

Untitled

Matt Wheeler

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R Markdown

I am going to look at the different priors and the resulting likelihood that results for the following dataset using maximum likelihood estimation

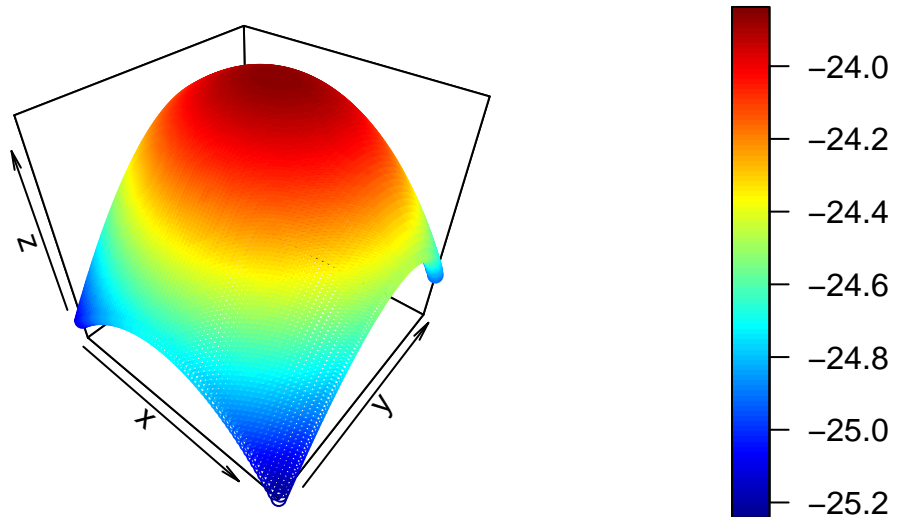
```
print(mData)
```

```
##      [,1] [,2] [,3]
## [1,]  0.0   1  10
## [2,]  0.3   4  10
## [3,]  1.0   4  10
## [4,]  4.0   7  10
```

```
H = single_dichotomous_fit(mData[,1],mData[,2],mData[,3],model_type = "weibull",fit_type = "mle")
H$parameters
```

```
## [1] -1.3883939  1.0000000  0.2740722
```

The default MLE for the α parameter hits its natural bound at 1.0. If we look at the likelihood without the beta



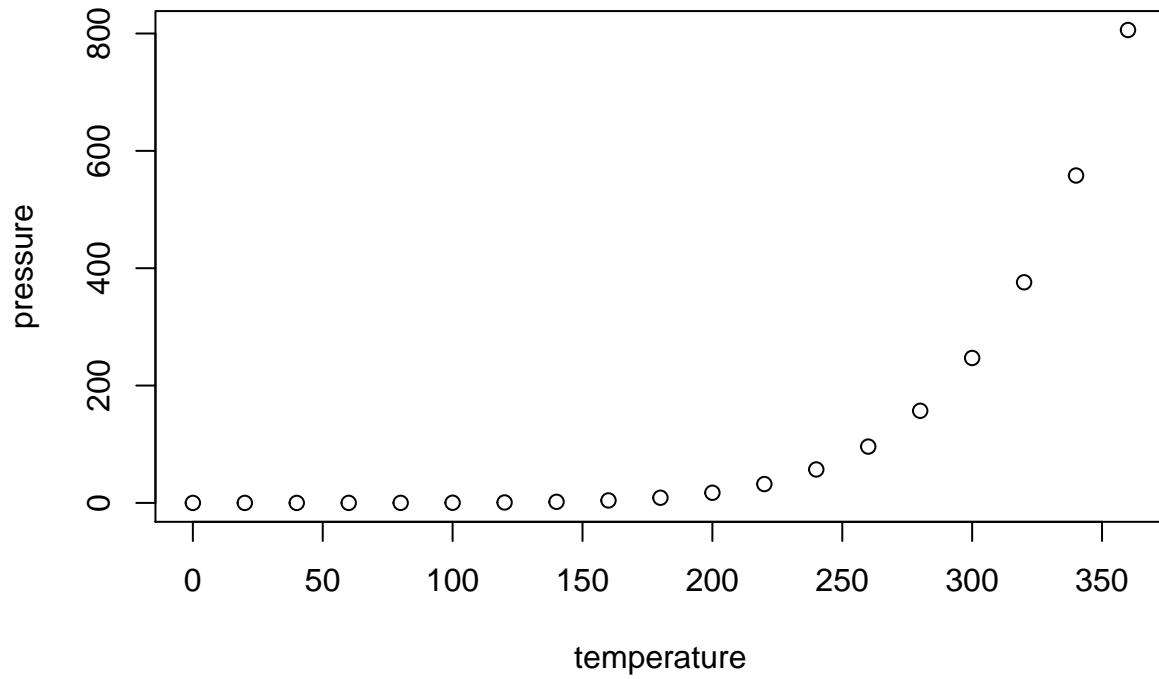
we have the following surface:

So what happens when we start to mess around with the prior? Well lets see the default prior in 'ToxicR' using MCMC for pretty plots we have:

```
H = single_dichotomous_fit(mData[,1],mData[,2],mData[,3],model_type = "weibull",fit_type = "mcmc")
H$parameters
plot(H)
```

Including Plots

You can also embed plots, for example:



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.