

## Propositions belonging to the thesis

### Design and Analysis of Randomized and Non-Randomized Studies: Improving Validity and Reliability

1. Treatment effect estimates from a regression discontinuity design should primarily be interpreted as local treatment effects. *This thesis*
2. A study using the regression discontinuity design may estimate a treatment effect similar to a randomized controlled trial, with the assumption of a global treatment effect over the range of the assignment variable. *This thesis*
3. The regression discontinuity design can increasingly play a role in providing evidence on the effects of interventions due to the increasing availability of observational data. *This thesis*
4. The use of covariate adjustment and proportional odds analysis increases the statistical power of randomized trials in patients with Guillain-Barré syndrome. *This thesis*
5. The impact of extracranial injury is dependent on the severity of traumatic brain injury. *This thesis*
6. Causal inference in a regression discontinuity design relies on weaker assumptions than most other quasi-experimental designs, such as instrumental variable analysis. *Moscoe E et al. J Clin Epidemiol 2015.*
7. Machine learning cannot replace randomized controlled trials, and is no shortcut to precision medicine. *Inaugural lecture prof.dr. E.W. Steyerberg, March 2018.*
8. Just because you get on a scale, doesn't mean you lose weight. *Mack M et al. Eur J Cardiothorac Surg 2016.*
9. The stuff we gather around us has the biggest impact on the ecosystem, mainly caused during its production. *Porcelijn B, The Hidden Impact, 2017.*
10. Decluttering is associated with reduced stress levels. *Arnold JE et al. Life at Home in the Twenty-First Century, 2012.*
11. If we knew what it was we were doing, it would not be called research, would it? *Albert Einstein*

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