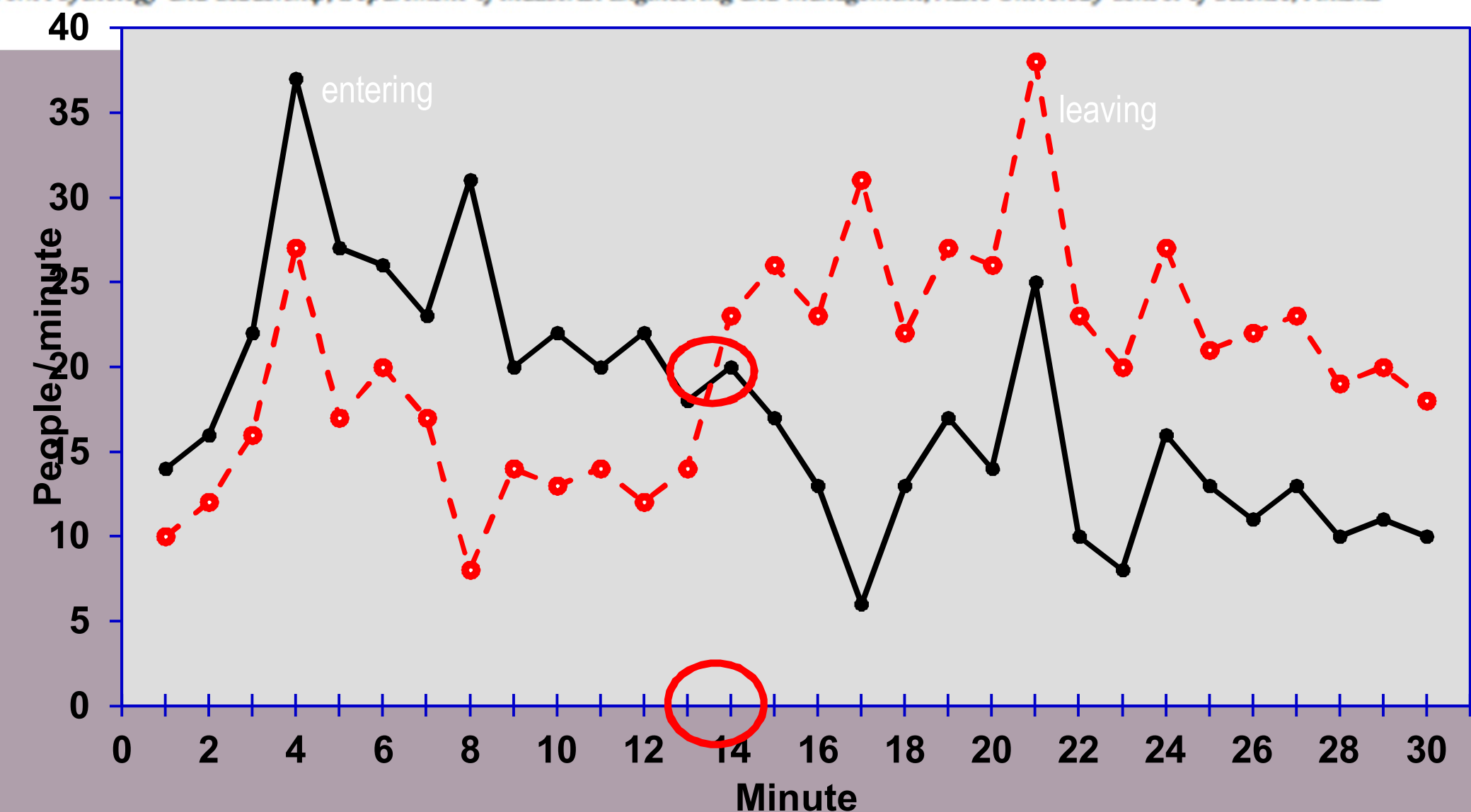


BEHAVIORAL OPERATIONS RESEARCH – BOR

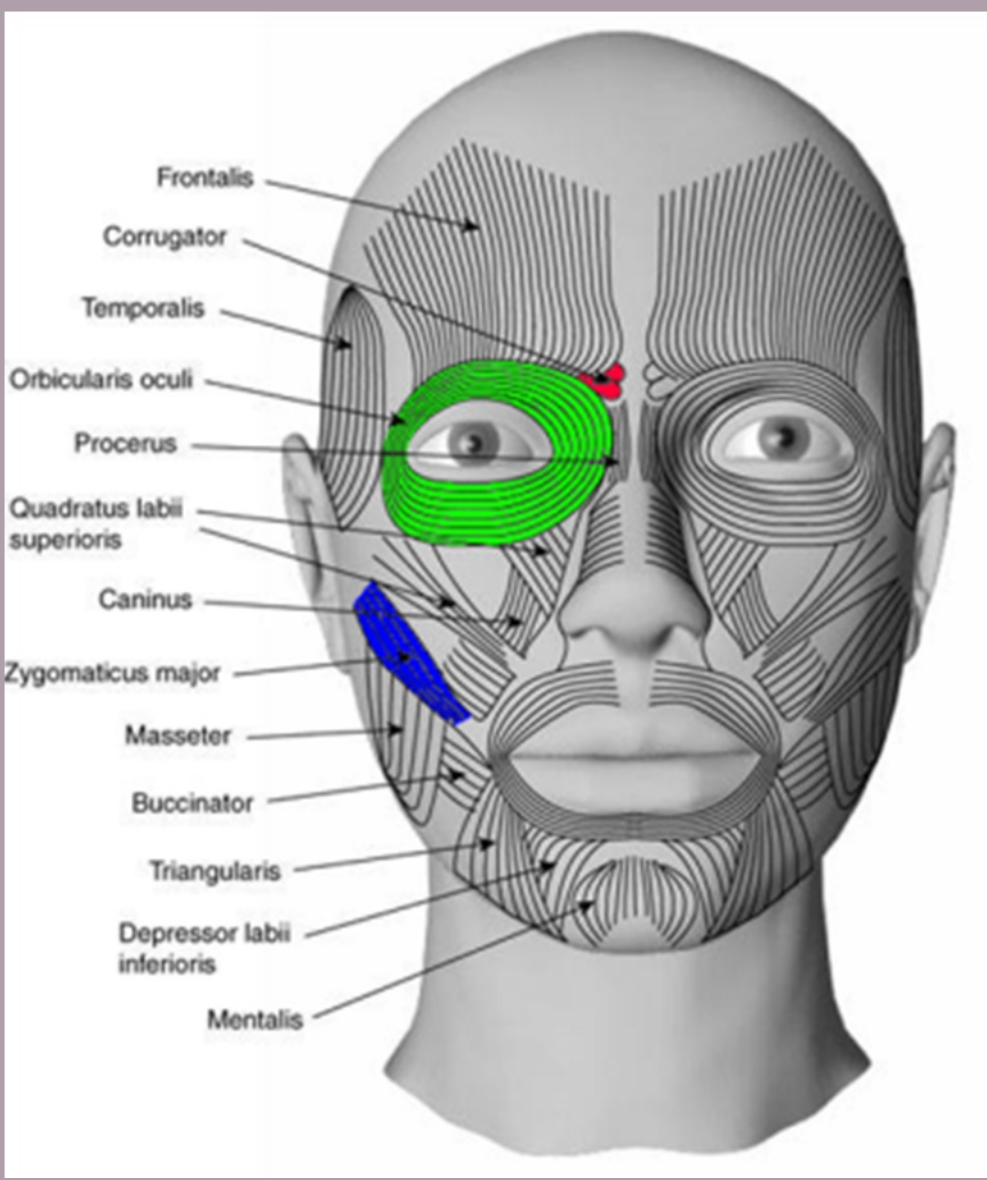
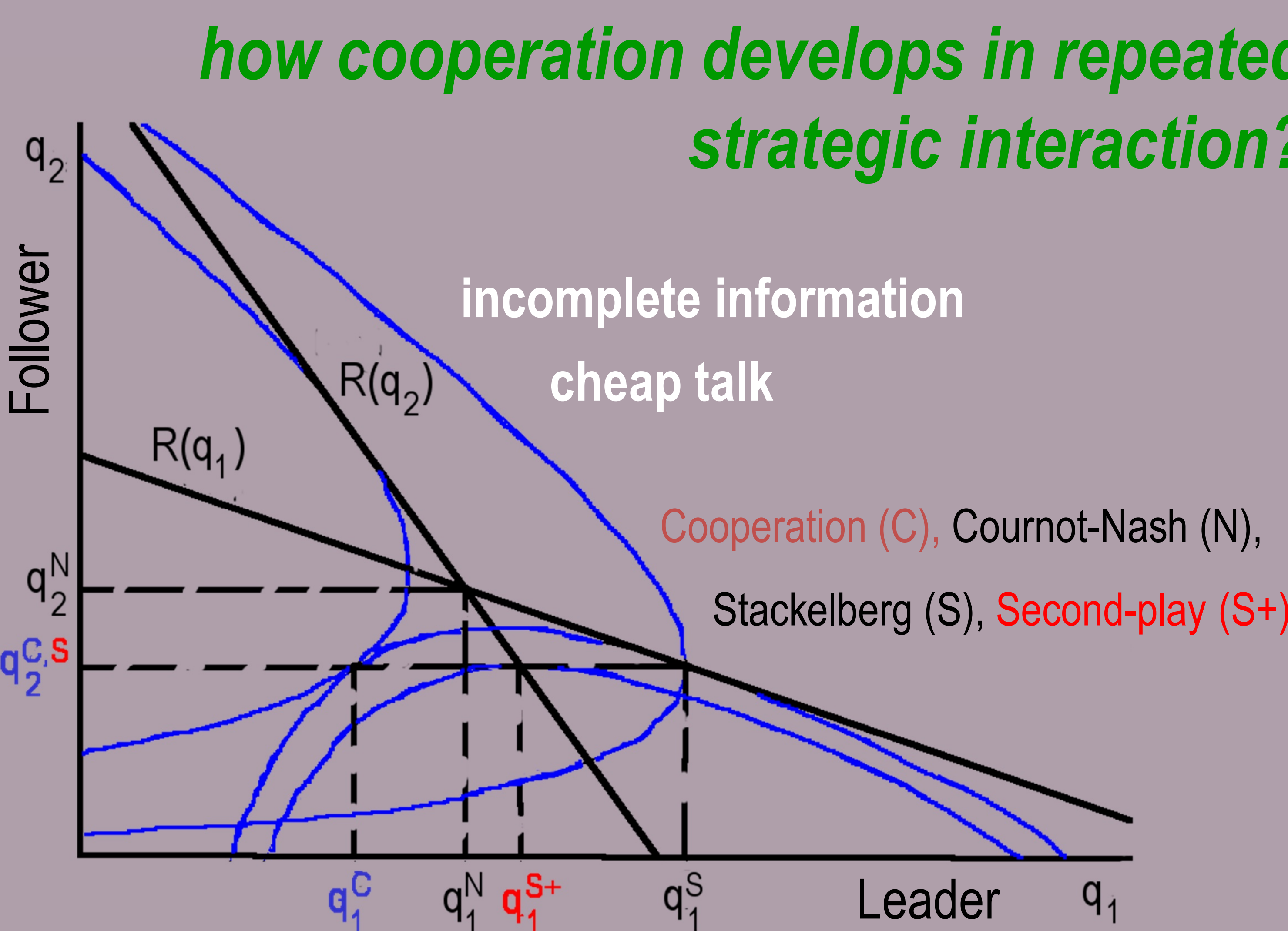
experiments on games, human interaction and decision making

The study of behavioral aspects related to the use of operations research methods in modeling, problem solving, and decision support, and
The use of OR methods in modelling human behavior

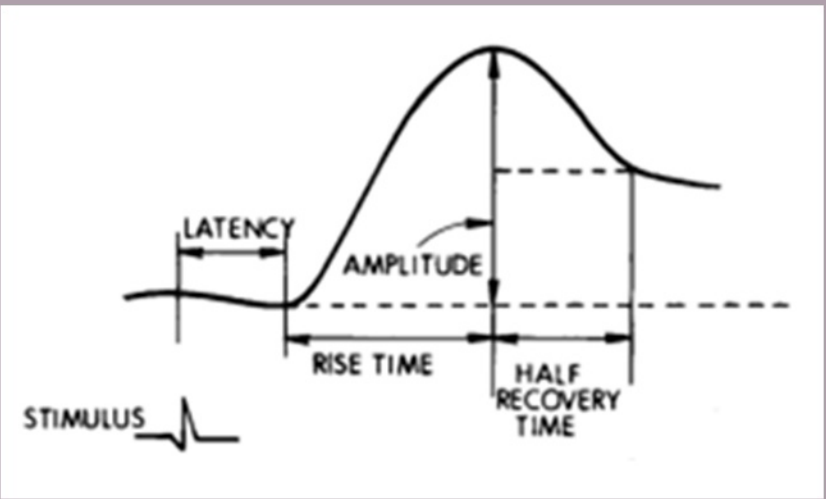
The pioneers of OR,
West Churchman and Russell Ackoff:
OR is not mathematics only



The department store task: during which minute were the most people in the store? 44% correct

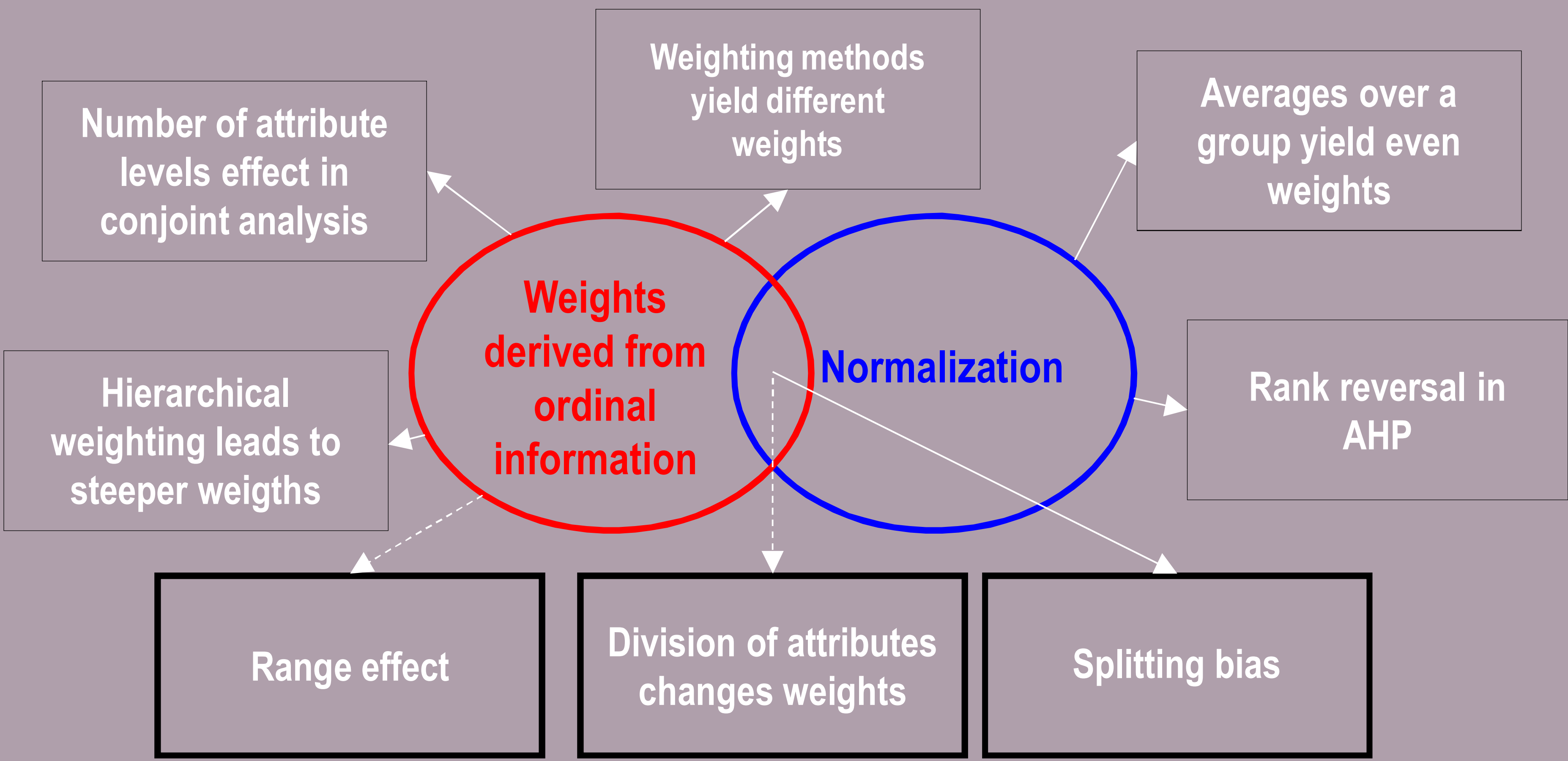


is cooperation emotional or cognitive?
psychophysiological experiments in repeated duopoly games

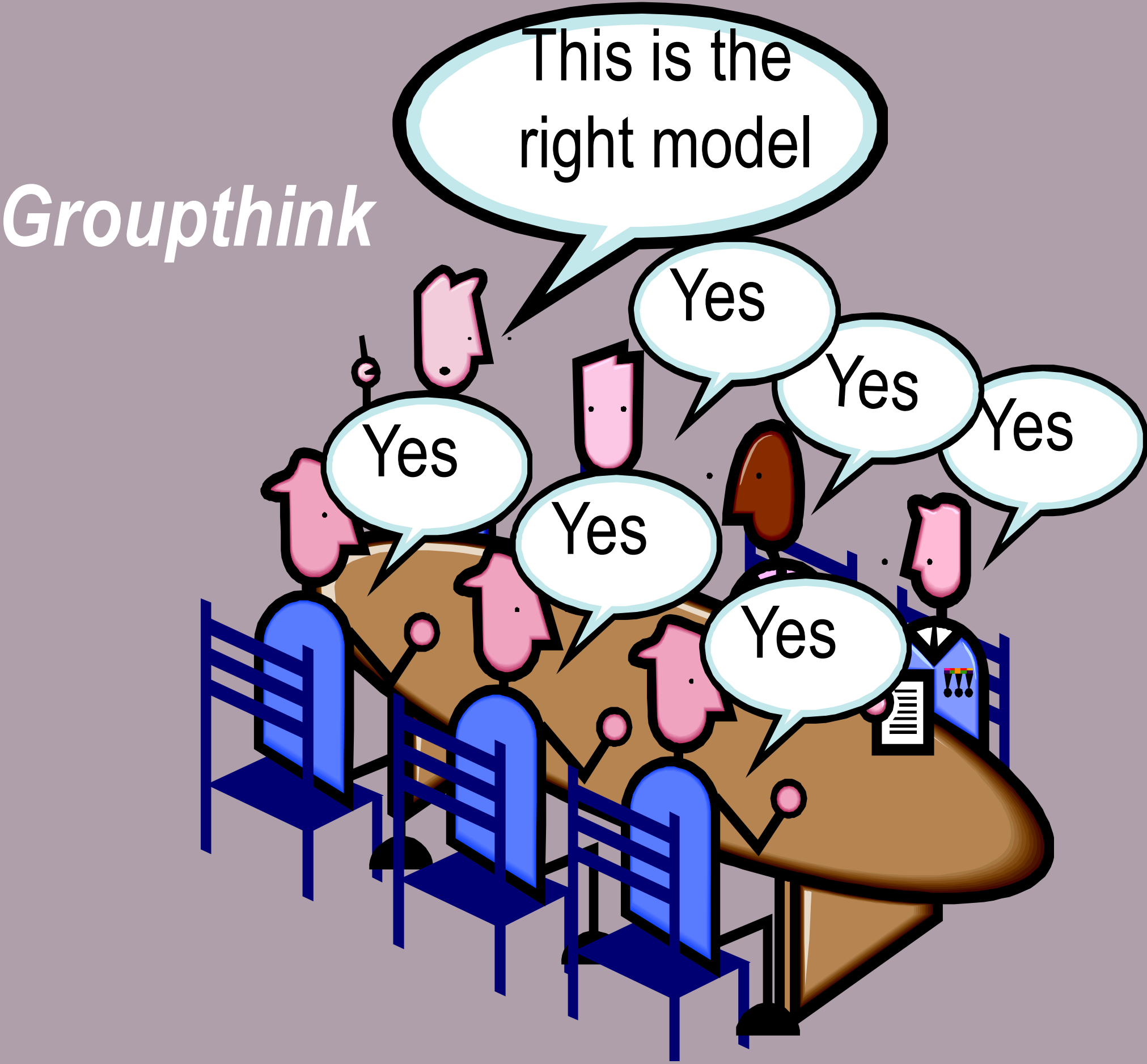


Facial electromyography
Skin conductance response
Heart rate variability

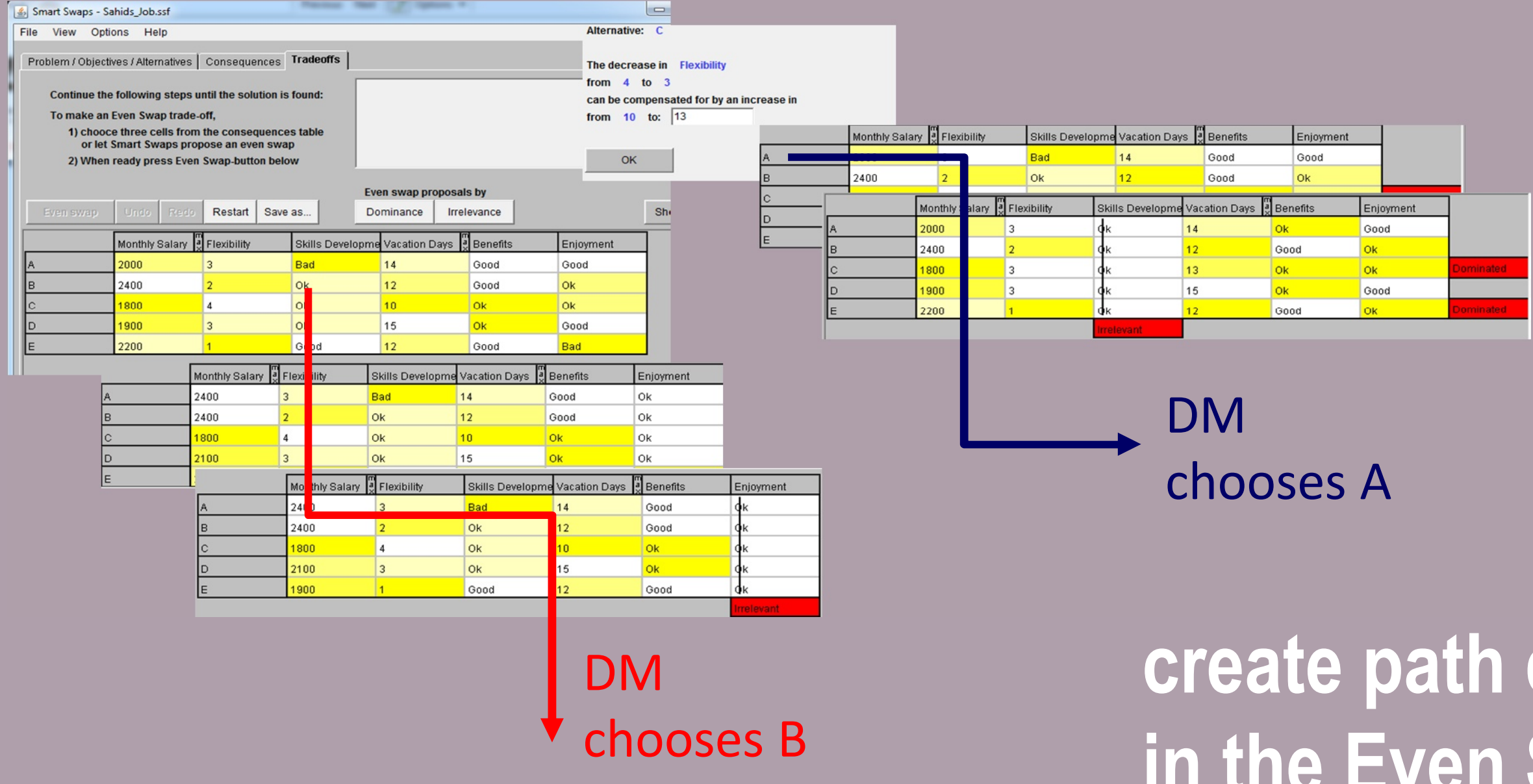
cognitive and behavioral biases in modeling and decision making



Man with a hammer
Appeal to authority
Overconfidence
Beauty effect
Cognitive dissonance
Commitment bias
Scale compatibility bias
Loss aversion



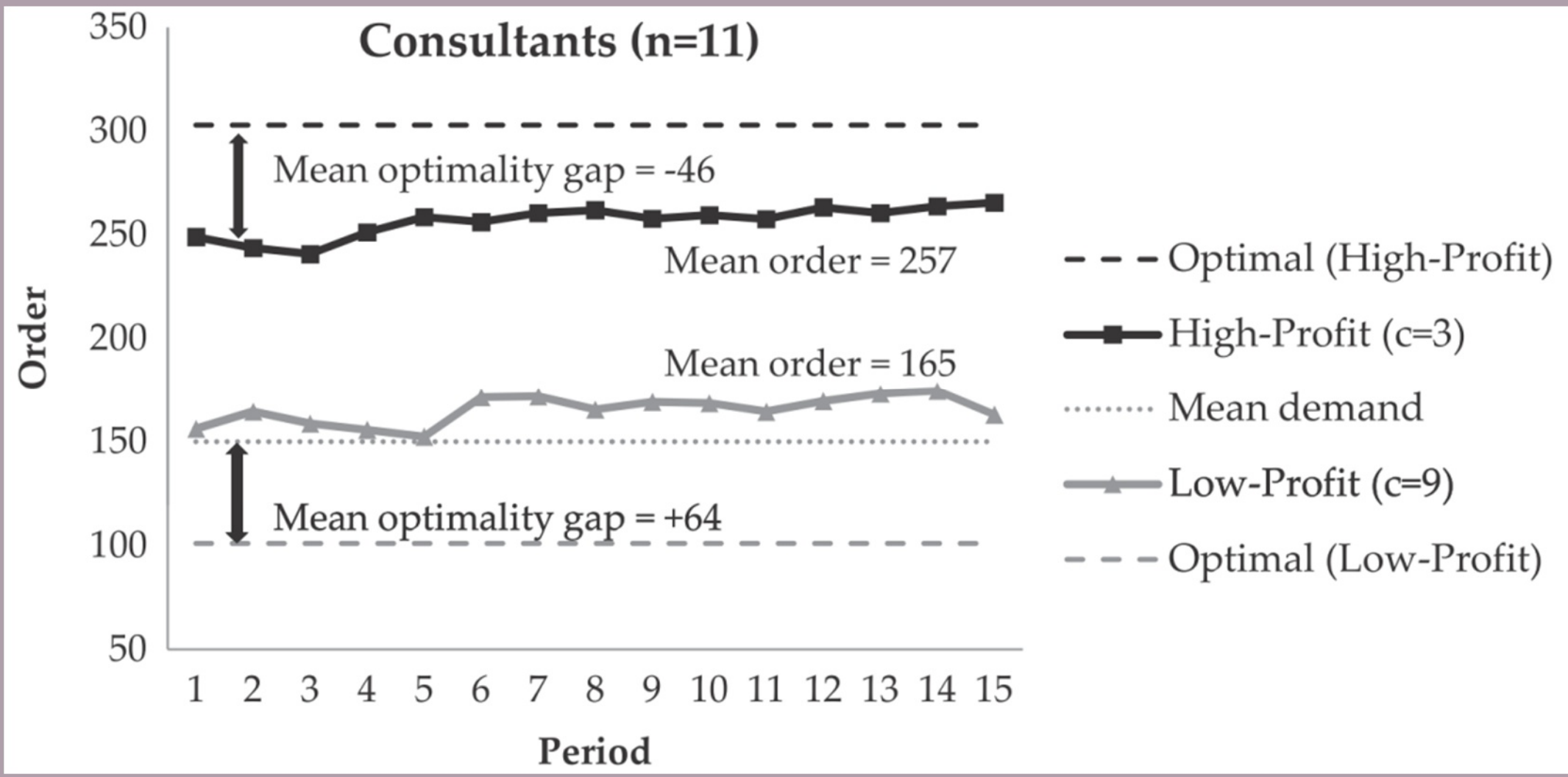
path dependence the outcome of the decision process depends on the path followed



accumulation of scale compatibility and loss aversion

create path dependence in the Even Swaps method

supply chain decision making



selected publications and manuscripts

L. Alberto Franco and Raimo P. Hämäläinen (eds.), *Special Issue: Behavioral Operations Research*, 2015, *European Journal of Operational Research*
R.P. Hämäläinen, J. Luoma and E. Saarinen: On the Importance of Behavioral Operational Research: The Case of Understanding and Communicating about Dynamic Systems. *European Journal of Operational Research* 228, 2013
A. Käki, J. Liesiö, A. Salo and S. Talluri: Newsvendor decisions under supply uncertainty. *International Journal of Production Research*
R.P. Hämäläinen and I. Leppänen: Cheap talk and cooperation in Stackelberg games. *Manuscript* 2014
R.P. Hämäläinen: Behavioural modelling research - the missing perspective. *Manuscript* 2014
T.J. Lahtinen and R.P. Hämäläinen: Biases and path dependency in the Even Swaps method. *Manuscript* 2014
M. Pöyhönen, H.C.J. Vrolijk and R.P. Hämäläinen: Behavioral and Procedural Consequences of Structural Variation in Value Trees. *European Journal of Operational Research*, Vol. 134/1, 2001
M. Pöyhönen and R.P. Hämäläinen: Notes on the weighting biases in value trees. *Journal of Behavioral Decision Making*, Vol. 11, 1998, pp. 139-150.
M. Pöyhönen, R.P. Hämäläinen and A. A. Salo: An experiment on the numerical modeling of verbal ratio statements. *Journal of Multi-Criteria Decision Analysis*, Vol. 6, 1997