

Diffusion model papers and related reaction time papers (with brief descriptions of the main points).

Original RT distribution paper - argues that distributions are necessary for evaluation reaction time models.

Ratcliff, R. & Murdock, B. B., Jr. (1976). Retrieval processes in recognition memory. *Psychological Review*, 83, 190-214.

Original diffusion model paper.

Ratcliff, R. (1978). A theory of memory retrieval. *Psychological Review*, 85, 59-108.

How to average RT distributions over subjects and why RT moments are not good measures of distribution shape.

Ratcliff, R. (1979). Group reaction time distributions and an analysis of distribution statistics. *Psychological Bulletin*, 86, 446-461.

Diffusion model when drift rate changes during the time course of processing (modest results mainly from the literature).

Ratcliff, R. (1980). A note on modeling accumulation of information when the rate of accumulation changes over time. *Journal of Mathematical Psychology*, 21, 178-184.

Diffusion model and letter string matching - a model of representation plus the decision process (variability in starting point is mentioned as a was of producing fast errors). Response signal functions also fit.

Ratcliff, R. (1981). A theory of order relations in perceptual matching. *Psychological Review*, 88, 552-572.

Evidence for drift rate changing during processing (diffusion model fits).

Ratcliff, R. & McKoon, G. (1982). Speed and accuracy in the processing of false statements about semantic information. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 8, 16-36.

Drift bias and bias in starting points first discussed in detail (noted earlier - but implicitly).

Ratcliff, R. (1985). Theoretical interpretations of speed and accuracy of positive and negative responses. *Psychological Review*, 92, 212-225.

More on the above.

Ratcliff, R. (1987). More on the speed and accuracy of positive and negative responses. *Psychological Review*, 94, 277-280.

Surprise! the diffusion model passes a test for serial inserted processes!

Ratcliff, R. (1988). A note on the mimicking of additive reaction time models. *Journal of Mathematical Psychology*, 32, 192-204.

Fitting Meyer et al.'s data. Introduces implicit boundaries for the response signal paradigm.

Ratcliff, R. (1988). Continuous versus discrete information processing: Modeling the accumulation of partial information. *Psychological Review*, 95, 238-255.

Non monotonic time course in recognition memory.

Gronlund, S.D. & Ratcliff, R. (1989). The Time Course of Item and Associative Information: Implications for Global Memory Models. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 15, 846-858.

Another nonmonotonic time course study.

Ratcliff, R. & McKoon, G. (1989). Similarity information versus relational information: Differences in the time course of retrieval. *Cognitive Psychology*, 21, 139-155.

Monte Carlo studies of how to deal with outlier reaction times.

Ratcliff, R. (1993). Methods for dealing with reaction time outliers. *Psychological Bulletin*, 114, 510-532.

You can deconvolve RT distributions, with plausible but wrong results.

Sheu, C-F, & Ratcliff, R. (1995). Fourier deconvolution of reaction time data: A cautionary note. *Psychological Bulletin*, 116, 285-299.

Examines the basis for variability in parameters across trials.

Van Zandt, T. & Ratcliff, R. (1995). Statistical mimicking of reaction time distributions: Mixtures and parameter variability. *Psychonomic Bulletin and Review*, 2, 20-54.

A model for implicit memory tasks that is actually a multi-alternative random walk model.

Ratcliff, R., & McKoon, G. (1997). A counter model for implicit priming in perceptual word identification. *Psychological Review*, 104, 319-343.

The second rebirth of the diffusion models (where we got errors and correct responses and parameter invariances) - this paper was submitted years after the 1999 Psych. Rev. paper, but beat it out.

Ratcliff, R., & Rouder, J.F. (1998). Modeling response times for two-choice decisions. *Psychological Science*, 9, 347-356.

The first paper that successfully modeled error and correct reaction times. Discusses drift bias and criterion bias, also discusses fast criterion setting - which is too fast for any adaptive method based on data.

Ratcliff, R., Van Zandt, T., & McKoon, G. (1999). Connectionist and diffusion models of reaction time. *Psychological Review*, 106, 261-300.

Masking and letter discrimination.

Ratcliff, R., & Rouder, J.F. (2000). A diffusion model account of masking in two-choice letter identification. *Journal of Experimental Psychology: Human Perception and Performance*, *26*, 127-140.

Diffusion model and aging - setting the stage for empirical work

Ratcliff, R., Spieler, D. & McKoon, G. (2000). Explicitly modeling the effects of aging on response time. *Psychonomic Bulletin and Review*, *7*, 1-25.

Modest but had a lot of work in it - has a random walk decision model at the end.

Rouder, J.F., Ratcliff, R., & McKoon, G. (2000). A neural network model of implicit memory in object recognition. *Psychological Science*, *11*, 13-19.

Critique of Carpenter's deterministic reaction time model.

Ratcliff, R. (2001). Putting noise into neurophysiological models of simple decision making (letter). *Nature Neuroscience*, *4*, 336.

Aging and RT: Signal detection/numerosity discrimination.

Ratcliff, R., Thapar, A., & McKoon, G. (2001). The effects of aging on reaction time in a signal detection task. *Psychology and Aging*, *16*, 323-341.

Numerical methods for simulating the diffusion process.

Tuerlinckx, F., Maris, E., Ratcliff, R., De Boeck, P. (2001). A comparison of four methods for simulating the diffusion process. *Behavior, Research, Instruments, and Computers*, *33*, 443-456.

How to fit the model to data.

Ratcliff, R., & Tuerlinckx, F. (2002). Estimating the parameters of the diffusion model: approaches to dealing with contaminant reaction times and parameter variability. *Psychonomic Bulletin and Review*, *9*, 438-481.

Shows that the diffusion model cannot predict everything!! Very important point.

Ratcliff, R. (2002). A diffusion model account of reaction time and accuracy in a brightness discrimination task: Fitting real data and failing to fit fake but plausible data. *Psychonomic Bulletin and Review*, *9*, 278-291.

Diffusion model and single cell recording.

Ratcliff, R., Segraves, M. & Cherian, A. (2003). A comparison of macaque behavior and superior colliculus neuronal activity to predictions from models of simple two-choice decisions. *Journal of Neurophysiology*, *90*, 1392-1407.

Aging and RT: letter discrimination.

Thapar, A., Ratcliff, R., & McKoon, G. (2003). A diffusion model analysis of the effects of aging on letter discrimination. *Psychology and Aging*, *18*, 415-429.

Aging and RT: brightness discrimination.

Ratcliff, R., Thapar, A., & McKoon, G. (2003). A diffusion model analysis of the effects of aging on brightness discrimination. *Perception and Psychophysics*, *65*, 523-535.

Diffusion model for lexical decision.

Ratcliff, R., Gomez, P., & McKoon, G. (2004). Diffusion model account of lexical decision, *Psychological Review*, *111*, 159-182.

Shows how "1/f" noise could be generated in sequential sampling models.

Wagenmakers, E-J., Farrell, S., & Ratcliff, R. (2004). Estimation and interpretation of 1/f noise in human cognition. *Psychonomic Bulletin and Review*, *11*, 579-615.

Major comparison among sequential sampling models.

Ratcliff, R. & Smith, P. L. (2004). A Comparison of Sequential Sampling Models for Two-Choice Reaction Time, *Psychological Review*, *111*, 333-367.

Reply to Myerson's critique of aging and RT.

Ratcliff, R., Spieler, D. & McKoon, G. (2004) Analysis of group differences in processing speed: Where are the models of processing? *Psychonomic Bulletin and Review*, In press.

Diffusion model fit to lexical decision data from Aphasics.

Ratcliff, R., Perea, M., Coleangelo, A., & Buchanan, L. (2004) A diffusion model account of normal and impaired readers. *Brain & Cognition*, *55*, 374-382.

Estimating variances and covariances in model parameters and discriminating between models: examples include RT models.

Wagenmakers, E-J., Ratcliff, R., Gomez, P. & Iverson, G. J. (2004). Assessing model mimicry using the parametric bootstrap. *Journal of Mathematical Psychology*, *48*, 28-50.

Aging and RT: Recognition memory.

Ratcliff, R., Thapar, A., Gomez, P., & McKoon, G. (2004). A diffusion model analysis of the effects of aging on recognition memory. *Journal of Memory and Language*, *50*, 408-424.

Aging and RT: Lexical decision.

Ratcliff, R., Thapar, A., Gomez, P., & McKoon, G. (2004). A diffusion model analysis of the effects of aging on lexical decision. *Psychology and Aging*, *19*, 278-289.

Philip put a front end onto a masking and attention experiment with a diffusion model back end.

Smith, P. L., Ratcliff, R., & Wolfgang, B. J. (2004). Attention, visual short term memory, and the representation of stimuli in psychophysical decisions. *Vision Research*, *44*, 1297-1320.

If you publish a paper, you get to write a review in this domain.

Smith, P. L., & Ratcliff, R. (2004). The Psychology and Neurobiology of Simple Decisions, *Trends in Neuroscience*, *27*, 161-168.

Applying the models to data previously fit only by the diffusion model.

Ratcliff, R., Thapar, A., Smith, P. L., & McKoon, G. (2004). Aging and Response Times: A Comparison of Sequential Sampling Models. In *Speed, Control, and Age*, J. Duncan, P. McLeod, & L. Phillips (eds.), Oxford University Press: Oxford, England.

Vary speed accuracy and word/nonword probabilities in 2 experiments.

Wagenmakers, E.-J., Ratcliff, R., Gomez, P., & McKoon, G. (2006). A quantitative account of strategic effects in lexical decision, *Journal of Memory and Language*, in press (subject to revision).

Has an implicit boundary like the response signal model paper.

Gomez, P., Perea, M. & Ratcliff, R. (2006). A Model of the go/no-go Lexical Decision Task. *Journal of Experimental Psychology: General*, In press.

How to model response signal and reaction time data simultaneously.

Ratcliff, R. (2006). Modeling Response Signal and Response Time Data, *Cognitive Psychology*, In press.

Aging and RT: Individual differences.

Ratcliff, R., Thapar, A., & McKoon, G. (2006). Aging and Individual Differences in Rapid Two-choice Decisions. *Psychonomic Bulletin and Review*, In press.

Aging and RT: Practice effects.

Ratcliff, R., Thapar, A., & McKoon, G. (2005). Aging, practice, and perceptual tasks: A diffusion model analysis. *Psychology and Aging*, In press.

Methods for numerically approximating sequential sampling models.

Brown, S., Ratcliff, R., & Smith, P. L. (2006). Evaluating methods for approximating stochastic differential equations. In press subject to revision, *Journal of Mathematical Psychology*.

An experimental paper using the brightness discrimination task and a model for the brightness discrimination task which fits single cell recording data.

Ratcliff, R., Hasegawa, Y. T., Hasegawa, Y. P., Smith, P. L., and Segraves, M. A. (2006). A Dual Diffusion Model for Behavioral and Neural Decision Making, *Journal of Neurophysiology*, in press.,

Application of the diffusion model to the worst performance rule in IQ research.

Ratcliff, R., Schmiedek, F., & McKoon, G. (2006). A diffusion model explanation of the worst performance rule for reaction time and IQ. *Intelligence*, In press.

Diffusion model applied to emotional words in moderate depression.

White, C., Ratcliff, R., Vasey, M. & McKoon, G. (In preparation). Information processing and emotional bias in moderate depression: A diffusion model analysis.

Correlations between ERP measures and diffusion model parameters.

Philiastides, M. G., Ratcliff, R., & Sajda, P. (2006). Neural Representation of Task Difficulty and Decision-Making During Perceptual Categorization: A Timing Diagram. *Journal of Neuroscience*, *26*, 8965-8975.