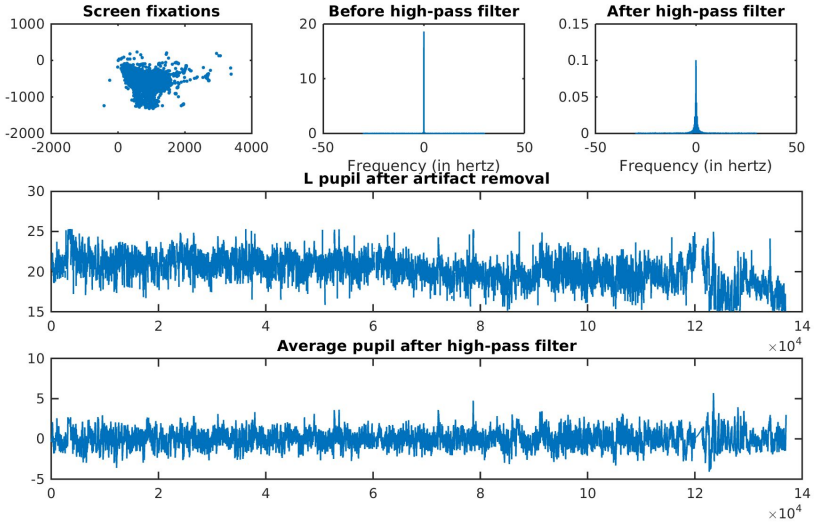
Pupil meeting

21/06/2017

Pupil pre-processing

1. Removed non-good states of eye-tracker
2. Removed fixations outside screen center
3. (Correct for gaze position)
4. Excluded samples outside 3 sd
5. Linear interpolation +- 100ms
6. 128s high-pass filter
7. (Average eyes)
8. (Downsampling)
9. Smoothing (for 1D-RFT, Kernel or low-pass 2 Hz)
10. Z-score
11. Baseline correction in epochs (100ms before onset average)



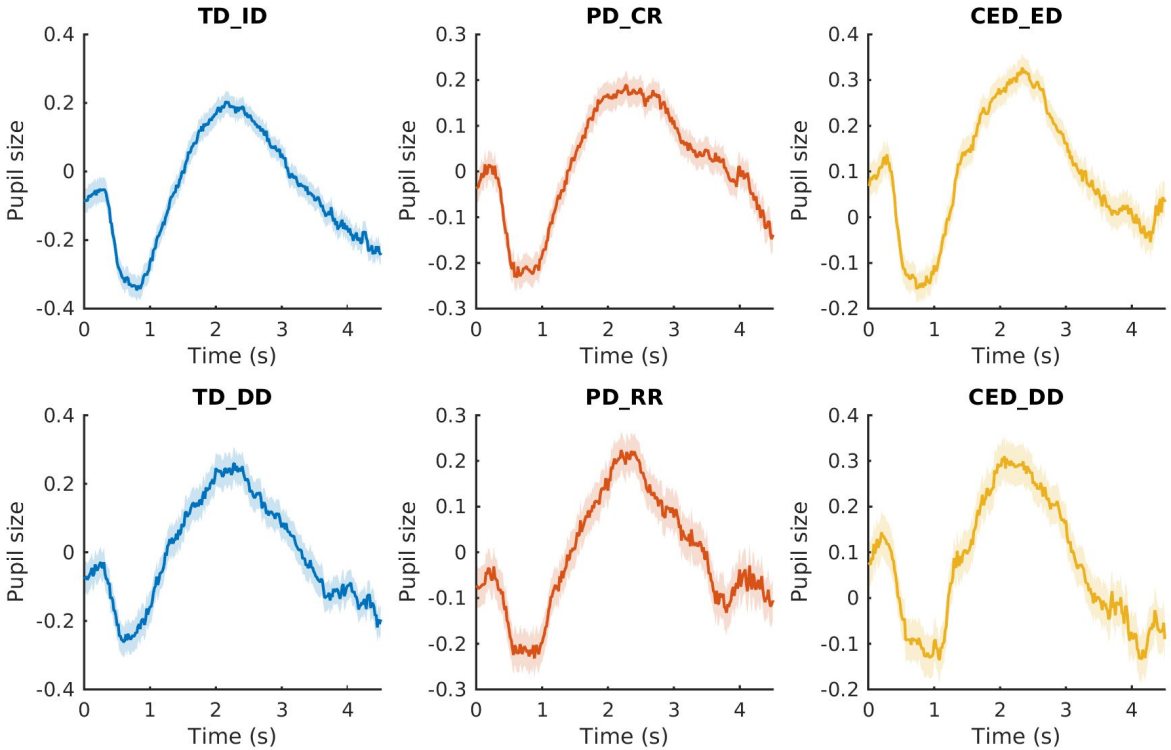
Geuter, S., Boll, S., Eippert, F. & Büchel, C. Functional dissociation of stimulus intensity encoding and predictive coding of pain in the insula. *Elife* **6,** e24770 (2017).

de Gee, J. W., Knapen, T. & Donner, T. H. Decision-related pupil dilation reflects upcoming choice and individual bias. Proc. Natl. Acad. Sci. 111, E618–E625 (2014).

Korn, C. W. & Bach, D. R. A solid frame for the window on cognition: Modeling event-related pupil responses. J. Vis. 16, 28 (2016).

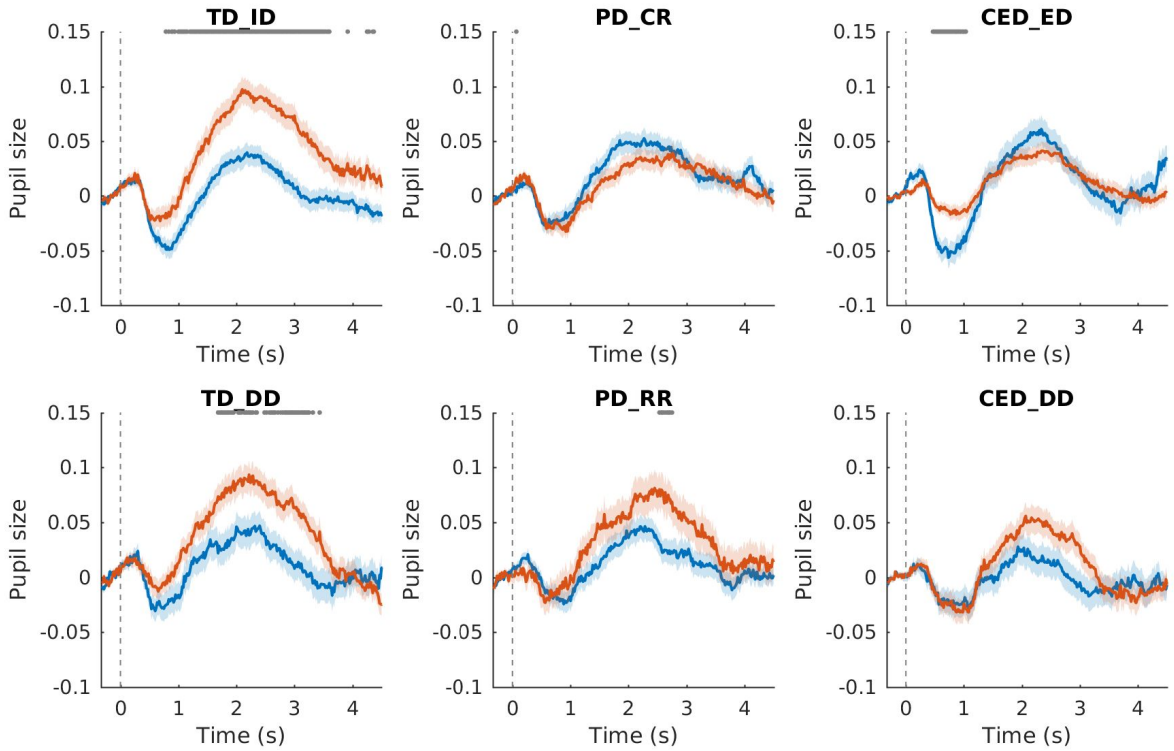
Results FatStim

Mean pupil response per task

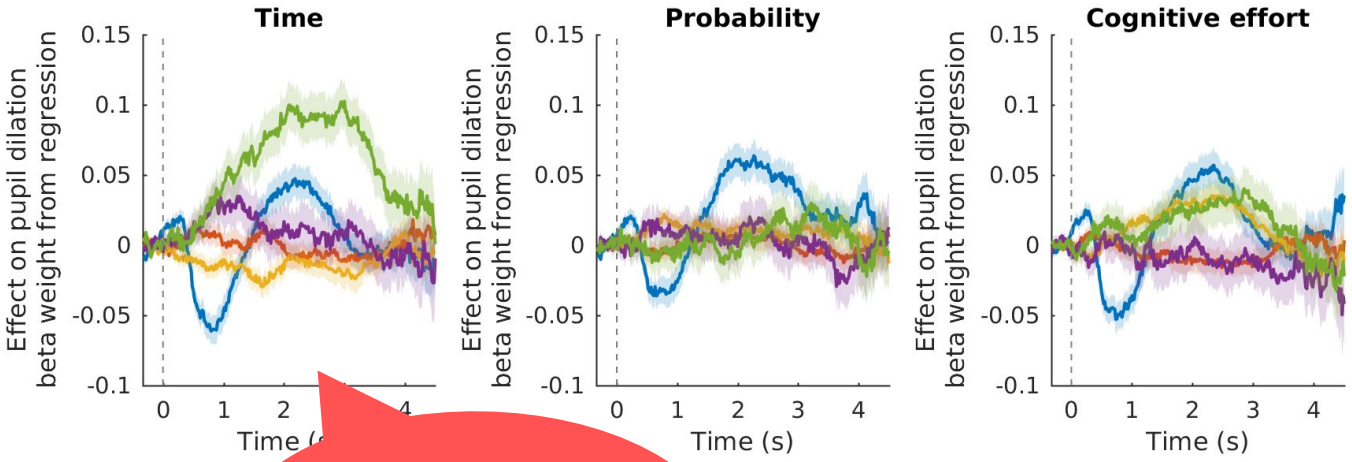


Pupil during choice - choice LL vs choice SS

*1D RFT



Pupil during choice - Regression



Don't forget to smooth betas and use 1D RFT to test if betas are different from zero :)

blue: intercept
red: cost
yellow: distance from indiff-point
purple: 1D/2D
green: choiceSS

Browning, M., Behrens, T. E., Jocham, G., O'Reilly, J. X. & Bishop, S. J. Anxious individuals have difficulty learning the causal statistics of aversive environments. *Nat. Neurosci.* **18,** 590–596 (2015).

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