# Maximizing Correct Estimation Percentage: EXOGENOUS

Correct estimation percentage is the ratio of correct responses in stimulus-based accuracy (compared to response based accuracy. Estimation seems to be decrease dramatically if there are many error responses. Not just because the error responses decrease the ratio, but there appears to be a bug in the script where errors (blank lines in response-based registry: no\_onset\_ResponseTable) cause subsequent correct estimations to not register.

I will systematically check for bugs in the following order:

1 ) Make an earlier error at the beginning and check subsequent registries.

1a) Make an omission

1b) Make a wrong timing

1c) Make a wrong response

1d) Make undefined response (Don’t know how)

2) Does trial count have an effect?

2a) Make an omission

2b) Make a wrong timing

2c) Make a wrong response

## 1a) Omission

There is a slide in registry when there is an omission in no onset table.

Check with 3rd reversal omitted.

Fixed the bug, there was a slide in response registries due to overwrite of one row in no onset table.

## 1b) Make a wrong timing

Wrong timing responses register as correct to no onset table. Therefore, more wrong timing will result in lower estimation accuracy. No bugs are detected.

## 1c) Make a wrong response

Wrong response counts as correct response in no onset table. There are no bugs, just making errors will cause the correct estimation rate to decrease. Wrong response was registering as Undefined in onset table, I fixed that.

**##** Lower bound for RT eligibility is decreased to .250. Because I gave a valid response with 280 ms RT and it did not register in no onset table.

**1d) Problem with NaN RTs**

There are instances where estimated RT becomes NaN. This disrupts registry. Check why this happens. It was in wrong timing trials, occasionally it could not find eligible onset in these trials. I made a condition where these non-eligible onset trials are not registered.

**1e) Problem of RT window**

RT window estimation was selecting onsets between .2 to 2 secs. I fixed it and made it .25 to 2.5 secs.

**EXOGENOUS TLDR PEOPLE (Too long didn’t read)**

**All registries seem to have %100 correct estimation of correct-response exogenous reversal onsets. If participants have error responses, these will also be counted as correct onsets. There are some certain situations where no eligible onsets are found for these error responses, so these trials are not registered; better for us because signal to noise ratio increases. But it is better to assume that all error responses will be registered as correct onsets.**

# Debugging Onset Estimation in Endogenous Trials

People could be able to respond much faster to endogenous task. I appear to have responded in 150 ms etc. Because there is a sense that the reversal is coming. That creates anticipation and you can respond faster. I’ll try more and see if this is true.