

Moderation Effects

- Moderation tests whether a variable (Z) affects the direction and/or strength of the relation between an IV (X) and a DV (Y).
- In other words, moderation tests for interactions that affect when relationships between variables occur.
- Imagine we are interested in whether the relationship between the number of hours of sleep (X) a student receives and the attention that they pay to this lecture (Y) is influenced by their consumption of coffee (Z).

Our predictor variables are X and Z - good idea to centre them (i.e., mean of zero) using the `scale` function. It is important to centre both the moderator and predictor to make interpretation easier.

```
#Centering Data
Xc      <- c(scale(X, center = TRUE, scale = FALSE)) #Centering
IV; hours of sleep
Zc      <- c(scale(Z, center = TRUE, scale = FALSE)) #Centering
moderator; coffee consumption
```