**Note from 15013 (trying to remember)**

First, there seems to be a problem with the glmdx script (the d-primes look wrong...)

Second.

Working on subway, I was seeking to understand the interaction TD.

I now have a good intuition about what's going on.

See this e-mail to chris.

*i was just thinking about the interaction in subway... i think i understand where it comes from.*

*two things can be driving the interaction:  
1) the fact that the slope is different at both sides of the U  
  
2)  as we've seen today, the signal we see in vmPFC is just the same for short and long journeys, locked to the time of the goal: it just keeps increasing with distance to goal but it's the same if we fix the onset to the goal.*

*however, this function is very flat when we're close to the goal and very steep when at the beginning of the journey (decreasing as we get closer). this is kind of weird as we hypothesised a logarithmic representation of distance. if what we see is true, the representation of distance is not logarithmic but exponential.*

*in our regression, the best regressor to fit this curve is the opposite logarithm (i.e. the number of trials since beginning of journey). however, this one is not locked to the time of the goal but to the start. for longer journeys it obviously needs to start from a higher point – thus we see an interaction.*

*i don't know if you see what i mean. we can talk more about it tomorrow!*

Running new GLMs (with linear distance regressors and without the interaction) show the usual effects on the distance-to-goal regressor rather than the distance-from-start.

Also, re-running the GLM with subgoal, with linear distance, and controlling for onsets (i.e. not using distance-to-goal as a distance-to-subgoal) yields the usual positive crown signal in SMA areas. Which is good.