

```

# CGM (2008):
# We are going to create a new pseudo-sample in each loop to re-estimate the
parameter of interest.
# We assume you are estimating a linear model with DV 'y' and two IVs 'x1' and
'x2'
# Here we are estimating the SE for b2 (beta for x2).
# We create a new DV in each iteration equal to the estimated coefficients from a
restricted model, with b2=0, and with the residual added or subtracted (with
probability 0.5) from the same restricted model.
# Within the loop you might have:

```

```

for(i in 1:reps){
  ones<-sample(c(1,-1),length(clusters),replace=T)
  ones<-rep(ones,times=freq)
  ds.bs<-data
  ds.bs[, 'y']<-c[[1]]+c[[2]]*ds.bs[, 'x1']+resids*ones
  b2[i]<-coef(lm(y~x1+x2,ds.bs))[[3]]
}

```

where freq is the frequency of each cluster which you could obtain using

```

freq<-as.data.frame(table(data[,paste(clustervar)]))
freq<-freq[, 'Freq']

```

resids are the residuals and c is the coefficients from the original restricted model

```

reg1<-lm(y~x1,data)
c<-reg1$coefficients
resids<-reg1$residuals

```

obtained before the bootstrap loop, and b2 is a vector to store all the b2 estimates in.