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Actions as a continuous representation of cognition:

As support of this framework, neurophysiological research has even shown that as a decision process for a binary decision task evolves, the strength of neural activation for the chosen option gradually increases, while the neural activation for the not chosen option is inhibited

because of many underlying processes affecting the decision to be either option A or B

# Document with all the deleted stuff

Mouse-tracking into:

(possible beginnings: “Before mousetracking researchers tried to infer… ”, “Donders…”, “Evolution of decisions in everyday life…”, Maybe saying that is has become popular to investigate a lot of different stuff and come with examples, i.e. like Maldonado does it)

“Methods like electroencephalography (EEG), functional magnetic resonance imaging (fMRI) and eye-tracking provides a more continuous measure of the underlying cognitive process, but still lacking a continuous measure of the response itself.”

What about mentioning decision research? Use the term “decision conflict” and how mouse-tracking has changed the assessment of this

Introduction and theory of Spivey experiment:

So the experiment is basically an investigation into whether spoken-word processing is the result of a dual-system framework or dynamic framework.

The experiment emphasised the use of mouse-tracking over eye-tracking, since eye-tracking will only be a semicontinuous account of the underlying cognitive processes since it is based on several steady fixations on an object. Mouse-tracking “provides an unusually high-fidelity emission of the continuous cognitive dynamics inherent in real-time spoken-language processing” (Spivey et al, 2005).

Experimental design:

As previously stated, all 16 visual stimuli were provided by a researcher of the original experiment to approximate the effect from the original experiment

Replicating Spivey et al.:

T-test

* Between percentage of incorrect trials
* between total response time
* between time\_initiation\_movement
* between duration\_of\_movement (x)
* between x-coordinates in cohort and control for specific time slices
* between proximity to target and distractor object (for both control and cohort)

Degree of curvature

* Bimodality coefficient
* Kolmogorov-Smirnov test

Area under the trajectory

* Kolmogorov-Smirnov test

Discussion of experimental replication and possible improvements:

What is the point of this section?

* Focus on the data itself and how well it represents the underlying process
* Bring up discussion about design features affecting the trajectories
* E.g. static start, click response, fast mouse, acceleration mouse creates more change of mind and straight trajectories (bimodal distributed data), while dynamic start, hover response, slow mouse, no acceleration creates more homogenous distribution of trajectories (unimodal distributed data)
* LDA-model trained on change of decision and straight trajectories
* Should experiments using this model induce such trajectories? Or should it not?
* Kieslich dissertation is a good source for this discussion