

2.15 Exercise: Time travel (*iNZight Lite* version)

This exercise will enable you to construct the types of graphs used in the previous video. The skills addressed are:

1. Make separate group-comparison dot plots for different subsets of the data defined by a third variable.
2. View different plots for categories of a third variable.

INSTRUCTIONS

Follow these instructions to generate the plots. If you have any problems doing this exercise, see the common questions on page 4.

Import the **Gapminder** (NOT Gapminder-2008) dataset into iNZight Lite:

- Select **File > Dataset Examples**
- Select Data set category: **Future-Learn**
- Select **Gapminder**
- Click on **Select Set**
- Click **Visualize**

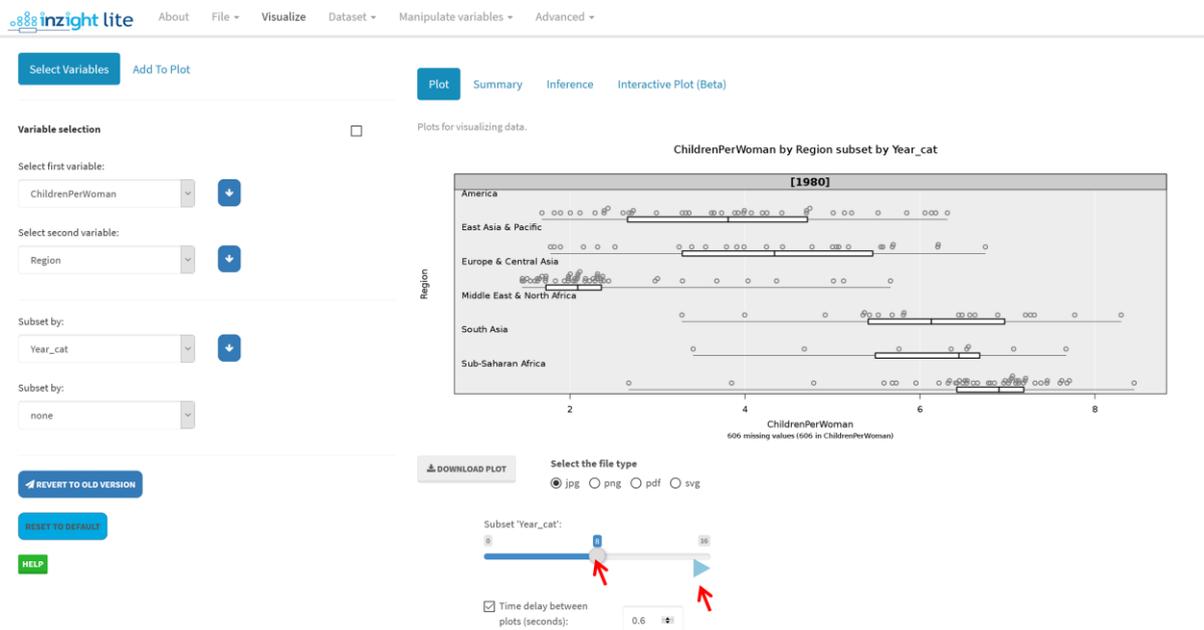
Make a set of group-comparison dot plots

Select the variable name **ChildrenPerWoman** in the **First variable** slot and **Region** in the **Second variable** slot and **Year_cat** into the **subset by** slot. iNZight automatically produces a set of group-comparison dot plots when you select the names of a **numeric** variable into the **First variable** slot, a **categorical** variable into the **Second variable** slot and a **third variable** into the first **subset by** slot.

The screenshot shows the iNZight Lite interface. On the left, the 'Variable selection' panel is highlighted with a red box. It contains three dropdown menus: 'Select first variable' set to 'ChildrenPerWoman', 'Select second variable' set to 'Region', and 'Subset by' set to 'Year_cat'. Below these are buttons for 'REVERT TO OLD VERSION', 'RESET TO DEFAULT', and 'HELP'. The main plot area is titled 'ChildrenPerWoman by Region subset by Year_cat'. It displays a grid of 16 dot plots, one for each year from 1990 to 2012. Each plot shows the distribution of 'ChildrenPerWoman' for five regions: East Asia & Pacific, Europe & Central Asia, Middle East & North Africa, South Asia, and Sub-Saharan Africa. The x-axis is labeled 'ChildrenPerWoman' and the y-axis is labeled 'Region'. Below the plots, there is a 'DOWNLOAD PLOT' button, a 'Select the file type' section with radio buttons for 'jpg', 'png', 'pdf', and 'svg' (selected), and a 'Subset 'Year_cat'' slider set to 16.

View different plots for categories of a third variable

On your plot, click the **play** button below the slider and watch it play through all the years on that window.



You can also play through the graphs in a more controlled way by using the slider. (You can also try clicking on the slider handle and then moving it with the left and right arrow keys.)

PRACTICE (~5 min)

Do this with a number of other choices for the numeric variable in the **First variable** slot. You can also experiment with interchanging the positions of **Region** and **Year_cat**. If you see something interesting, post a comment.

OPTIONAL

If you want to play with a more recent version of the data download [Gapminder_1952-2016_by_4yrs.csv](https://www.stat.auckland.ac.nz/~wild/data/gapminder_datasets/) from https://www.stat.auckland.ac.nz/~wild/data/gapminder_datasets/. [Some variable names may differ somewhat from those in the Exercise above.]

Common questions

iNZight Lite does not show the graph

If you have been using iNZight Lite with other data you may have to **Reset** to clear its memory of the previous choices.

I cannot see the Year_cat variable .

Make sure you are using the **gapminder** data set and not **gapminder_2008**.

Why are we using Year_cat and not Year ?

Since **Year_cat** is categorical, iNZight Lite subsets by every value of **Year_cat**. If you do it using a numeric variable like **Year** then iNZight will create 4 class-interval subsets.

In the panel of graphs the Years are ordered from bottom-left to top-right. Why is that?

They are behaving like numbers plotted on a scatter plot – they get larger going up the page and towards the right.