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> # this code is to investigate the robustness of saturated
> # new and old estimates when the data changed from sparse to non-sparse
> # require(BayDR)
> #
> # dat=GenDat2(phi1=2,K=1) # 6 confounders and 1000 observations
> # Y = dat$Y
> # X= dat$X
> # C=dat[,1:6]
> # # check if the data is sparse or not
> # UqC=dcom(Dat=dat)$UqC
> # nrow(UqC)==2^6 # TRUE means non-sparse
> #
> # #
> # sat.new=sat.est.new(Y,X,C)$est.new
> # sat.old=sat.est.old(Y,X,C)$est.old
> #
> # #
> # res=do.call(rbind,lapply(1:50,function(i){
> # temp=sample(1:1000,100)
> # dat.sp <- dat[temp,]
> # UqC.sp=dcom(Dat=dat.sp)$UqC
> # if(nrow(UqC.sp)<2^6) # true means sparse here
> # {
> # Y = dat.sp$Y
> # X= dat.sp$X
> # C=dat.sp[,1:6]
> # sat.new.sp=sat.est.new(Y,X,C)$est.new
> # sat.old.sp=sat.est.old(Y,X,C)$est.old
> # }
> # c(new=sat.new.sp,old=sat.old.sp)
> # }))
> #save(res,sat.new,sat.old,file="Sparse-NonSparse.Rdata")
> load("Sparse-NonSparse.Rdata")
> sat.new

[1] 0.3399628

> sat.old

[1] 0.1761116

> colMeans(res)/c(sat.new,sat.old)

      new      old
0.8326231 0.1472287

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