More reshaping

Hadley Wickham

Outline

- Closer Look at the French Fries Data: Inter-replicate reliability

Inter-rep reliability

- Each person tastes fries from the same oil twice – how consistent are they?
- Need to reshape, not aggregate, the data
  ffrep <- melt(ffm, ... ~ rep)
- Now have dataset with two columns, one for each rep
  qplot(X1, X2, data=ffrep, facet=. ~ variable)

Your turn

- Try and explore similar a relationships with time
- Are measurements taken closer together, more or less similar than those taken a long time apart
- You might want to use
  qplot(..., geom=c("point","abline"))
  qplot(..., geom=c("point","smooth","abline"), method=lm)

Your turn

- What if you make the columns treatments?
- Can you see any patterns?
- How is this different to the usual way we'd look at this data?

Subject effects

- Some subjects consistently rate highly or poorly
- How can we remove these effects?
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Separating subjects

- First we need to separate out the different subjects into a structure we can deal with
- Any ideas?
- How can we do with that with cast function?

- ffm <- melt(french_fries, id=1:4)
- pers <- cast(ffm, ... ~ variable | subject)
- p1 <- pers[[1]]

Rescaling

- Read up on ?rescaler
- What scaling do you think would be most appropriate?

- How can we do this for every subject?

- rescaler(p1)
- lapply(pers, rescaler)

Remove subject effects

- all <- melt(lapply(pers, rescaler))
- all <- rename(all, c(L1 = "subject"))

- qplot(time, value, data=ffm, facet=variable~.,
  type="group", grob="smooth",
  colour=treatment, id=treatment)