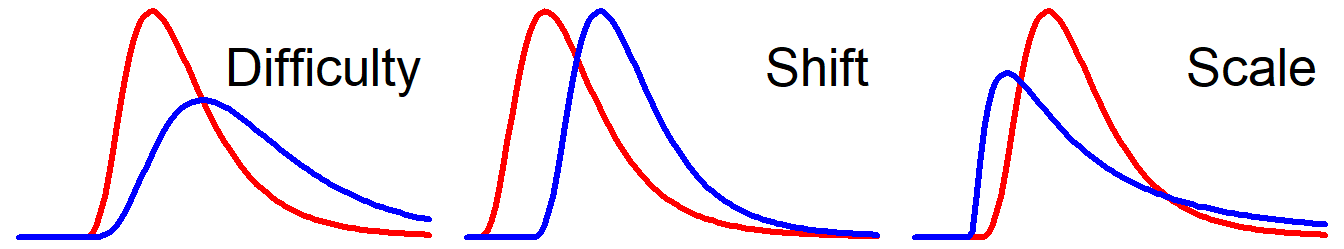
**Reaction time distributions**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Distribution | | | Parameters | | | | Code |
| Variant of… | Click to interact | RT fit | Shift | Scale | Difficulty | Messy | Example code |
| normal | Normal (Gaussian) |  | ***μ*** | *σ* |  |  | brm(rt ~ x + (1|id), data, family=gaussian()) |
| Ex-gaussian | ✔✔ | ***μ*** | *σ* |  | *λ* | brm(rt ~ x + (1|id), data, family=exgaussian()) |
| Skew normal |  | ***μ*** | *σ* |  | *α* | brm(rt ~ x + (1|id), data, family=skew\_normal()) |
| Log-normal | ✔ |  | *σ* | ***μ*** |  | brm(rt ~ x + (1|id), data, family=lognormal()) |
| Shifted log-normal | ✔✔ | *shift* | *σ* | ***μ*** |  | brm(rt ~ x + (1|id), data, family=shifted\_lognormal()) |
| Drift | Wald / Inverse Gaussian | ✔ |  | *λ* | ***μ*** |  | brm(rt ~ x + (1|id), data, family=inverse.gaussian()) |
| Shifted Wald / Inverse Gaussian | ✔✔ | *shift* | *λ* | ***μ*** |  | [Make a custom family for brm](https://cran.r-project.org/web/packages/brms/vignettes/brms_customfamilies.html) and [see this post](https://mrunadon.github.io/Shifted-Wald-distribution-for-response-time-data-using-R-and-Stan/). |
| Wiener / Decision Diffusion | ✔✔ | Mechanism: 4 parameters | | | | [See this tutorial](http://singmann.org/wiener-model-analysis-with-brms-part-i/). |
| Linear Ballistic Accumulator | ✔✔ | Mechanism: 7 parameters | | | | See glba::lba |
| Survival | Weibull |  |  |  | ***λ*** | *k* | brm(rt ~ x + (1|id), data, family=weibull) |
| Shifted Weibull | ✔ | *shift* |  | ***λ*** | *k* | [Make a custom family for brm](https://cran.r-project.org/web/packages/brms/vignettes/brms_customfamilies.html). |
| Gamma | ✔ |  |  |  | ***α, β*** | brm(rt ~ x + (1|id), data, family=gamma()) |

**Shift:** Moves the whole distribution towards longer RTs.  
**Scale:** Disperses the distribution.  
**Difficulty:** Disperses distribution towards longer RTs. [This is very RT-like](http://ejwagenmakers.com/2007/WagenmakersBrown2007.pdf).  
**Messy:** None or more than one of these.

**Bold parameter:** the one regressed on. You can change this in brm by using e.g., formula = bf(rt ~ 1, ndt ~ x + (1|id), sigma ~ x).

Red parameter: hard to interpret the value.

TO DO:

* Add prominent link to website.
* Make parameter distributions match titles
* Describe: fits, “drift-like”, Mechanism
* All code uses brms.