Experiments

Exp 1. How good is the last iteration of the MCEM

```
time = proc.time()
n_sim = 1000
n_trees = 10
MP = matrix(nrow=n_sim,ncol=3)
RP = matrix(nrow=n_sim,ncol=3)
p = proc.time()
for(i in 1:n_sim){
  est = sim.est(n_trees=n_trees,pars=c(0.8,0.1,40),seed=i)
  RP[i,] = est$real
  MP[i,] = est$est
}
print(proc.time()-p)
```
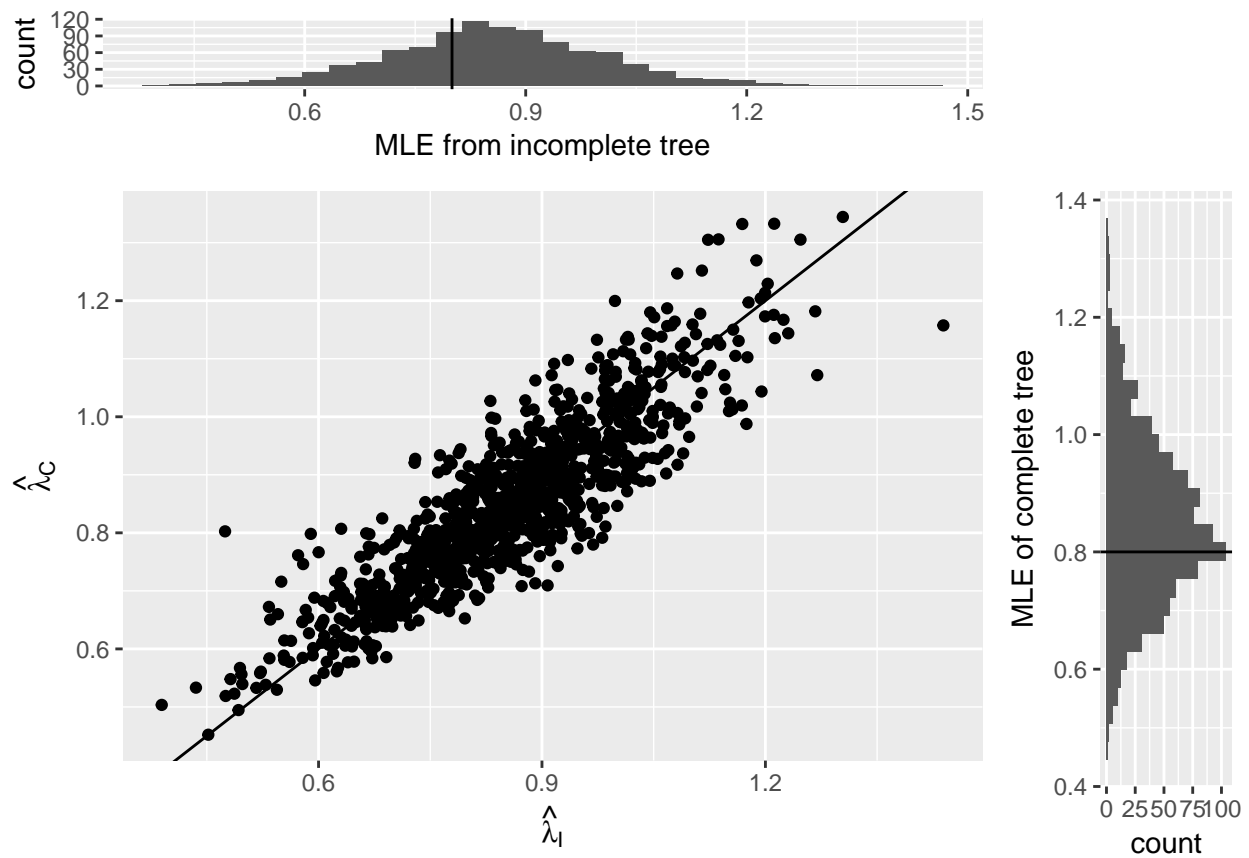
```
##      user    system   elapsed
## 1108.172    0.080  1108.613
```

```
get.time(time)
```

```
##  elapsed
## 1108.621
```

```
dmea::par_est_vis(P=MP,par=1,PR=RP)
```

```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```
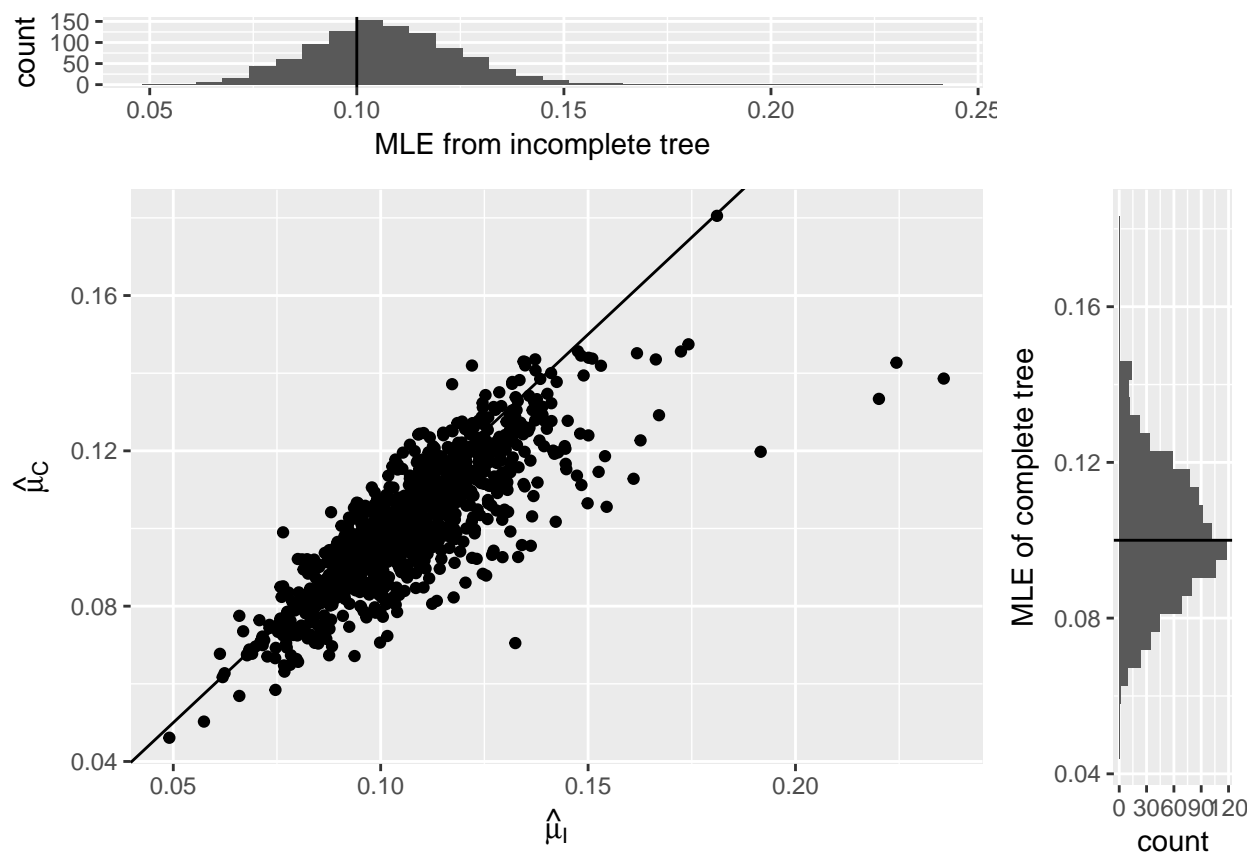
```
dmea::par_est_vis(P=MP,par=2,PR=RP)
```

```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```
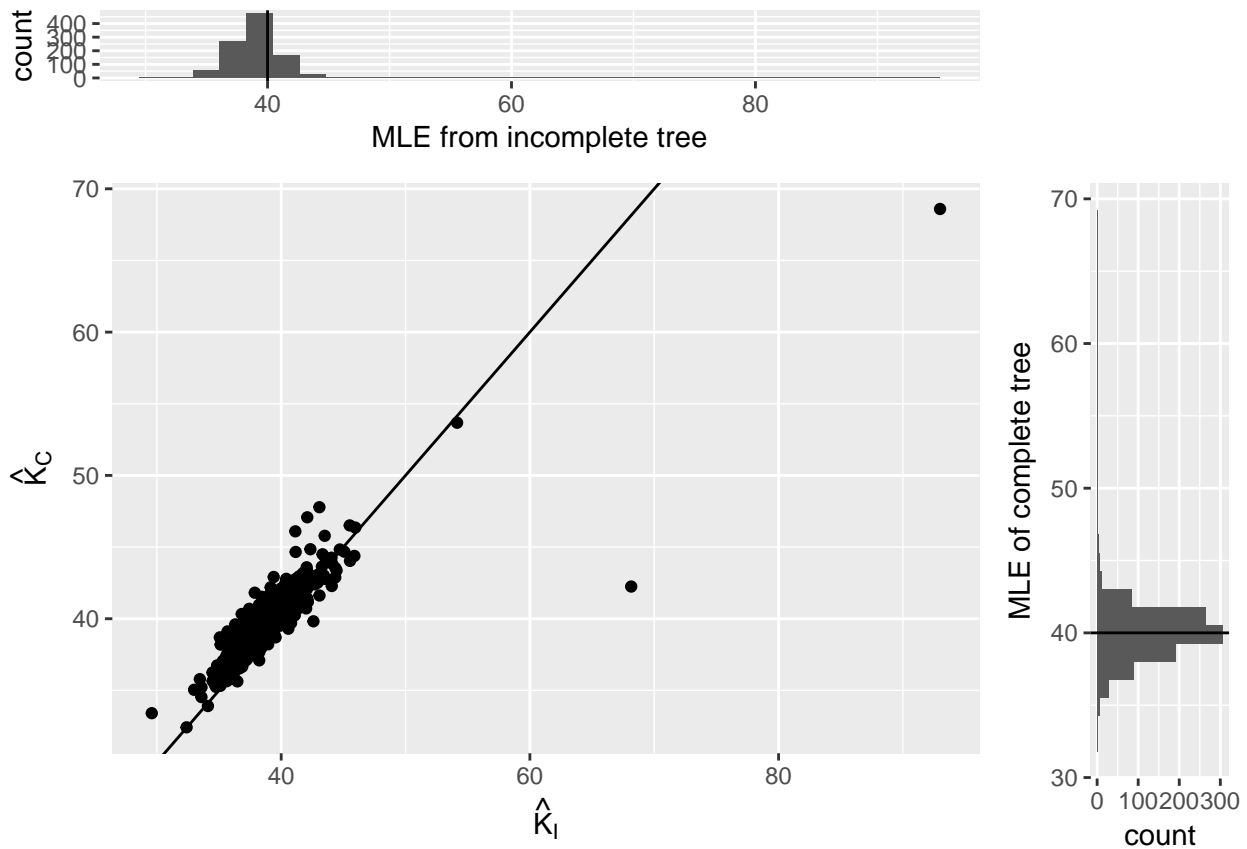
```
dmea::par_est_vis(P=MP,par=3,PR=RP)
```

```
## [1] "0.003 proportion of data was excluded for vizualization purposes"
```

```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```

```
summary(MP)
```

```
##        V1              V2                V3
##  Min.   :0.3894   Min.   :0.04906   Min.   :24.74
##  1st Qu.:0.7670   1st Qu.:0.09504   1st Qu.:37.76
##  Median :0.8542   Median :0.10580   Median :38.93
##  Mean   :0.8558   Mean   :0.10722   Mean   :39.04
##  3rd Qu.:0.9468   3rd Qu.:0.11806   3rd Qu.:40.13
##  Max.   :1.4390   Max.   :0.23574   Max.   :92.99
```

```
summary(RP)
```

```
##        V1              V2                V3
##  Min.   :0.4521   Min.   :0.04611   Min.   :3.200e+01
##  1st Qu.:0.7557   1st Qu.:0.08961   1st Qu.:3.900e+01
##  Median :0.8363   Median :0.10023   Median :4.000e+01
##  Mean   :0.8497   Mean   :0.10096   Mean   :2.314e+11
##  3rd Qu.:0.9381   3rd Qu.:0.11241   3rd Qu.:4.100e+01
##  Max.   :1.3443   Max.   :0.18053   Max.   :2.314e+14
```