Why Linear Mixed Models?

We are going to look at linear modelling and then (generalized) linear mixed modelling. (G)LMMs are have taken the biological and behavioural sciences by storm.

(G)LMMs are more powerful than ANOVA, allow for multiple simultaneous random effects (e.g., subjects and items), subject and item covariates, nesting, unbalanced designs, normal and non-normal data distributions, cope with missing data, allow you to model both continuous and categorical IVs and DVs, operate over trial-level data, and allow you to determine the best statistical models to fit to your data that make the most theoretical sense…

Recap - Linear modelling in R

Imagine we have data corresponding to males and females and their height.

```
> genderheightdata
  # A tibble: 8 x 3
 subject gender height
  <chr>   <fct>  <chr>
1 1       male   170
2 2       male   180
3 3       male   175
4 4       male   185
5 5       female 160
6 6       female 170
7 7       female 165
8 8       female 165
```

We might be interested in whether height is predicted by gender.