

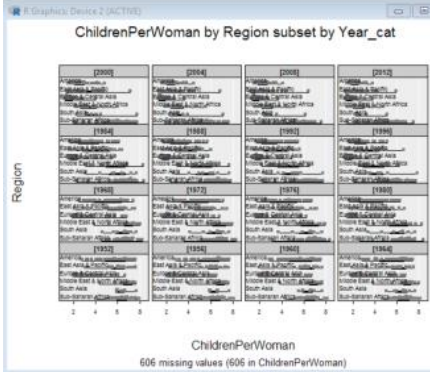
2.15 Exercise: Time travel – R version

Note: Copying and pasting text (e.g. R code) from a pdf is not reliable. For that reason we have also provided this file in [Word format \(.docx\)](#) and also the code in [a text file](#)

In this Exercise we are going to use the **gapminder** data set that contains data for all years whereas **gapminder_2008** (that we used in the last Exercise) only had the data for 2008.

We will ...

1. Start by looking at the plot of *ChildrenPerWoman* by *Region*
 - This is not sensible as we are getting lots of points for the same country sometimes going as far back as 1952
2. Make a separate graph like this for every year (as a tiled set of plots)
3. See how to look at just one of these plots
4. See how to “play through the years” by displaying the graph for each year in turn

#R Code	Commentary OR Output
<pre> # Setup library(iNZightPlots) library(FutureLearnData) data(gapminder) names(gapminder) iNZightPlot(ChildrenPerWoman, Region, data=gapminder) </pre>	<p><i>Commentary</i></p> <p>Use <i>gapminder</i> NOT <i>gapminder_2008</i></p> <p>Plot <i>ChildrenPerWoman</i> by <i>Region</i></p>
<pre> # Plot ChildrenPerWoman by Region subset by Year_cat iNZightPlot(ChildrenPerWoman, Region, g1=Year_cat, data=gapminder) </pre>	

```
levels(gapminder$Year_cat)
```

```
# Display just the plot for the year 2000
```

```
iNZightPlot(ChildrenPerWoman, Region, g1=Year_cat,  
            g1.level="[2000]", data=gapminder)
```

```
# Do it again for 2004
```

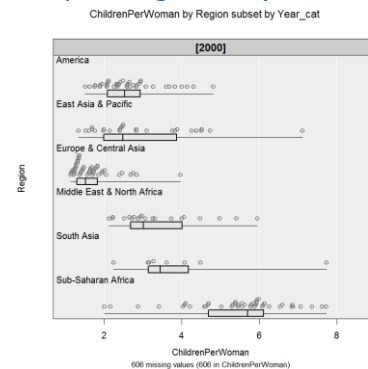
```
iNZightPlot(ChildrenPerWoman, Region, g1=Year_cat,  
            g1.level="[2004]", data=gapminder)
```

Remind ourselves how the levels of Year_cat are represented

```
[1] "[1952]" "[1956]" "[1960]" ...
```

Choose the level value

corresponding to the year 2000



```
# Now put it in a loop and do it for every year, i.e. for every level of Year_cat
```

```
for (k in levels(gapminder$Year_cat)) iNZightPlot(ChildrenPerWoman,Region, g1=Year_cat,  
            g1.level=k, data=gapminder)
```

```
# Do not display a new plot UNTIL you have clicked on the on plot window
```

```
old.value = devAskNewPage(TRUE) # save current plotting behaviour and ask for new behaviour
```

```
for (k in levels(gapminder$Year_cat))  
  iNZightPlot(ChildrenPerWoman,Region, g1=Year_cat, g1.level=k, data=gapminder)
```

```
devAskNewPage(old.value) # Reset the plotting behaviour back to the way it was before
```

```
# Play the plots, but with a 2 second delay between plots
```

```
for (k in levels(gapminder$Year_cat)) {  
  iNZightPlot(ChildrenPerWoman,Region, g1=Year_cat, g1.level=k,  
            data=gapminder)  
  Sys.sleep(2)  
}
```

Commentary

*This time there are **2 lines of code** to be run at each step so we have to put them in “{ .. }” brackets so that both lines get run*

OPTIONAL

If you want to play with a more recent version of the data download

[Gapminder_1952-2016_by_4yrs.csv](#) from

https://www.stat.auckland.ac.nz/~wild/data/gapminder_datasets/. [Some variable names may differ somewhat from those in the Exercise above.]

To discuss issues related to this Exercise,

go to <https://gitter.im/iNZightVIT/d2i-R-discussion>

To be able to post to the list you will have to set up a (free) account on **Github**
<https://github.com/login>

If your question relates to an Exercise, say which one you are talking about!