Path analysis (for people who hate statistics)

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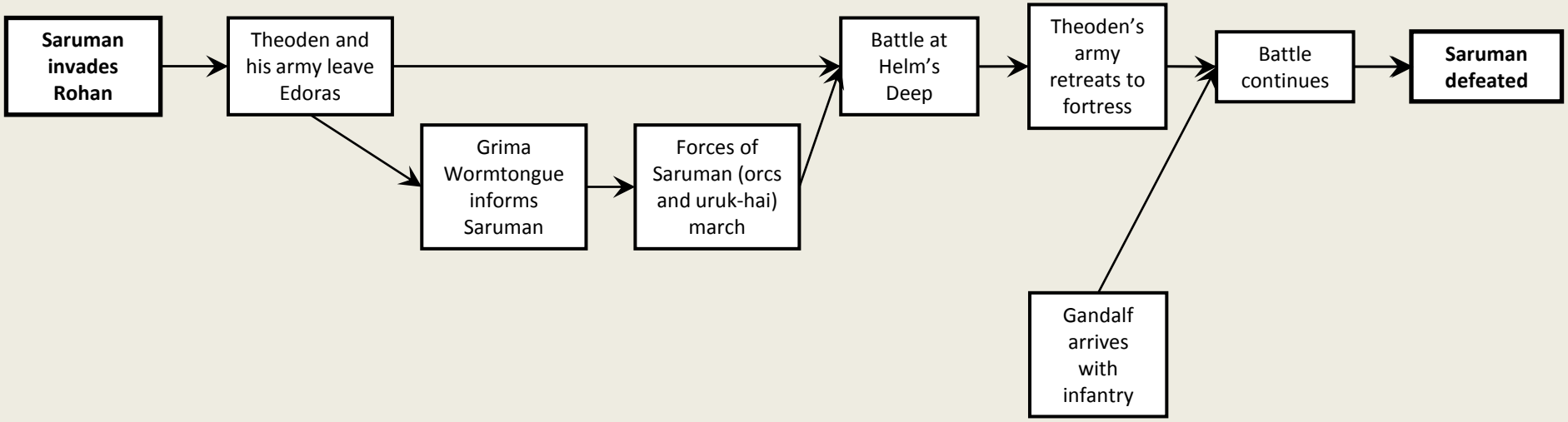
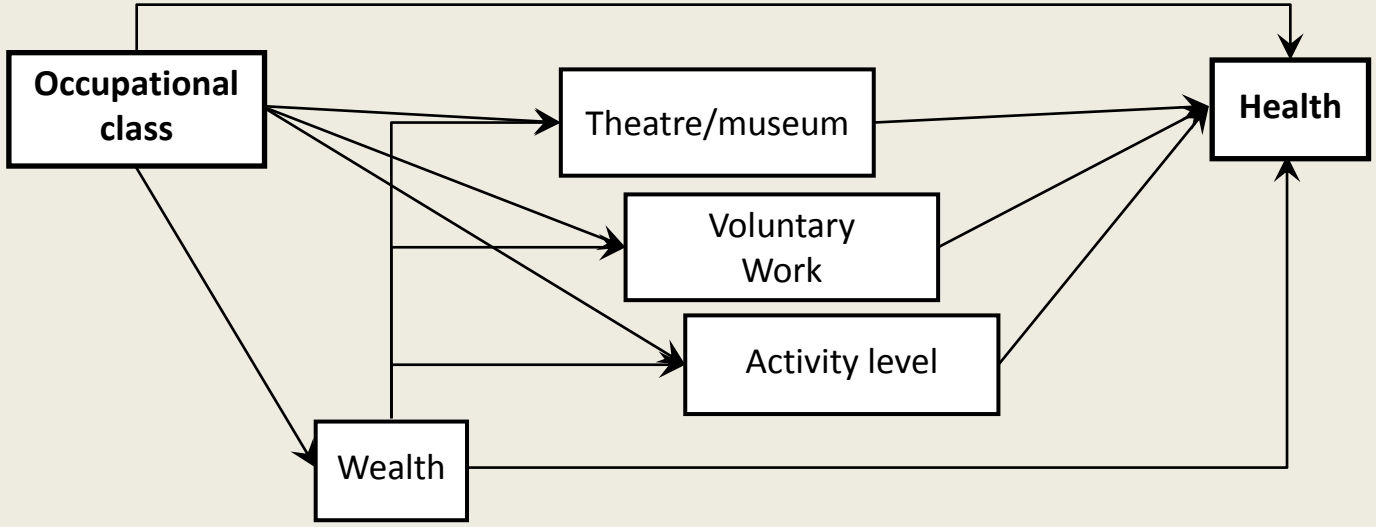
Path model of the battle of Rohan

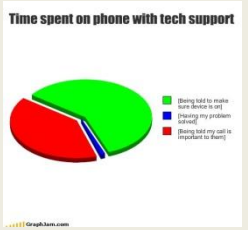


Path model of the hypothesised relationships between occupation and health

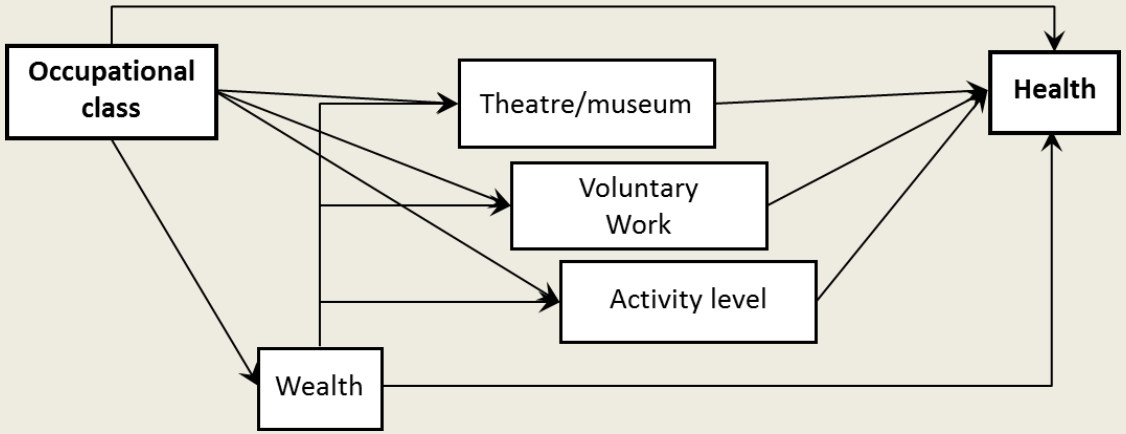


Other aspects of path analysis

- Control variables: age, sex and health from wave 1.
- Judging effects: path coefficients.
- Judging overall fit of the model: goodness of fit indices.
- Judging how much variation in health is due to the predictors in the model: R^2.

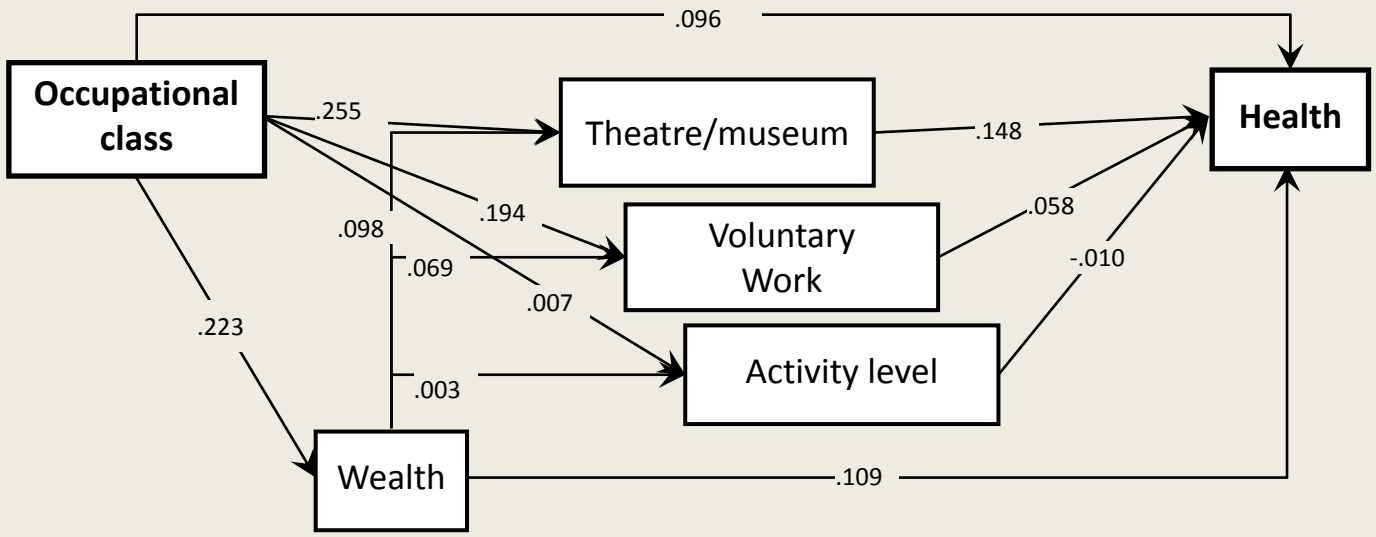


The results: fit and completeness



- The model was a reasonably good fit (RMSEA=0.082).
- The model only explained 7.5% of the variability in health (R^2 = 0.075).

The results: Standardised direct path coefficients



Total effects on health:
Occupational class=.173
Wealth=.128

The results: main findings

- Occupational class had the biggest standardised total effect. 45% of this effect was indirect.
- Having lots of money gives people better health! 85% of the total effect was direct.
- Going to the theatre or museums had an effect bigger than that of wealth and nearly as much as occupational class.

Conclusions

- This analysis suggests that class-related health inequalities persist for older people.
- It suggests that the main effect of occupational class is via wealth that has been accumulated and that allows people to arrange their lives.
- What path analysis adds is about *how* the effect of occupational class on health is filtered through other characteristics. A large amount of the effect of occupation is not direct but indirect.

Further detail about path analysis

- Path analysis is confirmatory. It tests a theory.
- Usually, there is a process of modifying the model to increase goodness of fit and then re-running the analysis.
- AMOS provides a simple form of path analysis with good graphics – ideal for people new to path analysis.
- MPLUS is better and allows mixed regressions (different levels of data) but poor graphics.
- It is possible to extend path analysis to do structural equation modelling. This is path analysis that includes latent factor analysis.