

What can students gain by switching to R?

Transitional Student Perspective | Rebecca Lai

About Me

- Adult returner to education:
 - Left school at 16
 - Non-conventional path to my degree
 - Scared of maths!
- Undergraduate at Glasgow
- Current Postgraduate:
 - MSc Research Methods of Psychological Science
 - ESRC funding nominee, Psychology Pathway



SPSS Period

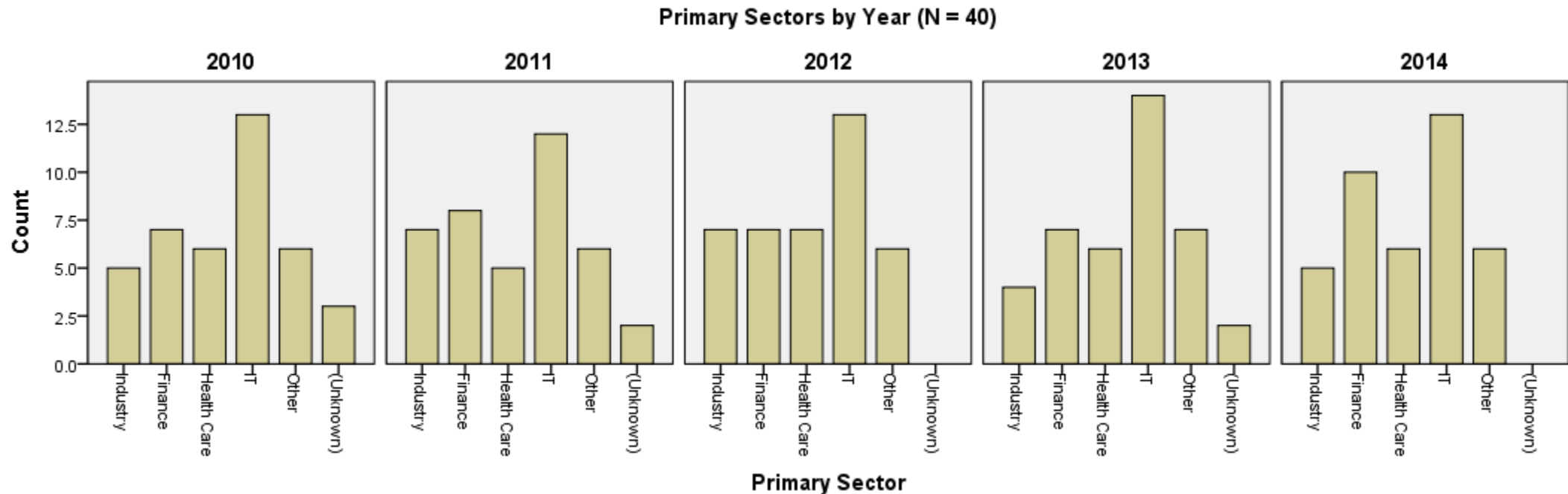
- Awareness of the tests underlying the tasks we were asked to perform.
- Point-and-click method-disconnected from the tests.
- Learning SPSS with cookbook style statistics.



SPSS Period

Results:

Mediocre performance, little understanding and beige graphs.



Transition to R

- Department transition started around 2015/2016.
- Our junior honours given the choice between SPSS and R.
- Reproducibility: can see all the steps!
- Teaching the GLM, not individual “recipes”.
- **Increased demand from students for statistics!**



Statistical Analysis
with
The General Linear Model¹

Jeff Miller and Patricia Haden²

Copyright (©) 1988–1990, 1998–2001, 2006, 2013.
Version: February 14, 2013

Transition to R



Dale Barr @dalejbarr · 16 Feb 2016



Replying to @Eavanmac

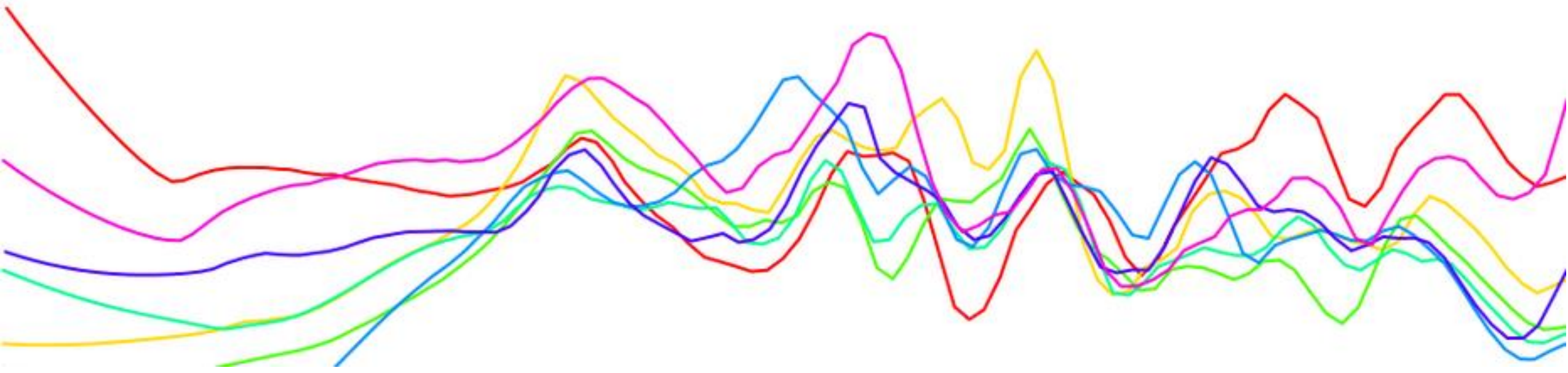
@Eavanmac @lam_bis when I heard there was a FB campaign about stats, this was the first image that came to mind



Transition to R

Results:

An understanding of the framework that underlies the statistical tools we use. Got a bit better. No more *beige*.



Transition to R

- Extra work for staff (in the short term).
- Alleviated by encouragement of peer-support:
 - Collaborative learning.
- Learning by teaching.
- Large online support community.
- Peer Assisted Learning (PAL).
- Slack.



Oct 31st, 2017 at 1:48 PM

in #the_research_cycle

Anyone who can help me with the Q10? when I try to use `distinct(user_id)` function to remove the duplicate `user_id`, why the other values also be removed as well and only `user_id` column be left?

2 replies



rebeccalai 4 months ago

`distinct()` has an argument you need to insert to keep all the cols. It's in the help documentation for that function.



4 months ago

Got it, thanks!



Feb 8th at 1:47 PM

in #r_help

in the level 2 lab homework for next week I'm having some trouble loading in the 'ez library'. it says 'Error in library("ez") : there is no package called 'ez'' does anyone have the same issue or know how i can fix this

5 replies



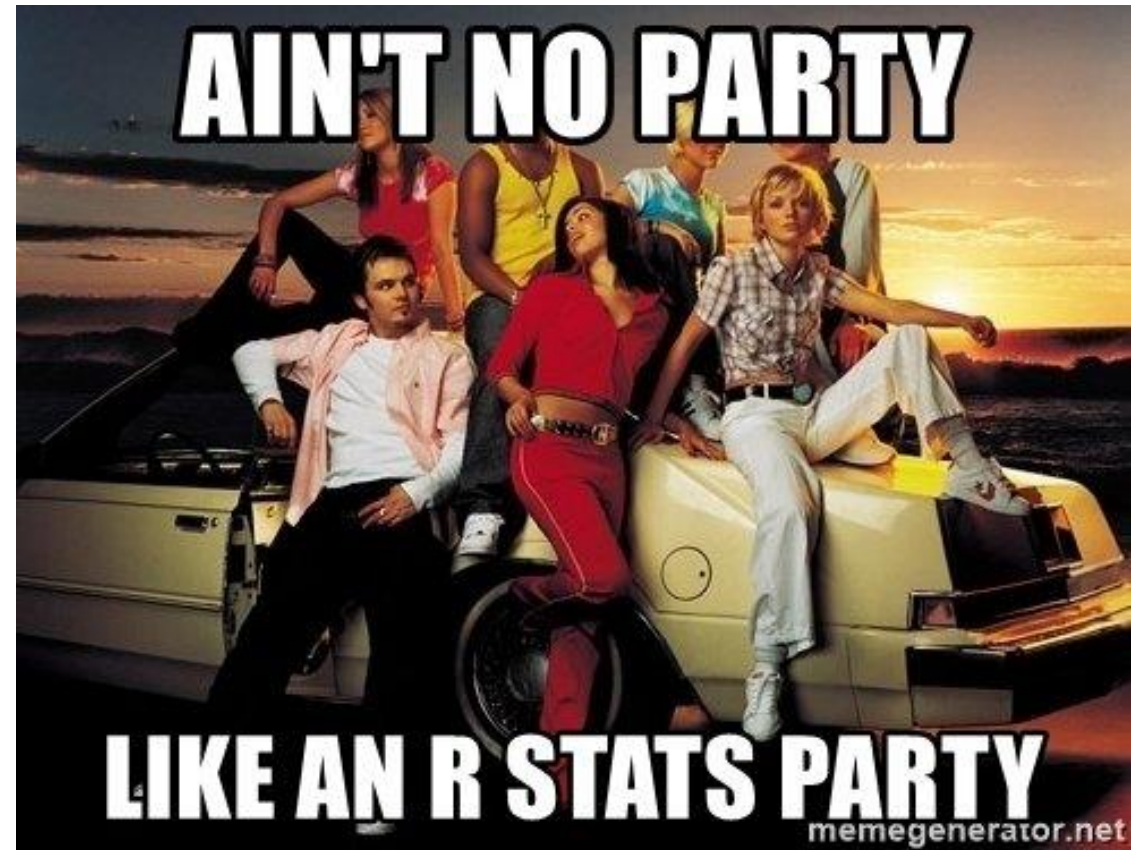
Tommaso 25 days ago

1. Type: `install.packages("ez")` in the console.
2. press the Enter button.



Altered Perceptions

- A whole system of interconnected principles that could be understood.
 - Reflected in the R, not completely compartmentalised.
- Re-engagement with the material with a positive attitude and less fear.
 - Fun challenge, not inescapable horror!
- Great preparation for postgrad:
 - Getting used to coding!
 - Teaching and communication.



Conclusions

- Better statistics skills:

- GLM teaching supported by R and Open Science.
- Increased engagement with materials.
- More efficient use of staff time through Slack.
- Learning through teaching and discussion *with* peers.

- Better communication skills:

- Written and verbal communication skills developed through peer support.
- Scientific communication through better understanding of stats, Open Science and data visualisation.

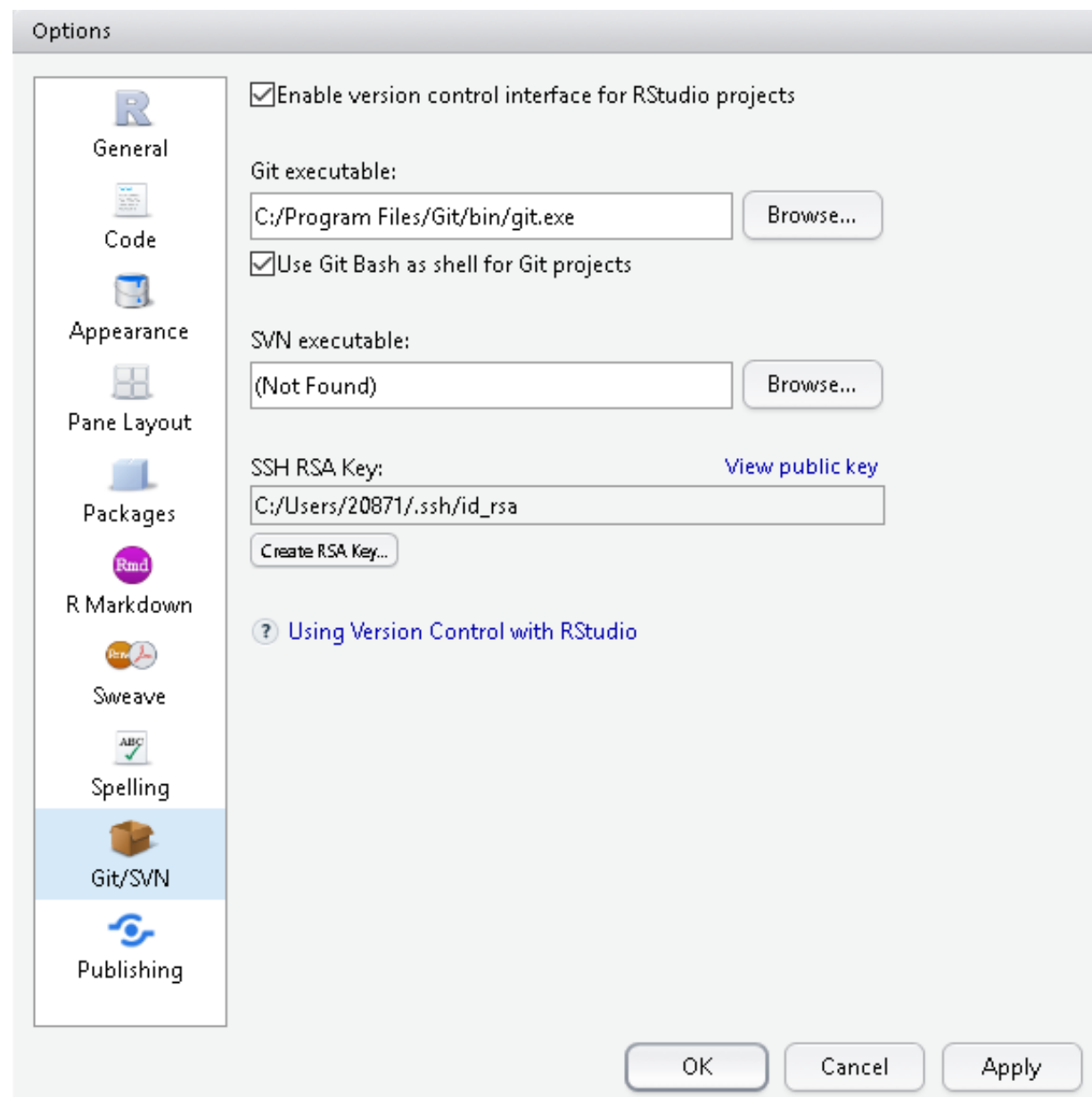
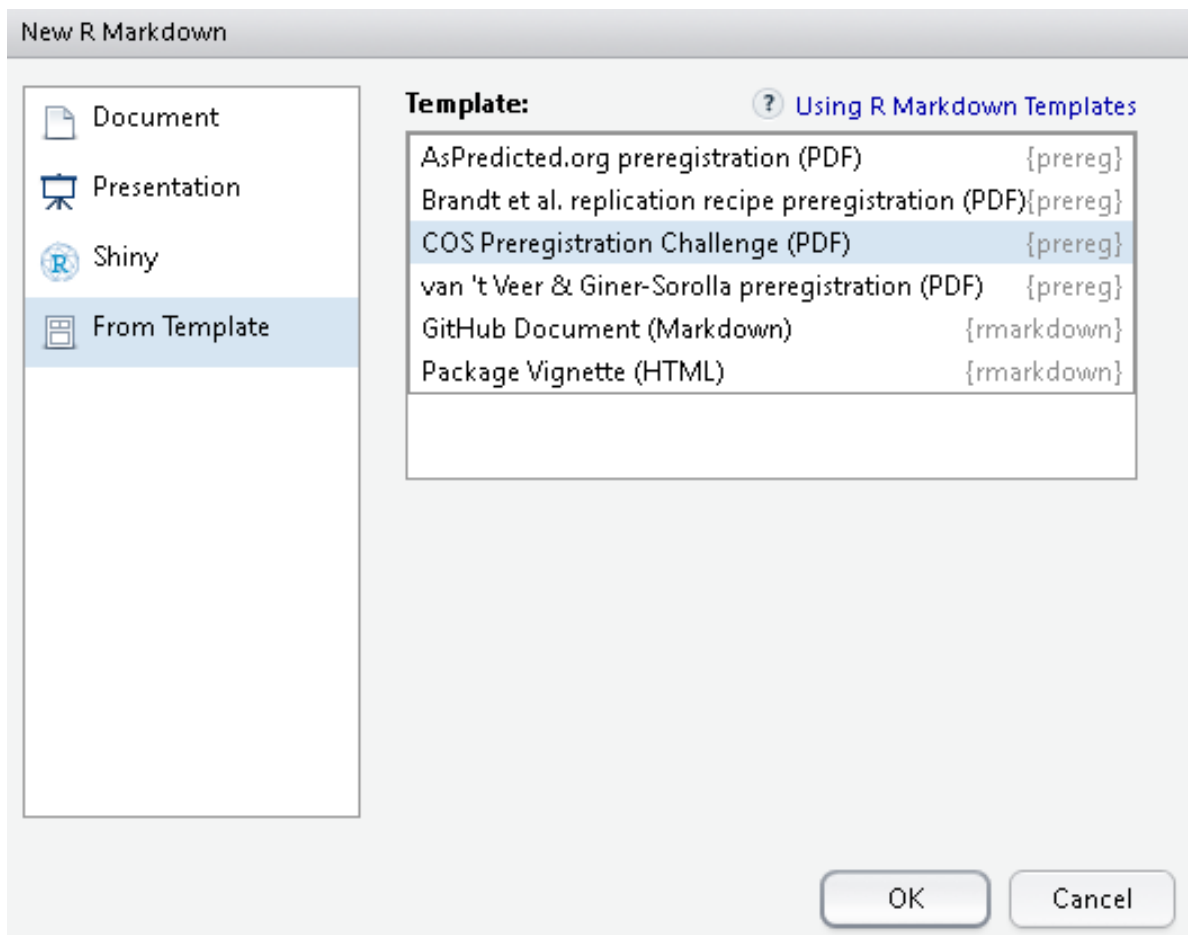


Appendix A: Model Formulae

```
full.fit <- lm(Attend ~ PercWeight + OnlineMat + DaysFromMonday + Engaging,  
              data = courses.data)
```

$$\hat{y} = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k$$

Appendix B: Open Science Ready!



Appendix C: Open Science Ready!

23 March
2017

Psychology is in Crisis: And Here's How to Fix It

Filed under: Uncategorized

By [Andrew Przybylski](#), [Malte Elson](#) and [David Sutcliffe](#)



Hannah Moshontz

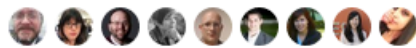
@hmoshontz

Following

I have been thinking a lot about a phrase that was used during the #SPSP2018 panel on student perspectives on open science. An audience member said that our generation is being "sacrificed." I deeply deeply disagree and here is why...
1/n

3:43 AM - 5 Mar 2018

29 Retweets 83 Likes



15

29

83



- Misunderstanding of our goals.
- Ways of working evolve. Some tools are more compatible with other ways of working.
- Choosing to do ethically right things can have detrimental affects on young careers.
- Changes to incentive structures.