# T model output.

## Posteriors







Both predictions on a single plot.







Remember, these are all lag 5 in the first place. So df2 autocorrelation actually goes to zero by lag 15\*5=75. The second plot of alpha[1] actually has each single unit on the x axis is lag 25.



# Comparison of t to normal output



The t model posteriors are slightly more peaked than most of the normal results, suggesting the parameters are slightly more precisely estimated in the t model than in the normal model.



Modest differences. Most notable difference is that the t model for the distract treatment for distracters is estimated to be a weaker effect than under the normal model.

The t model identifies outlying observations and downweights them and does not allow them to influence the parameter estimates. A useful exercise: Go back through the data and identify the outliers that are downweighted. What coping style and treatment has the most outliers and are they high or low outliers?



Five number summaries of the predictions

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | observation | min | lower 1/4 | median | upper 1/4 | max |
| log | t | 3 | -5.6 | 2.7 | 3.0 | 3.2 | 58.7 |
| seconds | t | 4 | -6.5 | 2.5 | 2.8 | 3.0 | 8.9 |
| scale | normal | 3 | 0.8 | 2.7 | 3.0 | 3.3 | 5.3 |
|  | normal | 4 | 0.5 | 2.4 | 2.8 | 3.1 | 4.8 |
| seconds | t | 3 | 0.004 | 15.4 | 19.9 | 25.7 | 3.21E+25 |
|  | t | 4 | 0.002 | 12.0 | 15.8 | 20.6 | 7165.3 |
|  | normal | 3 | 2.2 | 14.8 | 20.4 | 28.3 | 198.7 |
|  | normal | 4 | 1.7 | 11.5 | 16.0 | 22.5 | 117.0 |

The t distributions are similar to the normal in the center part, but the extremes are radically different.