Design Declaration

Macartan Humphreys

Design declaration of a simple RCT

```r
simple_design <-

  # M: model
  declare_population(N = 100, u = rnorm(N)) +
  declare_potential_outcomes(Y ~ 0.25*Z + u) +

  # I: inquiry: the average effect
  declare_inquiry(PATE = mean(Y_Z_1 - Y_Z_0)) +

  # D: data strategy
  # sampling
  declare_sampling(S = complete_rs(N = N, n = 50)) +
  # assignment
  declare_assignment(Z = simple_ra(N, prob = 0.5)) +
  declare_reveal(Y, Z) +

  # A: answer strategy
  declare_estimator(Y ~ Z, inquiry = "PATE")
```

Design diagnosis

If you then "run" this design many times you can see the
distribution of the "true" answers, the distribution of the estimates,
and how these relate to each other.

```
## Error in read_rds("../code/diagnosis.rds"): could not fi
## Error in reshape_diagnosis(.): object 'diagnosis' not fo
```

Design library

You can explore some designs here:

- https://declaredesign.org