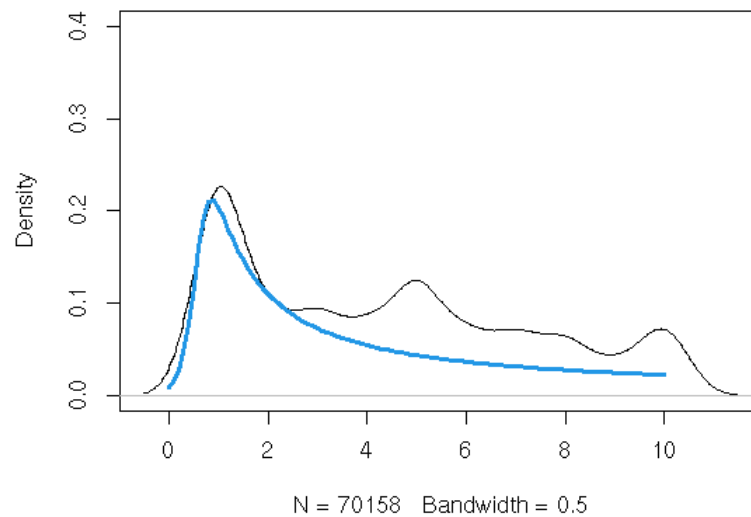


ISSUES FITTING GHD TO Q110

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1. MANUAL GHD FIT OF Q110

Q110 density and GHD fit



GHD fits by MLE, but in some cases, we can fit manually, as above for Q110. The parameters are a bit strange, which is what I worry about.

```
> caption<-paste(var, "density and GHD fit")
> out<-plot(density(V,bw=0.5),ylim=c(0,0.4),main=caption)
> xt<-seq(0,10,by=0.1)
> lines(xt,1.5*dghyp(xt,
object=ghyp(
lambda=0.1,
sigma=6,
mu=0.6,
gamma=90,
alpha.bar=0.04)),col=4,lwd=3)
>
```

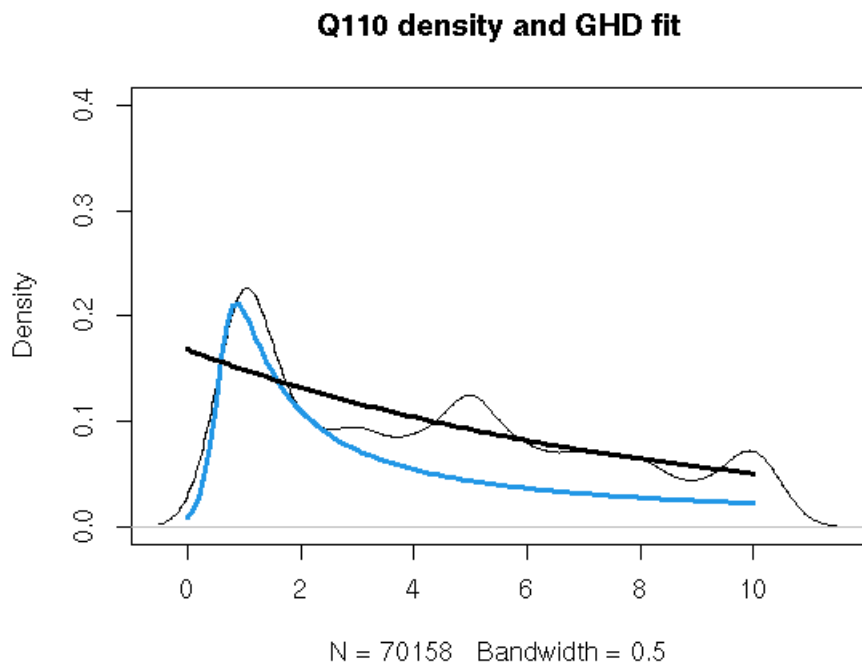
Date: May 14, 2021.

2. MAY 14 2021

I look at the importance of Q110, on whether human race thinks hard work or luck determines success, and gain renewed enthusiasm for being more accurate in my models.

I take a step back from GHD and fit an exponential.

You see, when the substance is serious, we ought to respect the data and not be fooled by an automated technique, despite how it seems theoretically satisfying. Nature comes first, not techniques. One has to reverse the data.



The exponential fit is not all that bad at all. Let's take a look at the summary.

```
> summary(mod)
```

Call:

```
lm(formula = log(nrm(Vt)) ~ t10)
```

Residuals:

	Min	1Q	Median	3Q	Max
	-0.48483	-0.25660	-0.08237	0.29677	0.59467

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	-1.78406	0.27482	-6.492	0.00019 ***
t10	-0.11929	0.04429	-2.693	0.02736 *

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.4023 on 8 degrees of freedom
Multiple R-squared: 0.4755, Adjusted R-squared: 0.41
F-statistic: 7.254 on 1 and 8 DF, p-value: 0.02736

Here we are getting an $R^2 = 0.41$ fit. This is actually a good model.

And this is how one develops a sense for the relative merits of the models. Standard science takes over Zulf's thinking, after heady discovery and euphoria dies down and a different mode predominates.