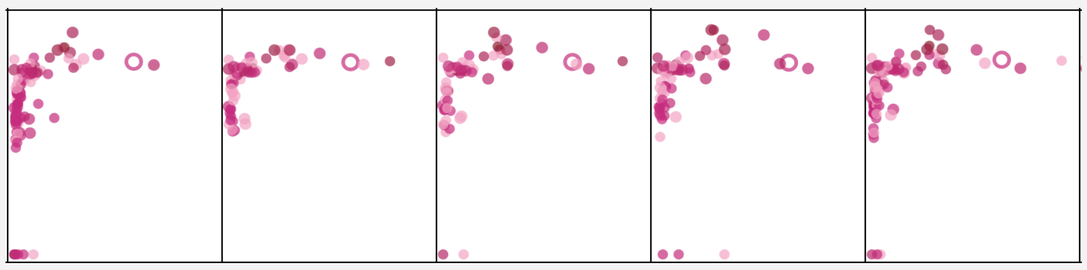
Interaction Techniques



Interacting with any individual data point in the visualization results in animation effects. When a mouse cursor hovers over a circle, the circle animates as if it is stretching to become larger, and it changes from full to stroked. Moving the mouse away, the circle returns to its original state. Clicking on the circle causes a more persistent selection – the circle is highlighted when moving the mouse away. Continued hovering over a circle shows a tooltip with more details, including country name, density, life expectancy, and GDP per capita.



A search function allows people to select and analyze one or more countries.



A persistent selection causes all points for the respective country to become 'highlighted'. This functionality aims to increase the visibility of trends across the data.

Future Work

Helping people correlate individual countries across scatterplots by showing trend lines on interaction.

Our visualization shows missing data in a separate part of each scatterplot. Other options might be better.

Issues of overplotting might be overcome through interactive adjustment of data marks size.

interactions lab
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