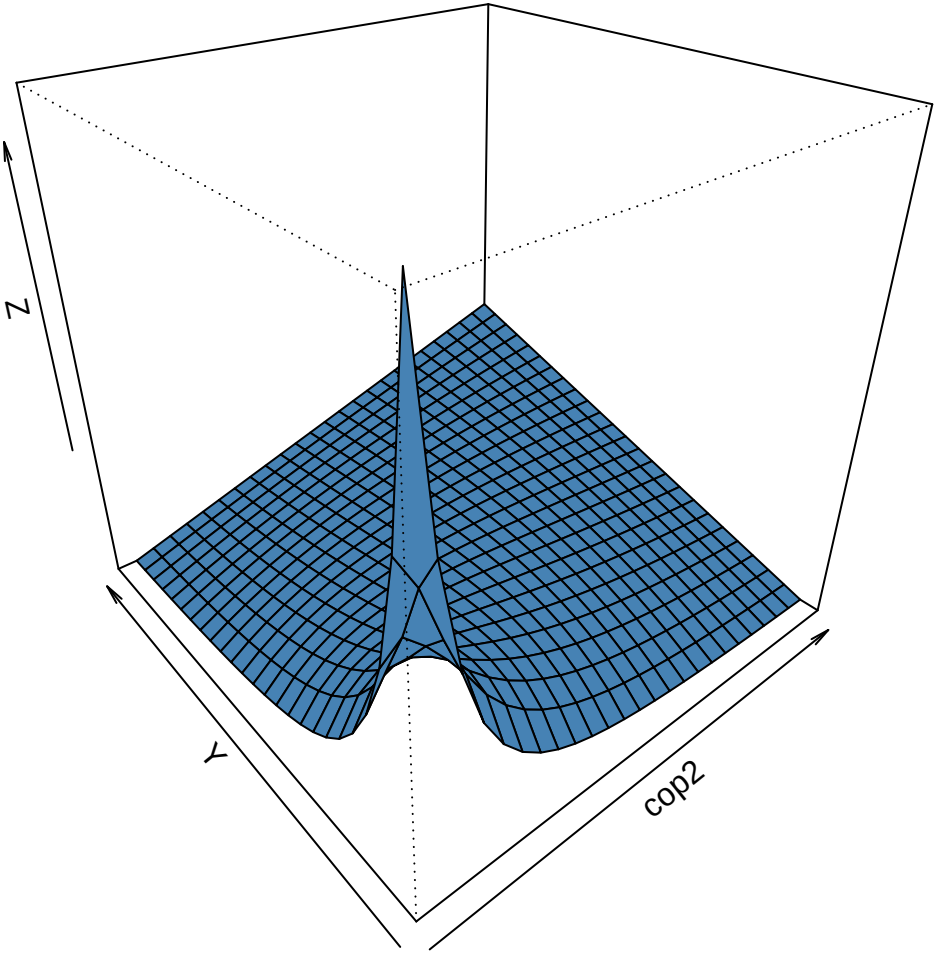
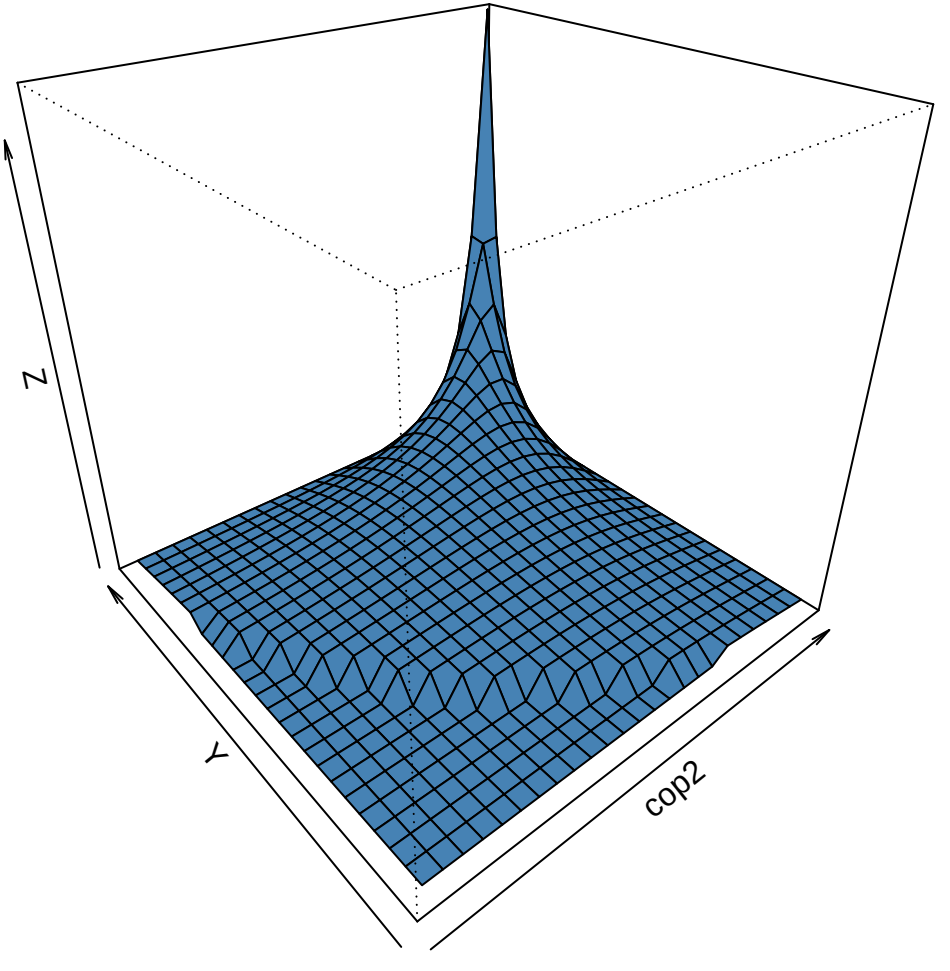
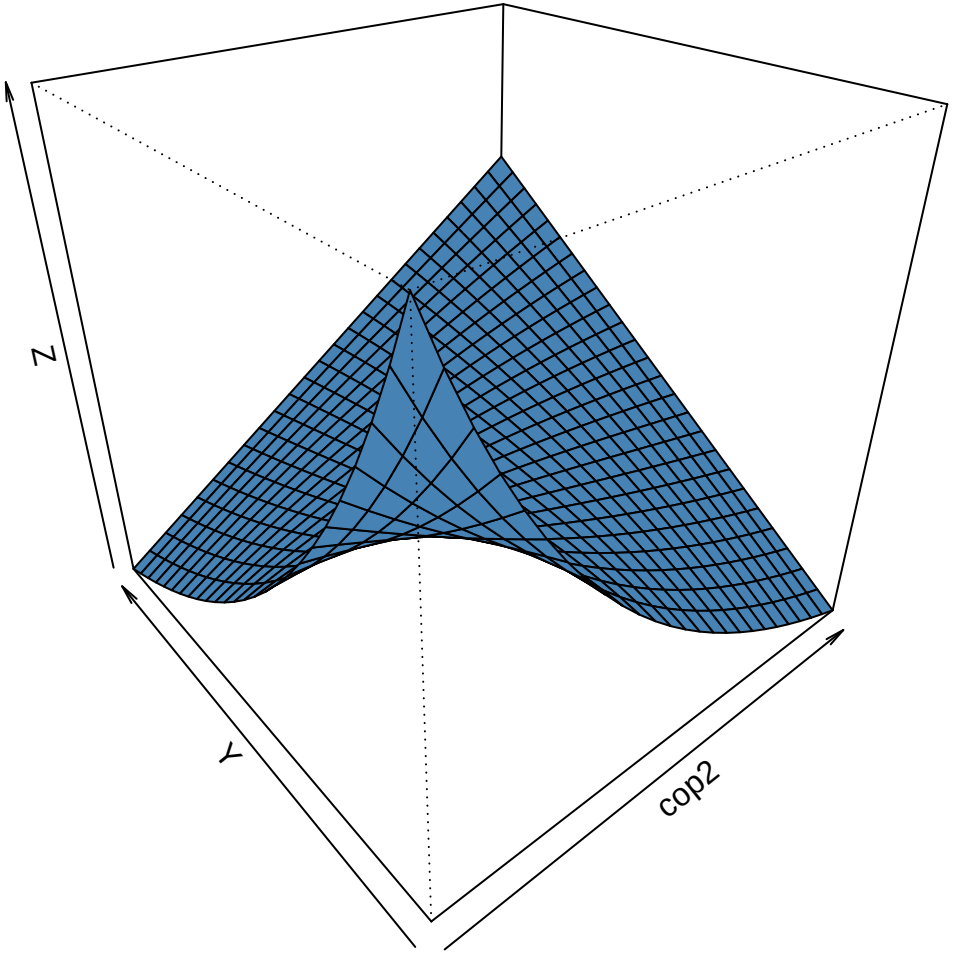
1



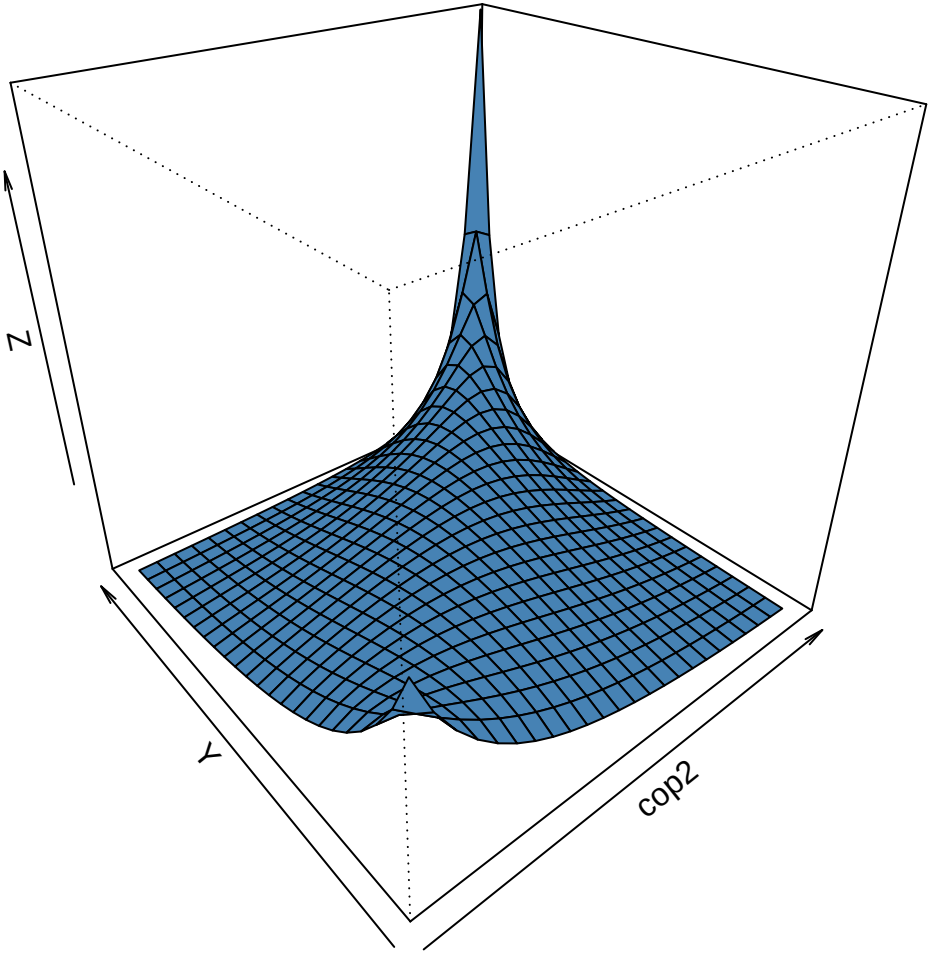
2

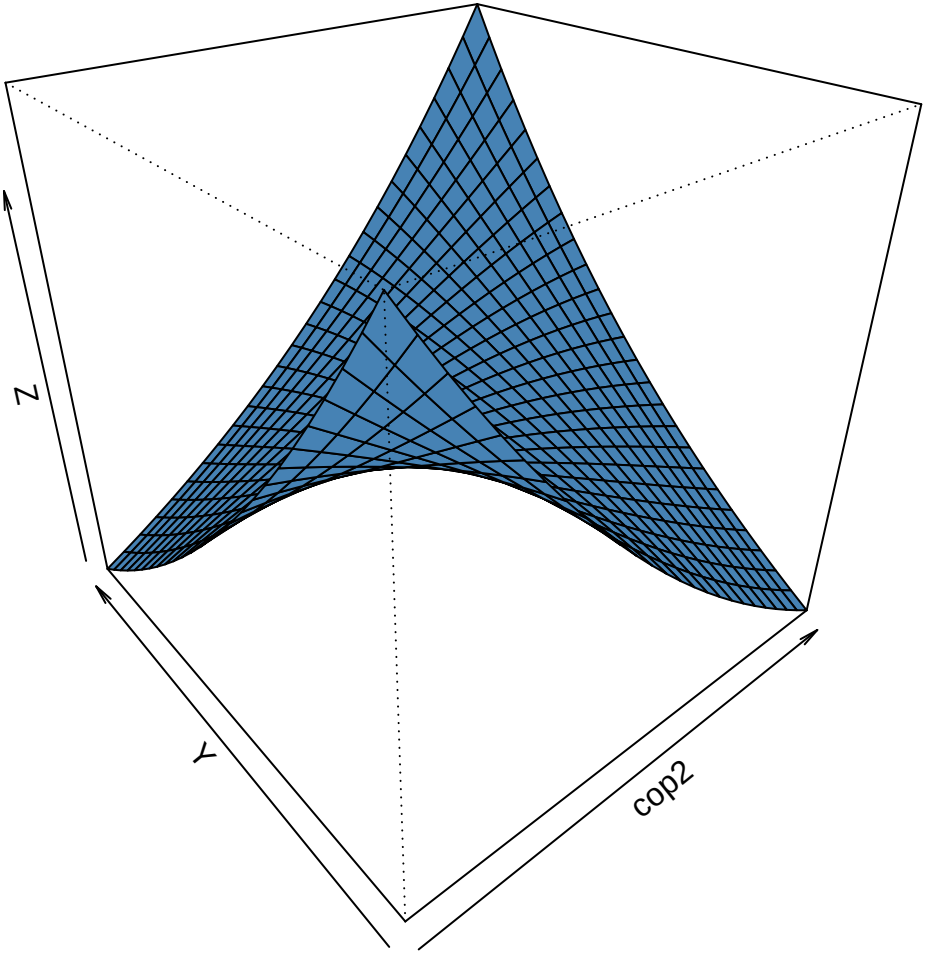


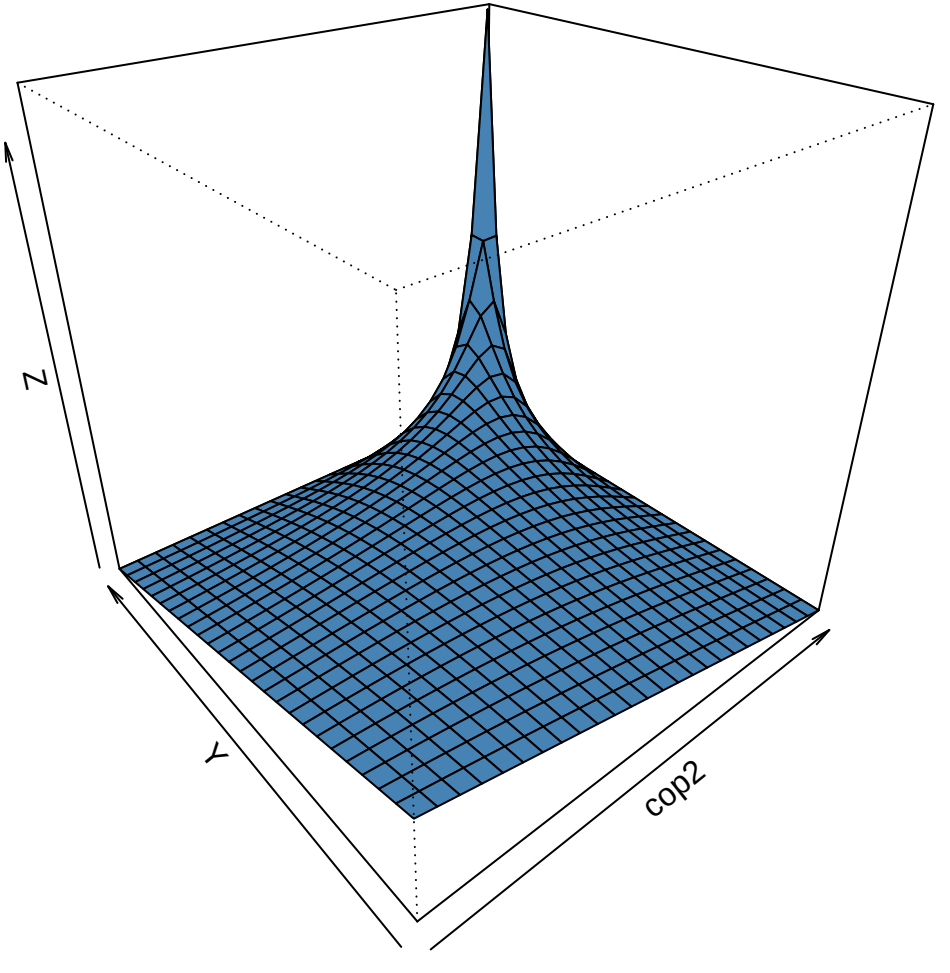
3

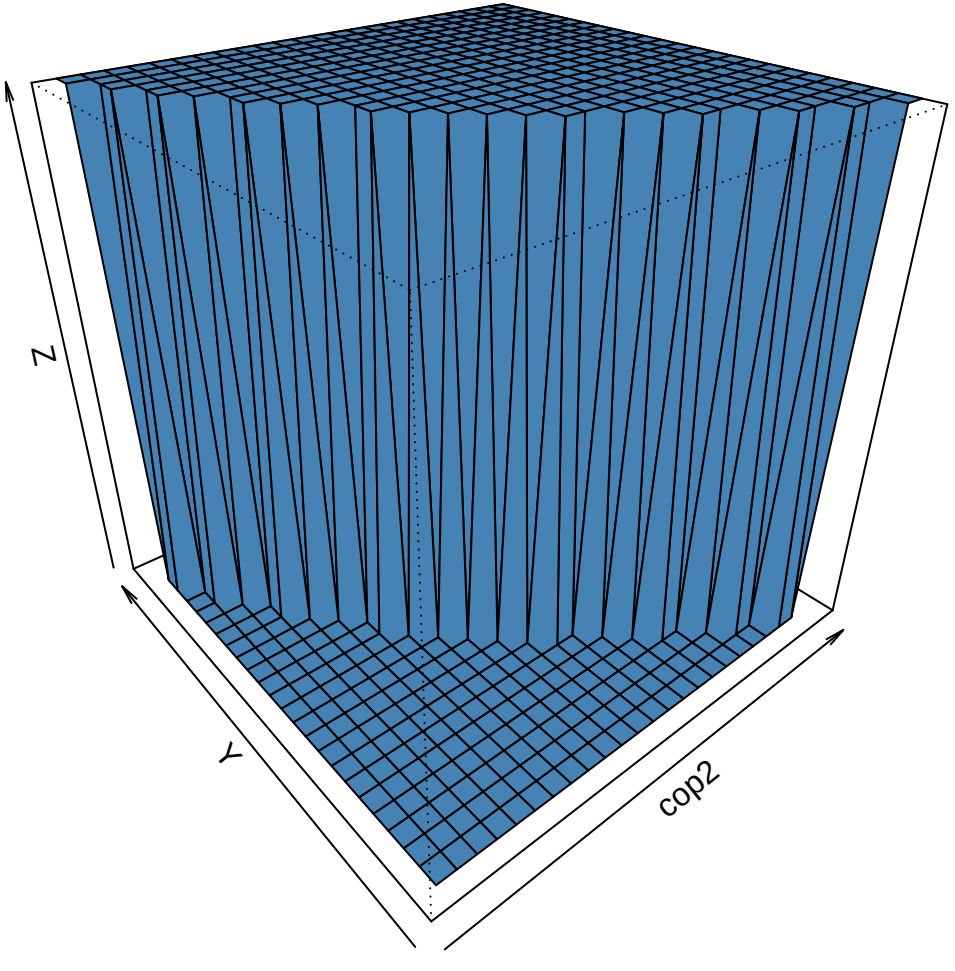


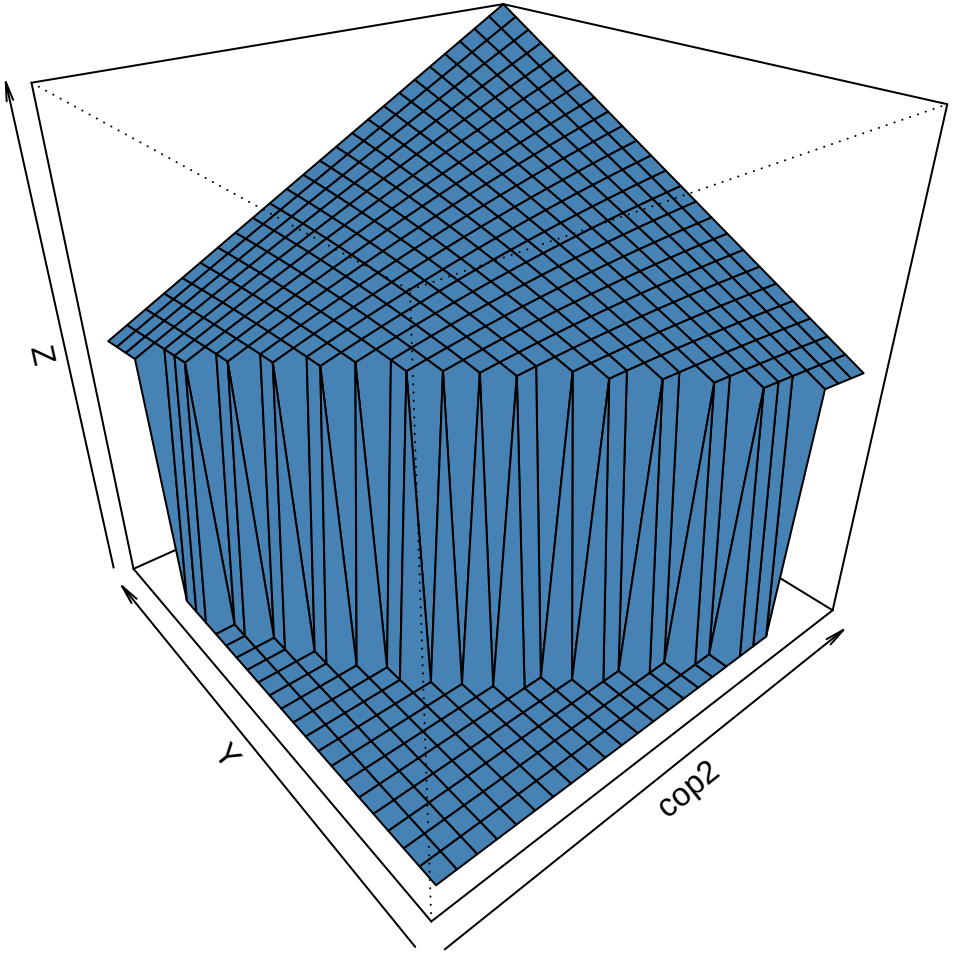
4

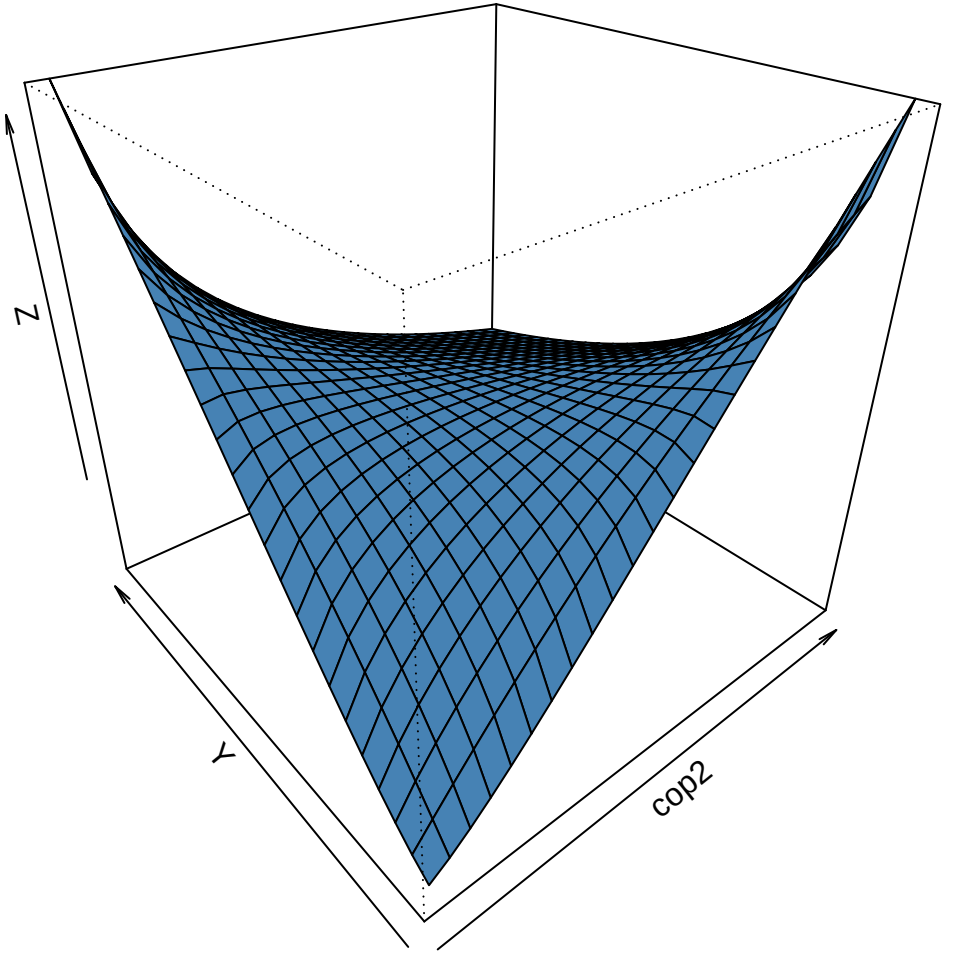


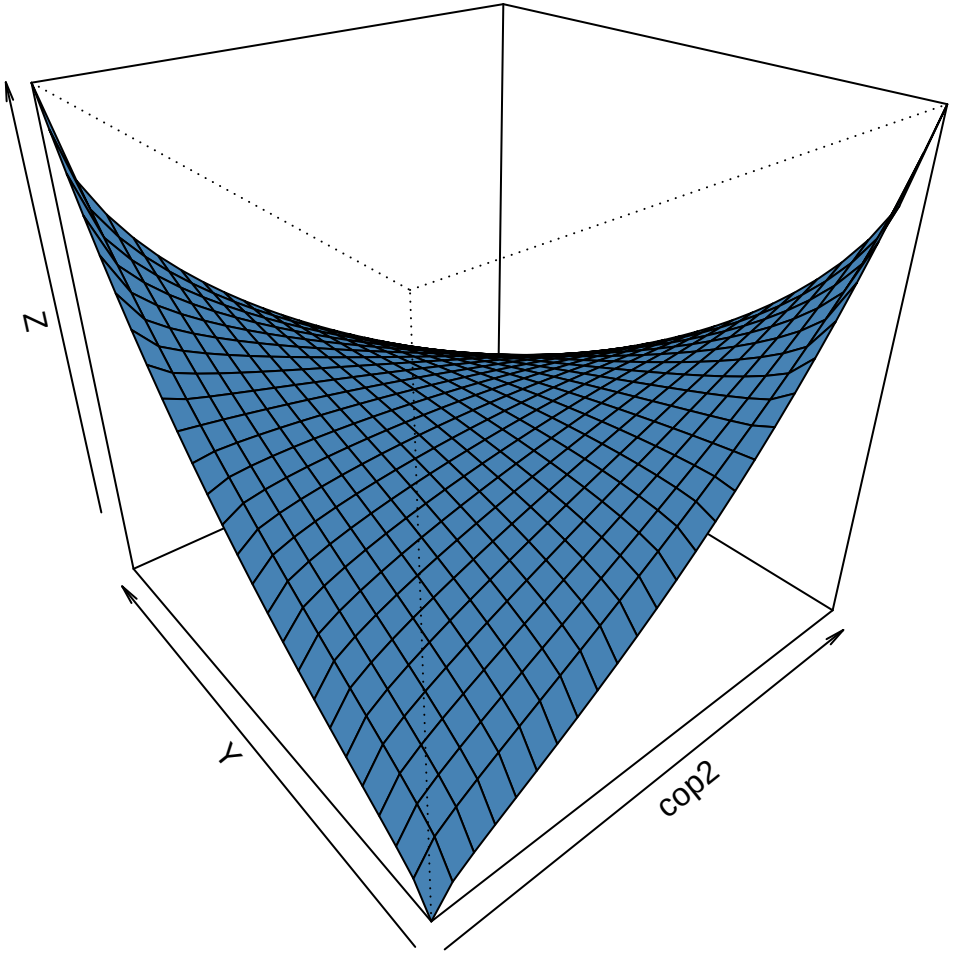

Z
Y
cop2

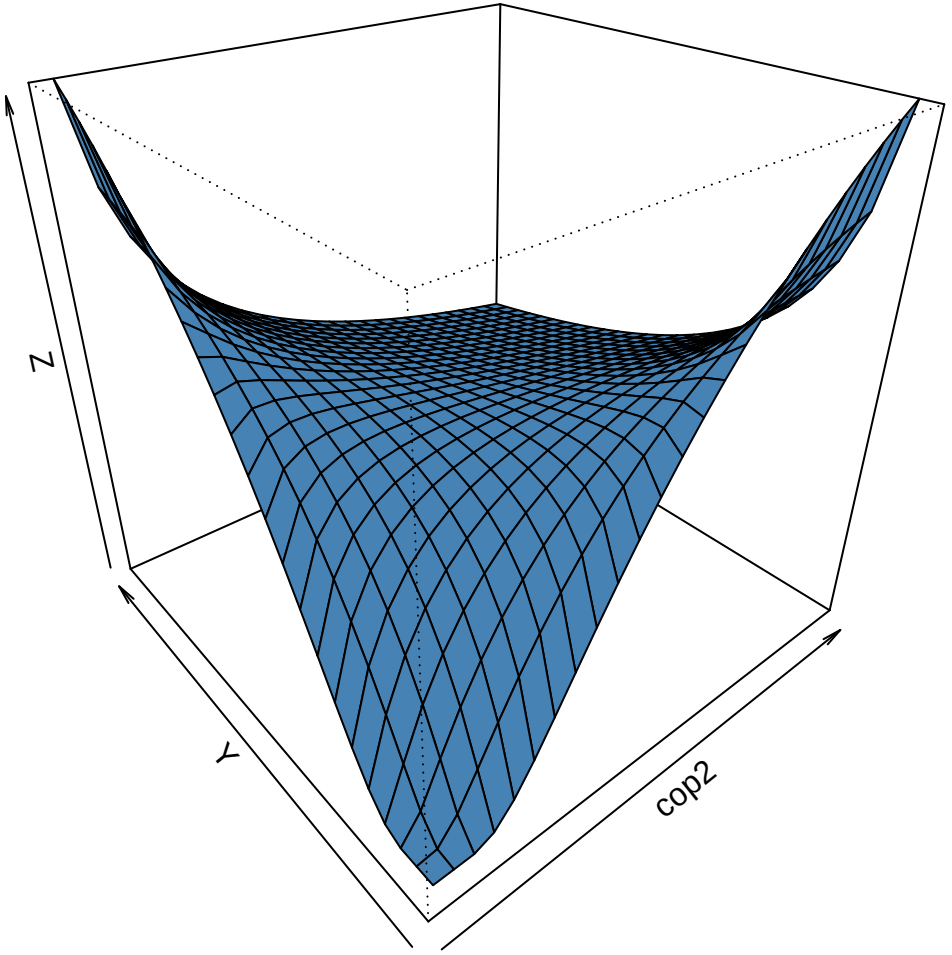

Z
Y
cop2

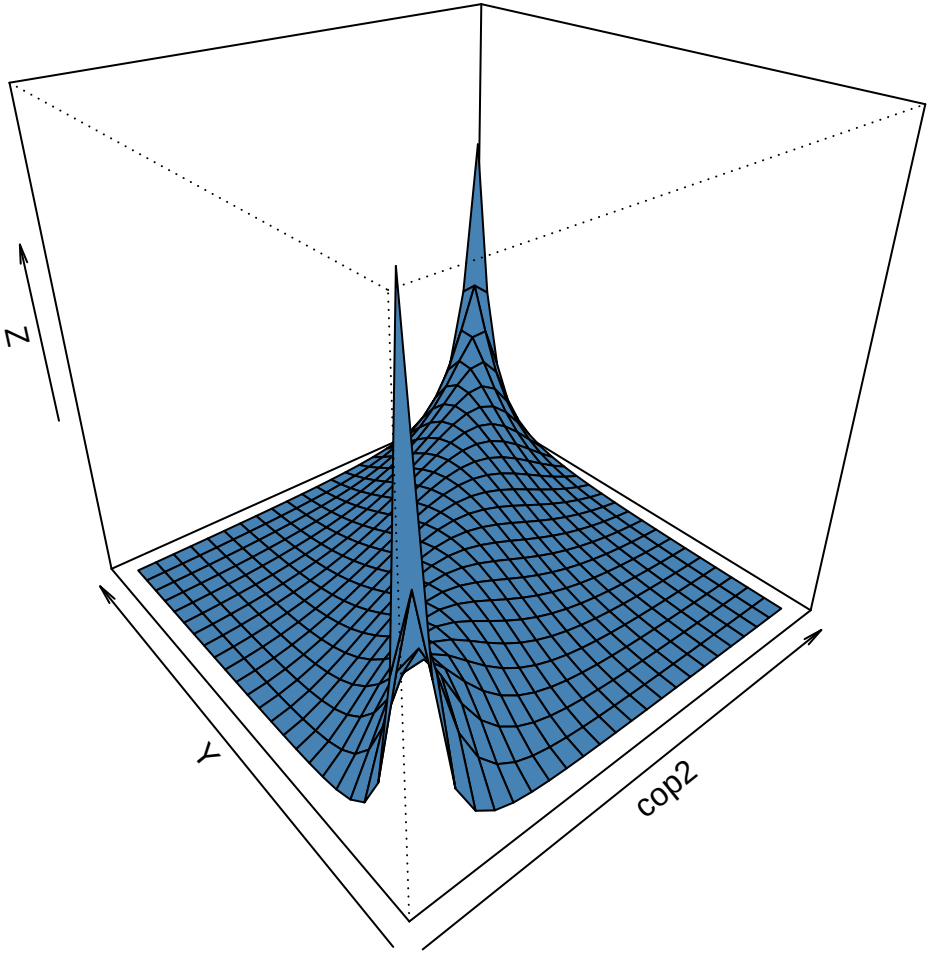

Z
Y
cop2

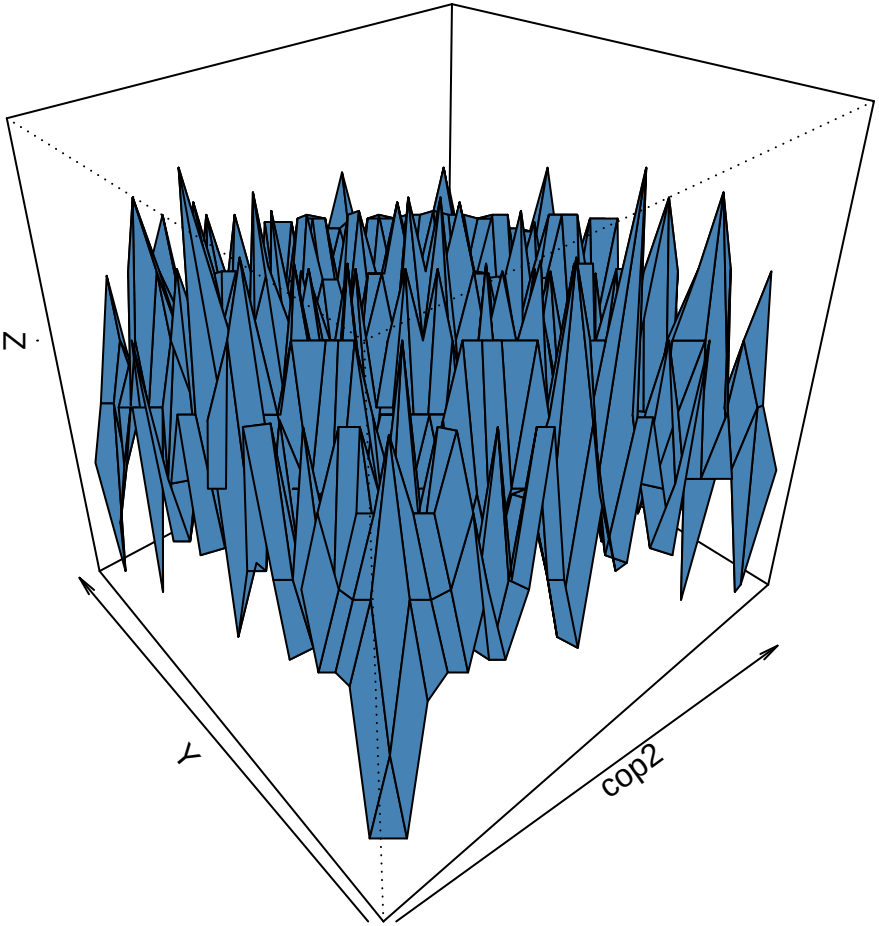

Z
Y
cop2

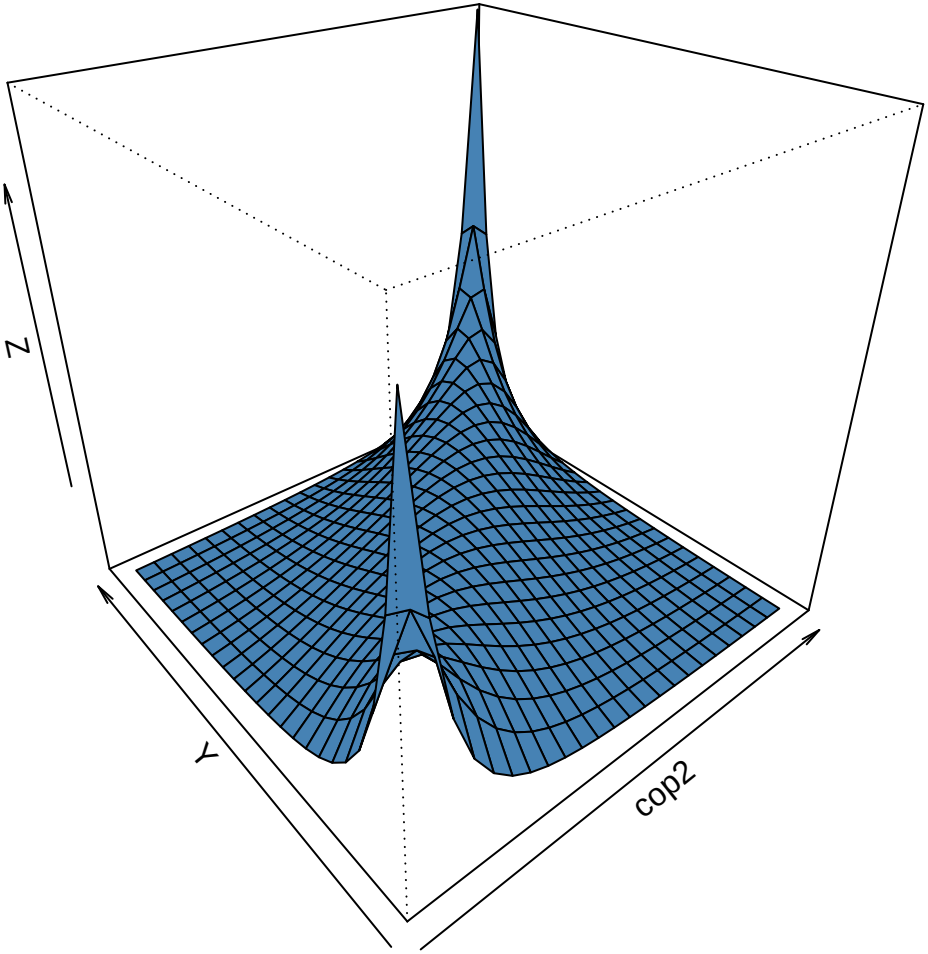

Z
Y
cop2

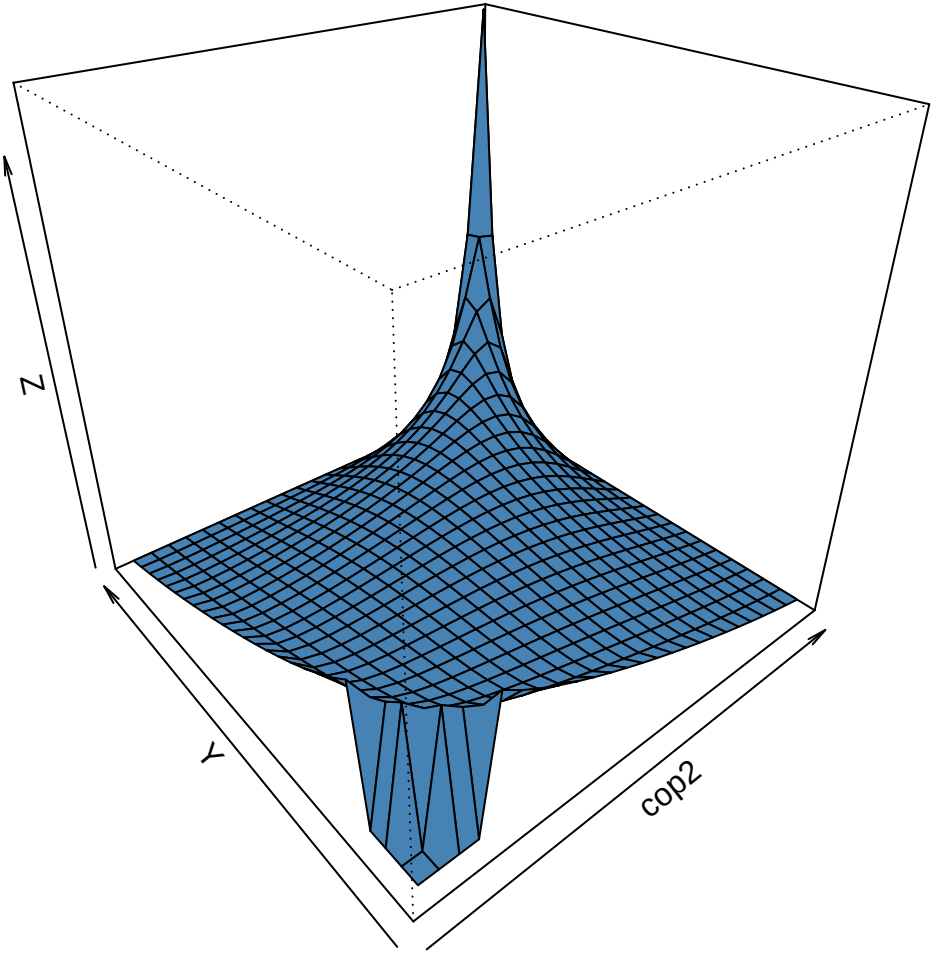

Z
Y
cop2

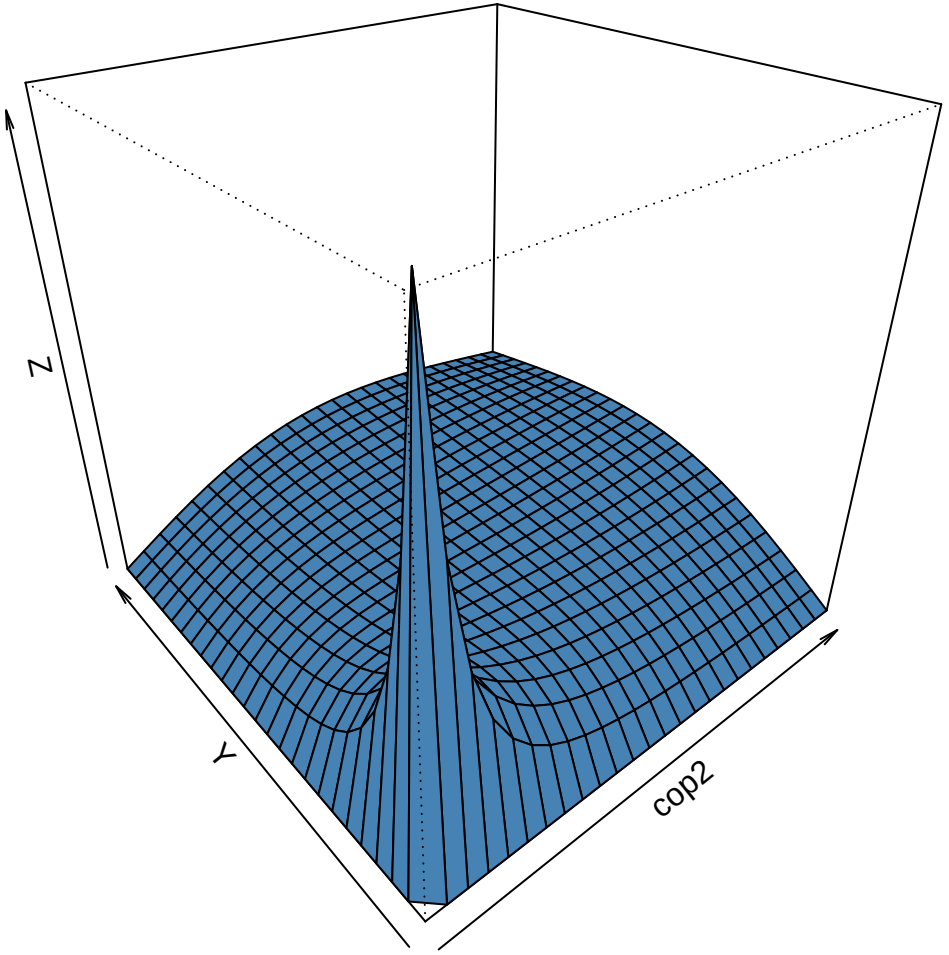

Z
Y
cop2

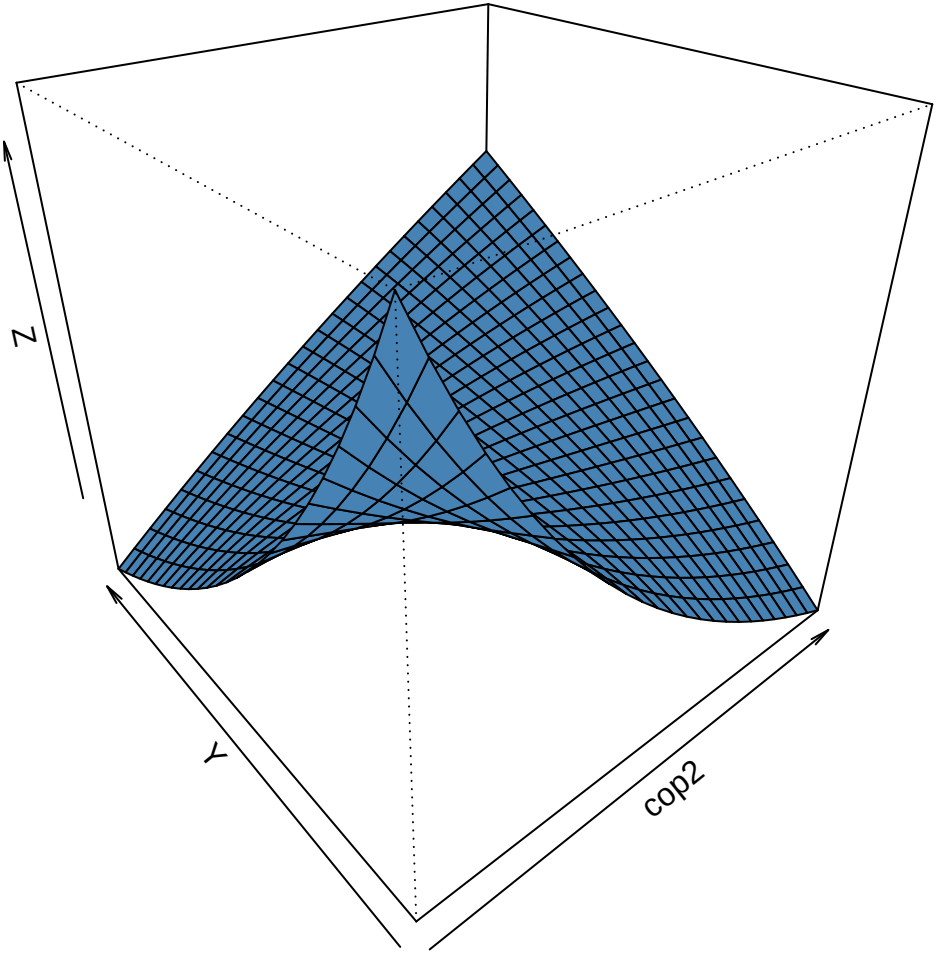

Z
Y
cop2

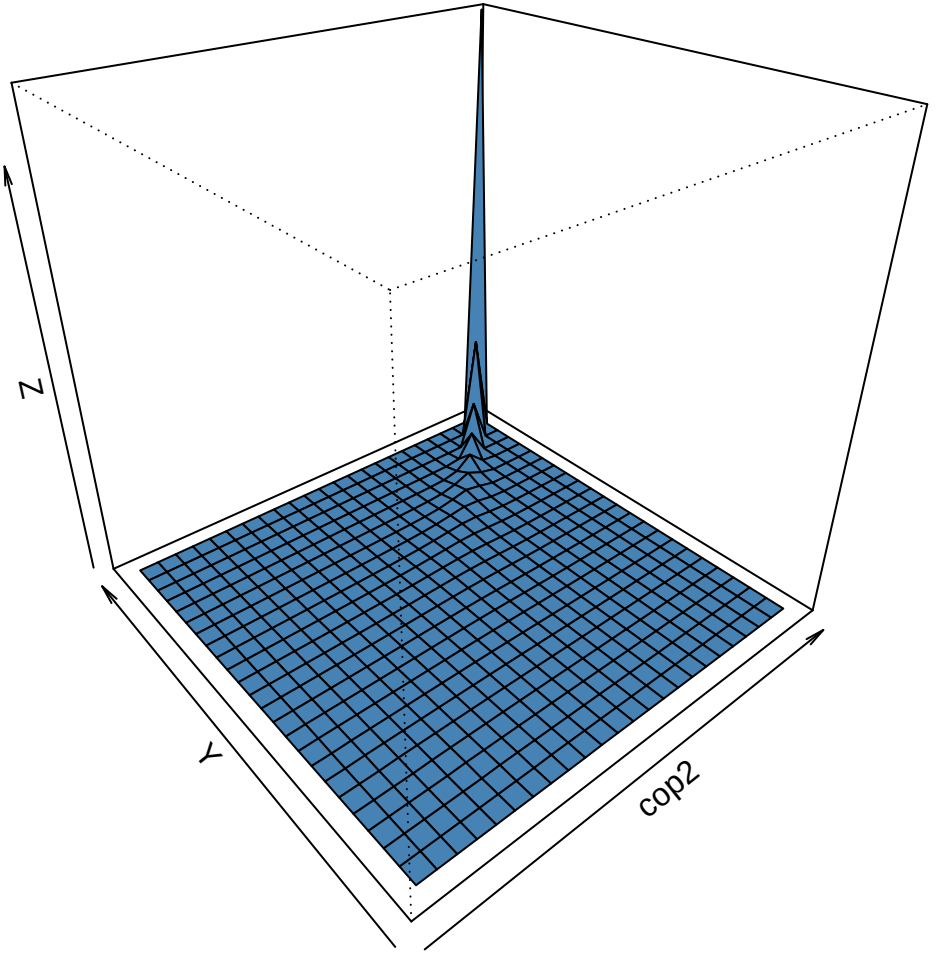

Z
Y
cop2

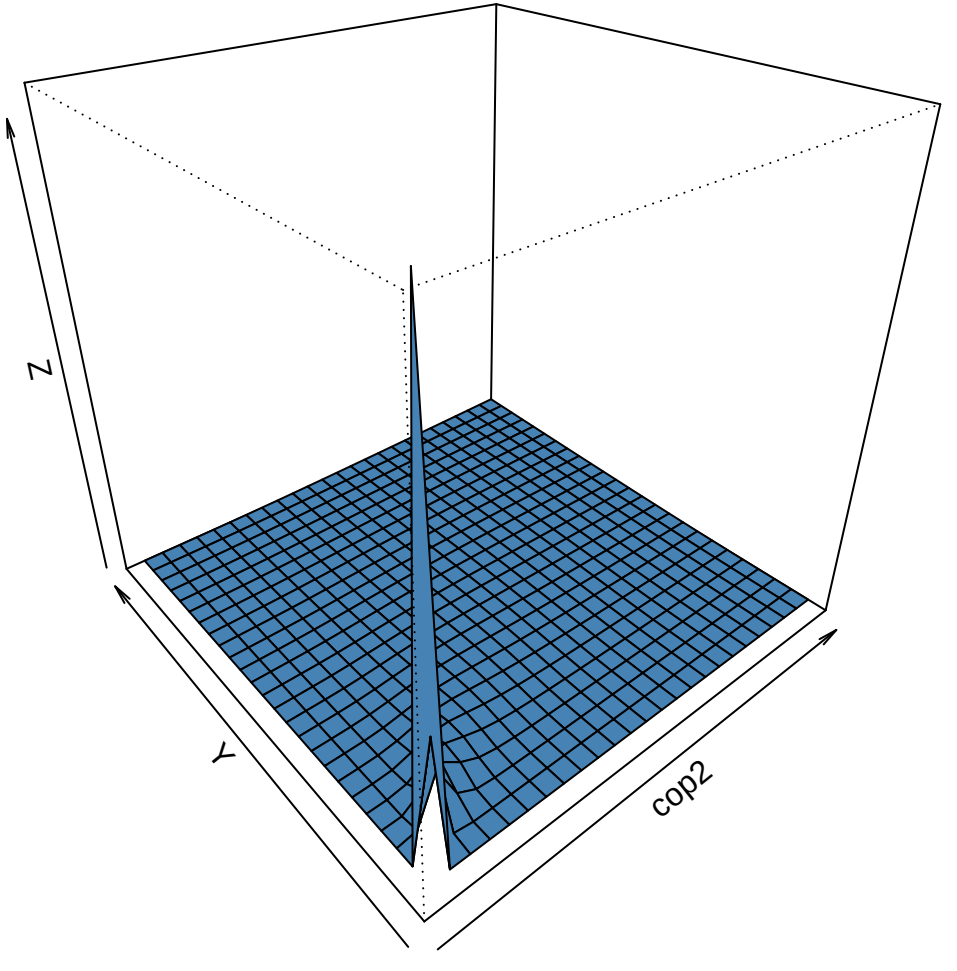

Z
Y
cop2

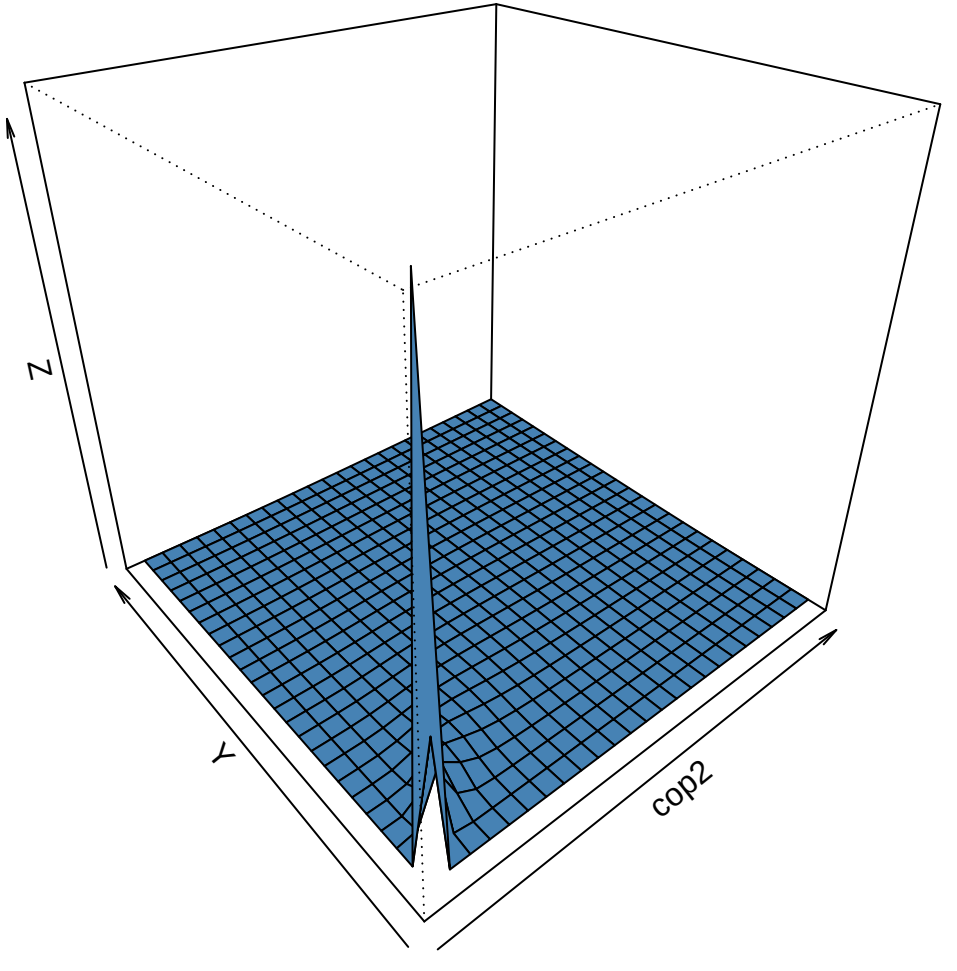

Z
Y
cop2

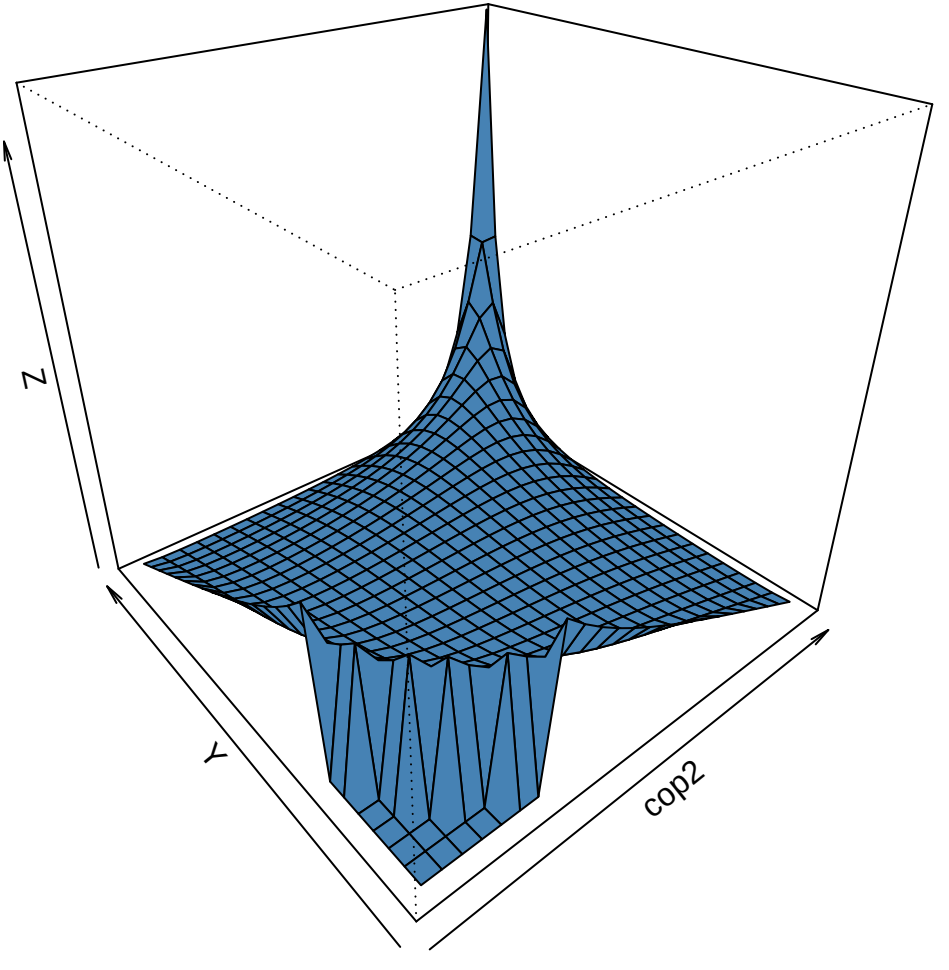

Z
Y
cop2

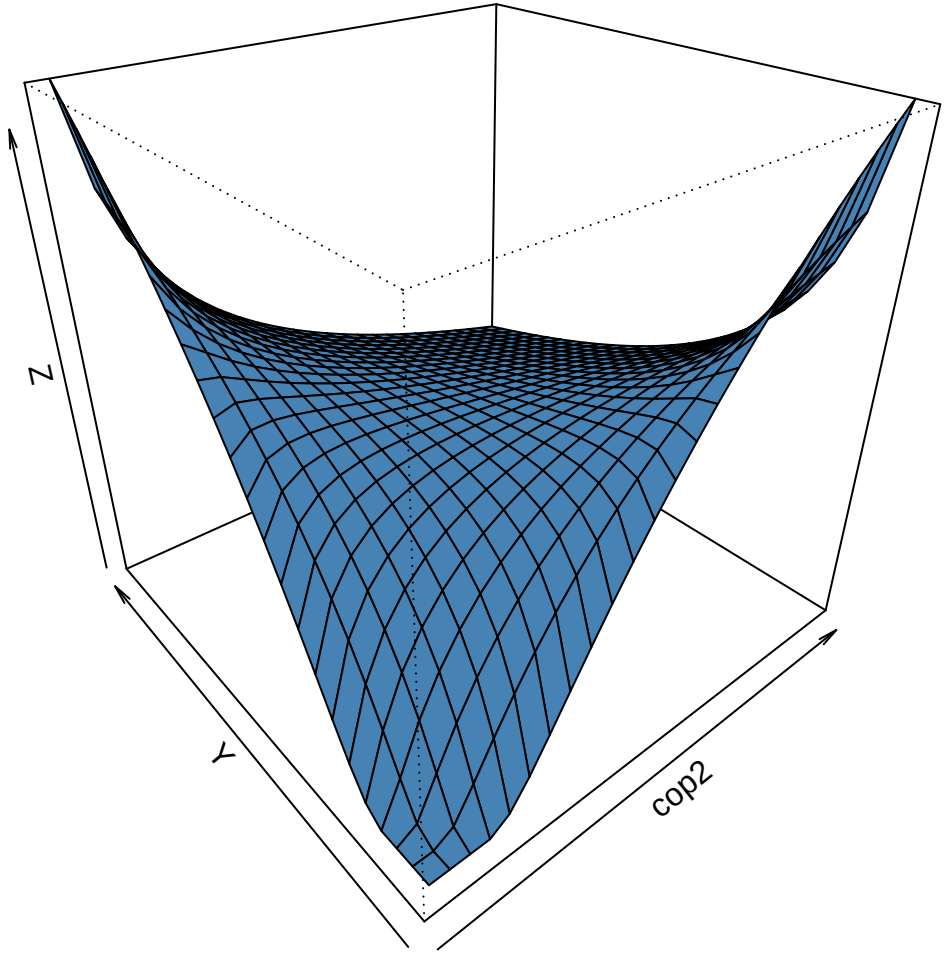

Z
Y
cop2

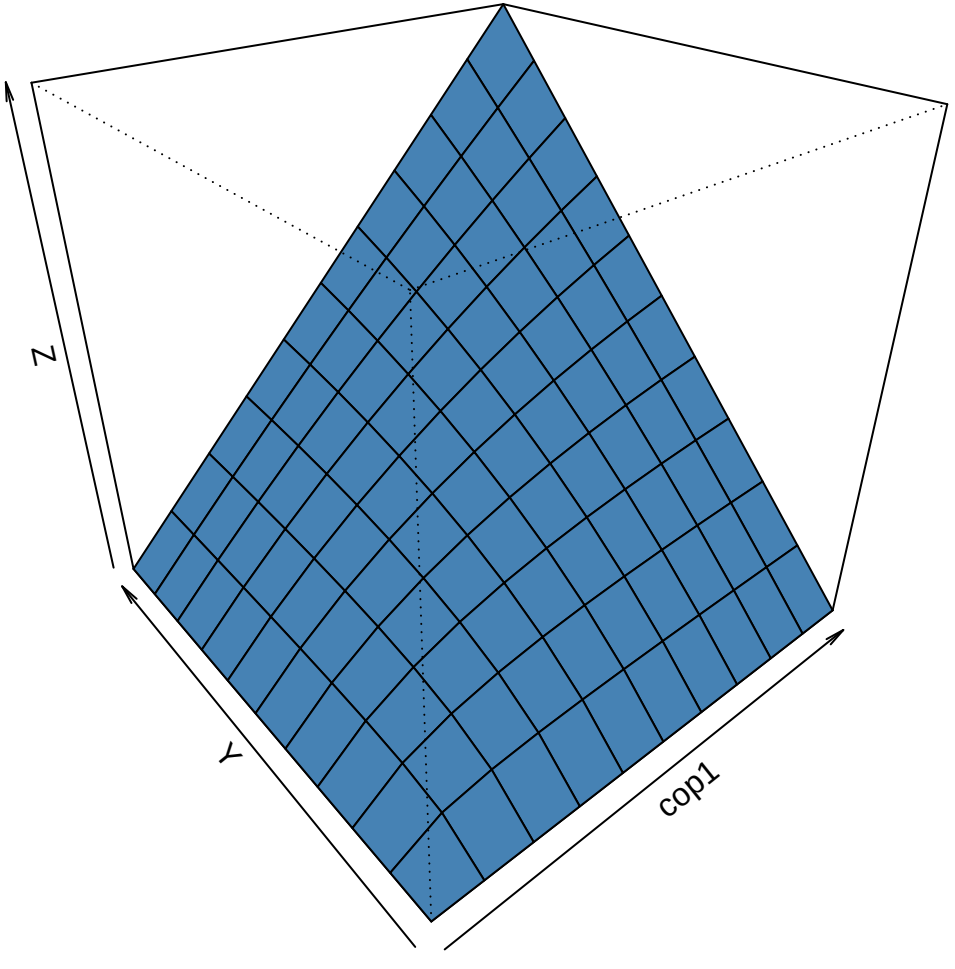

Z
Y
cop2


Z
Y
cop2

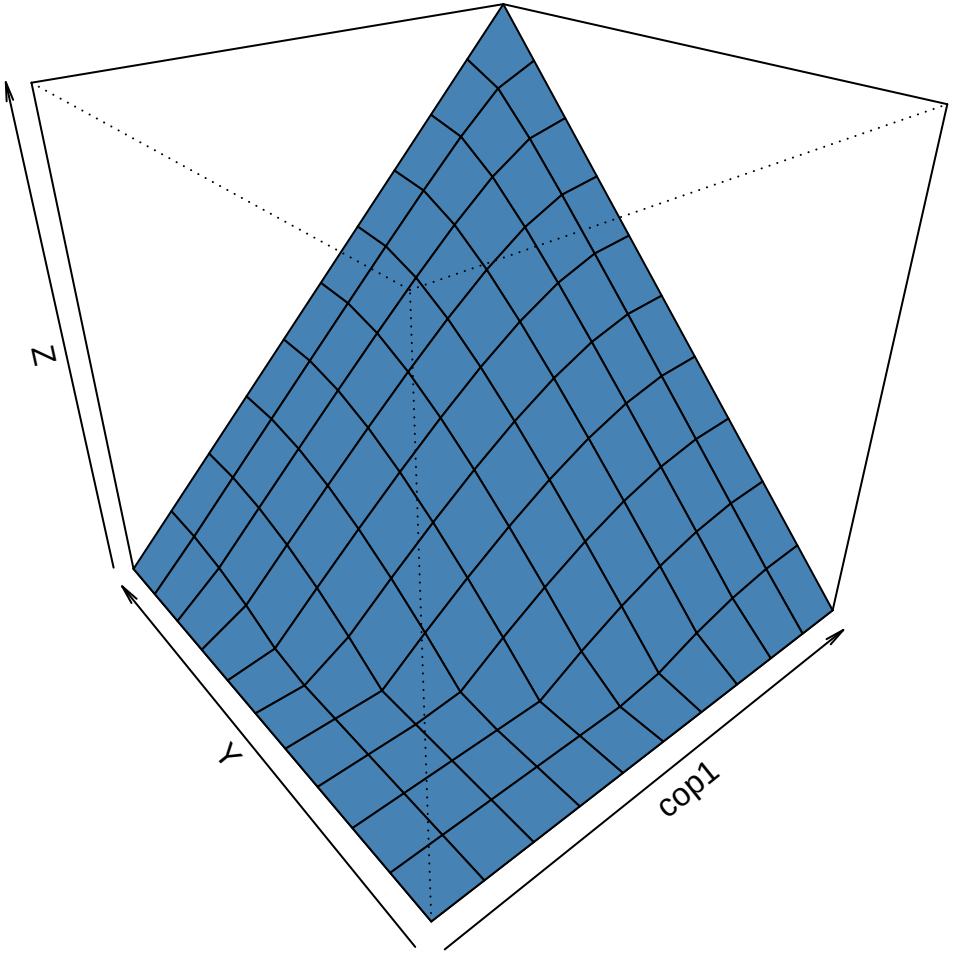

Z
Y
cop2


Z
Y
cop2

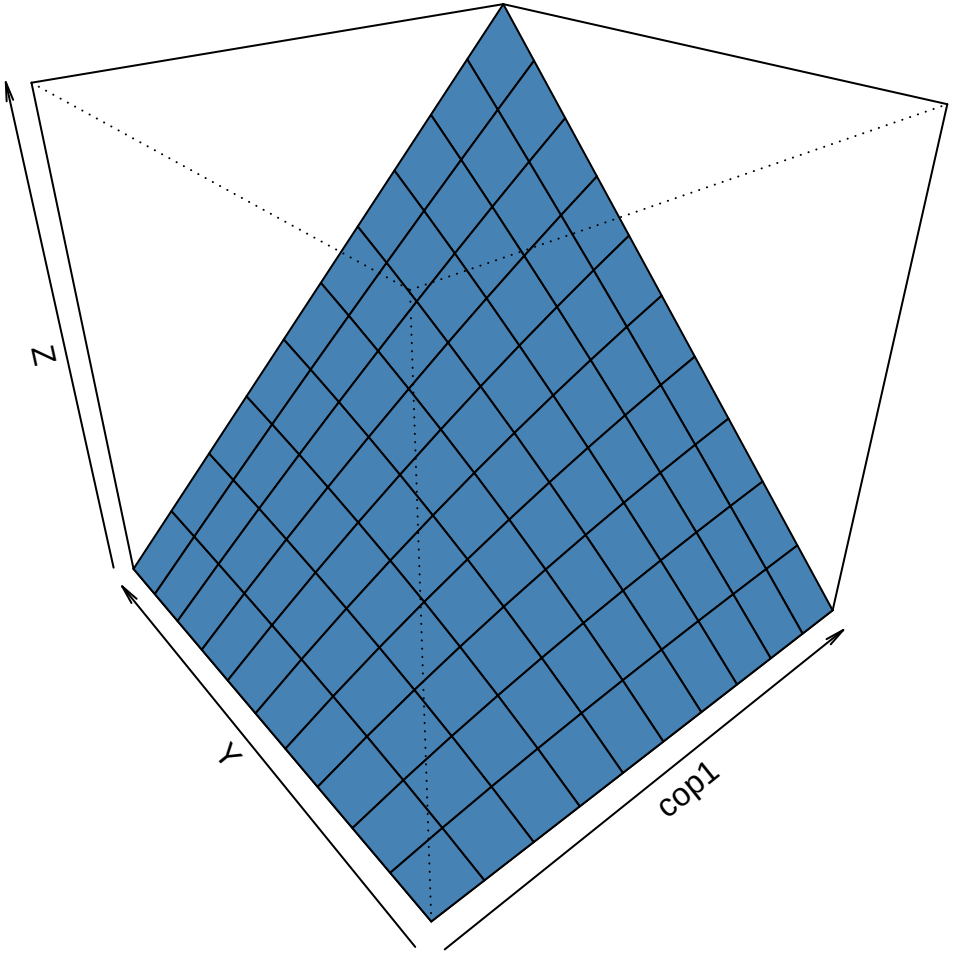

Z
Y
cop2


Z
Y
cop1

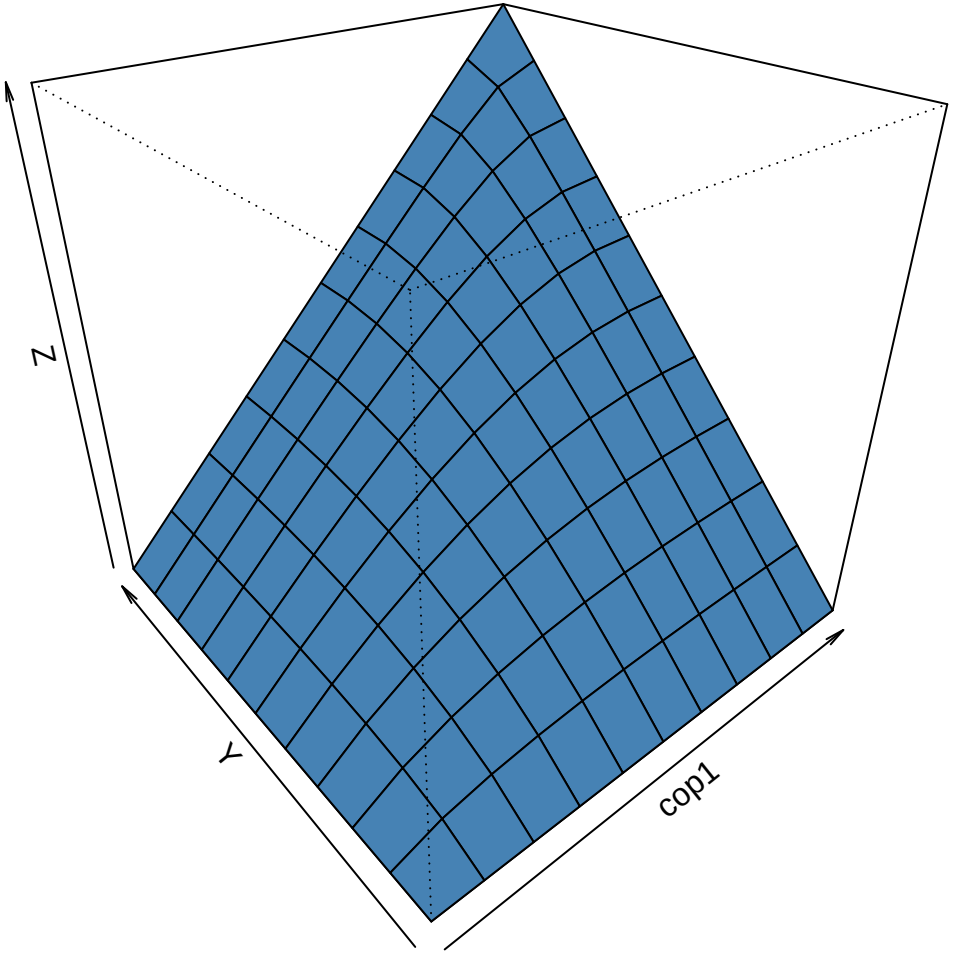
2



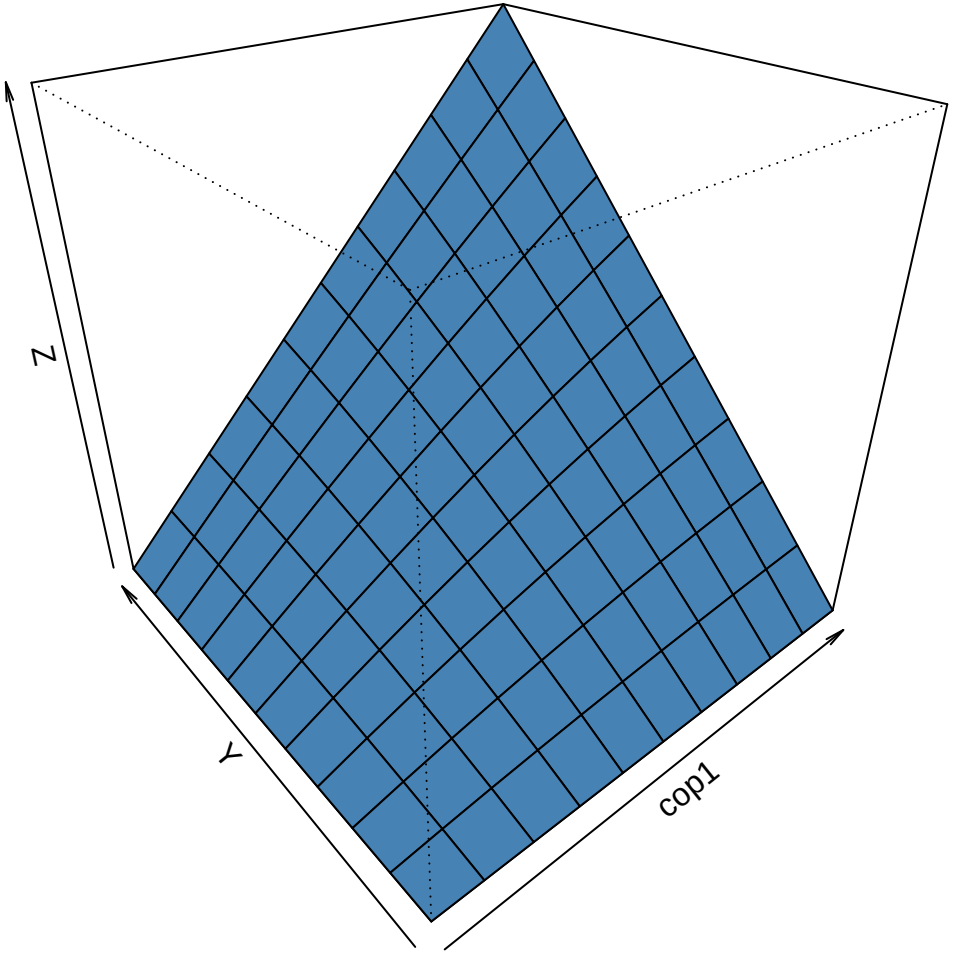
3

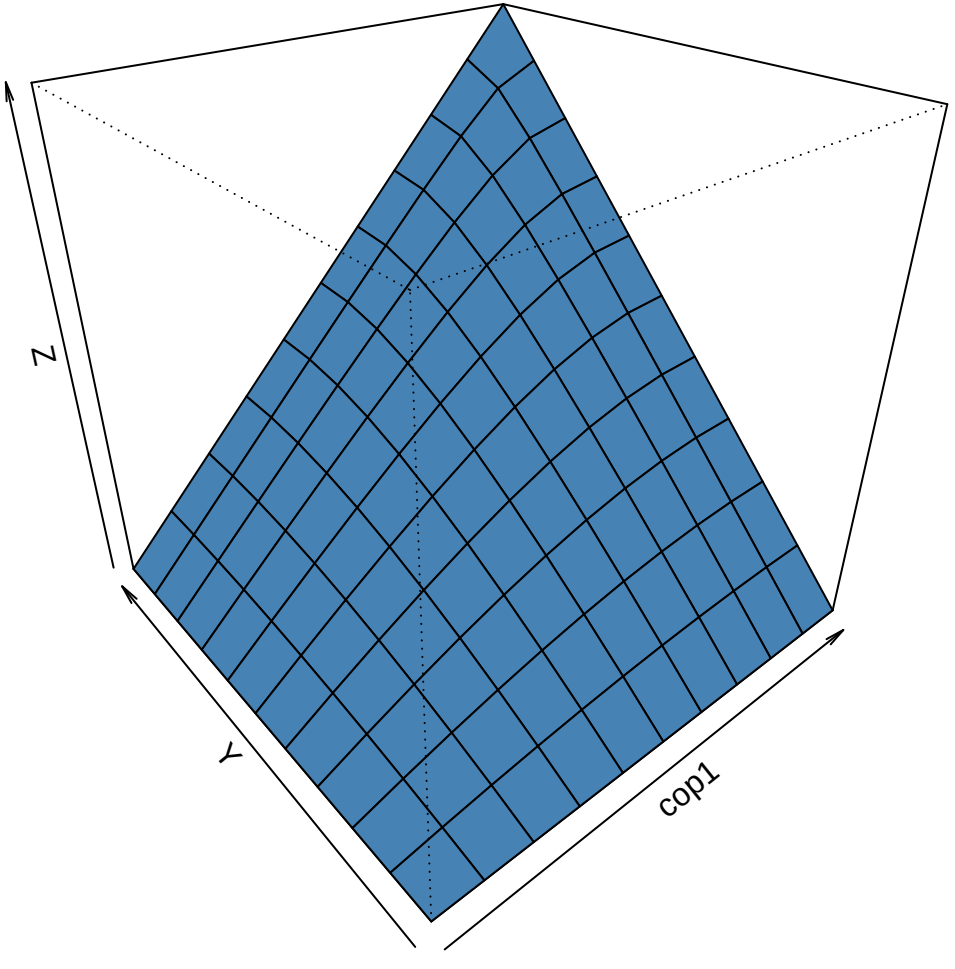


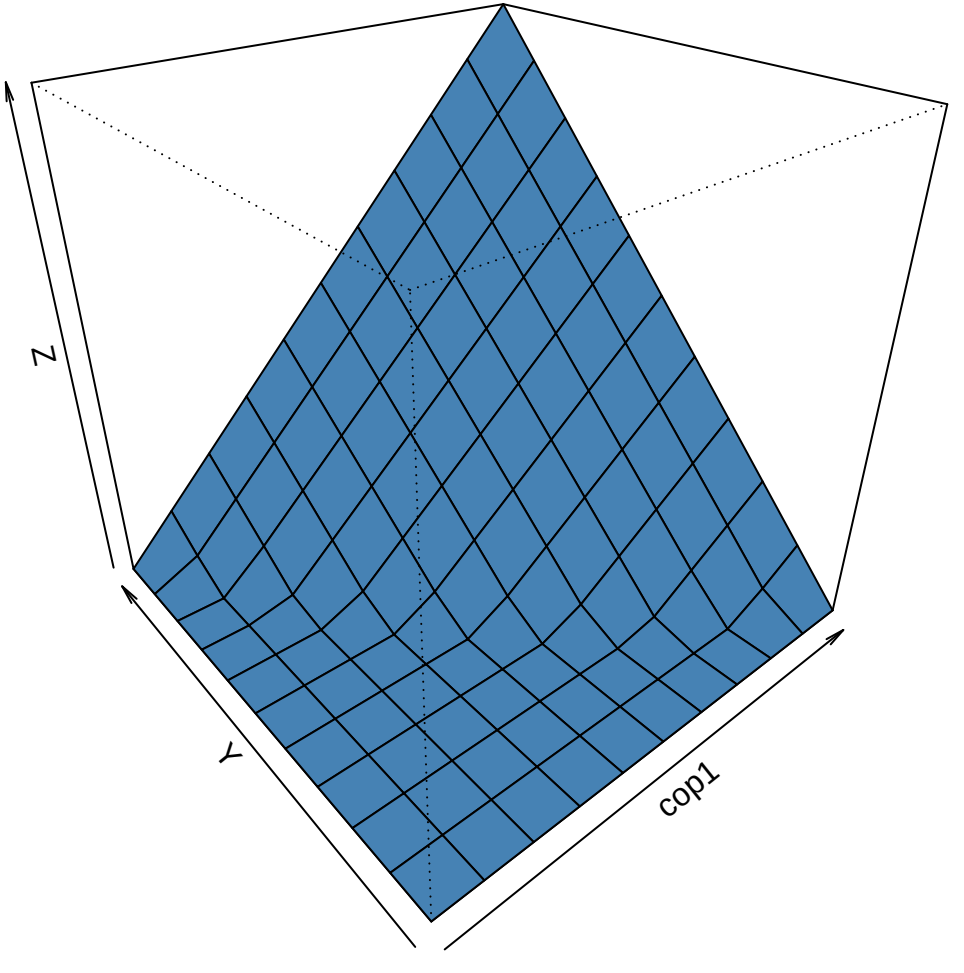
4

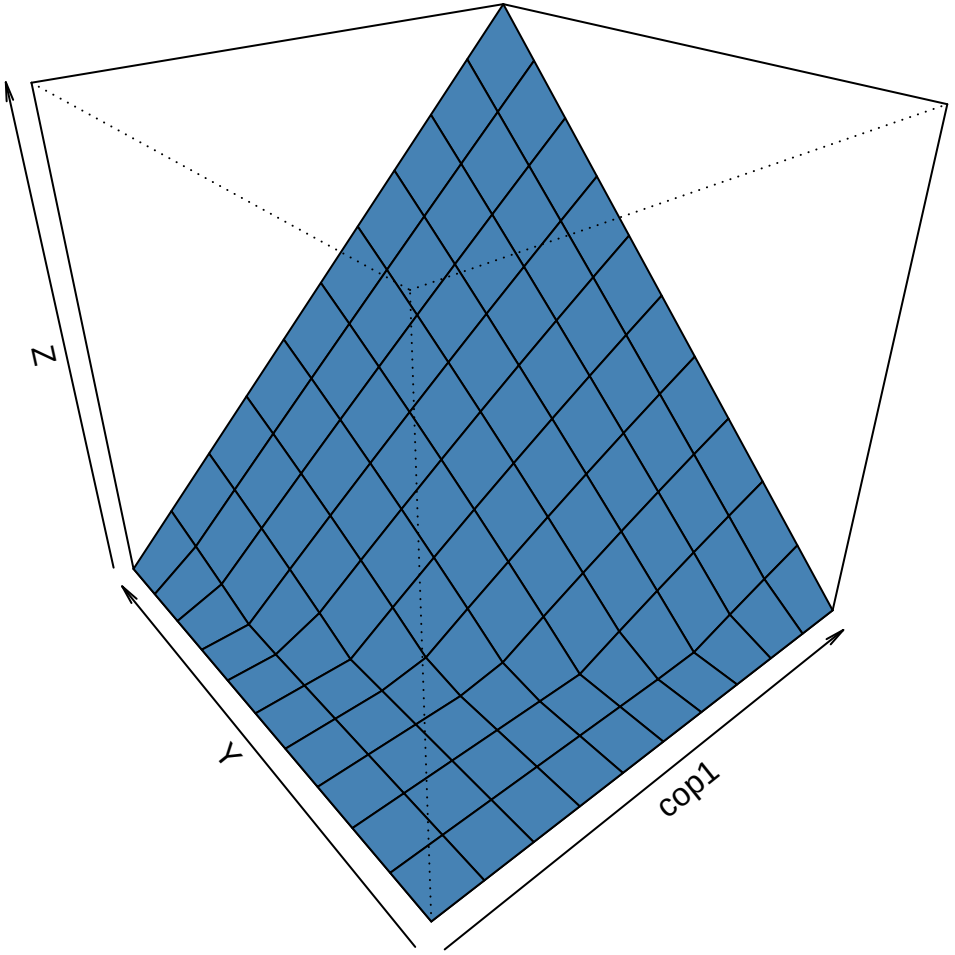


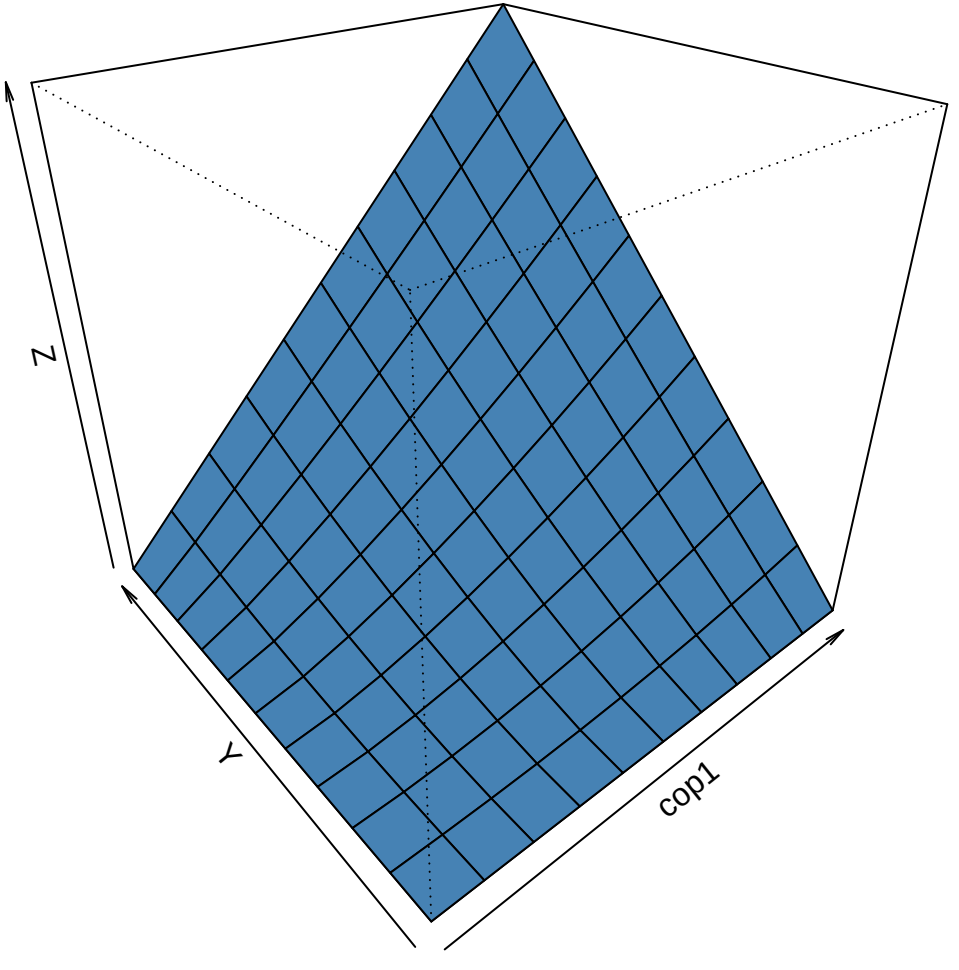
5

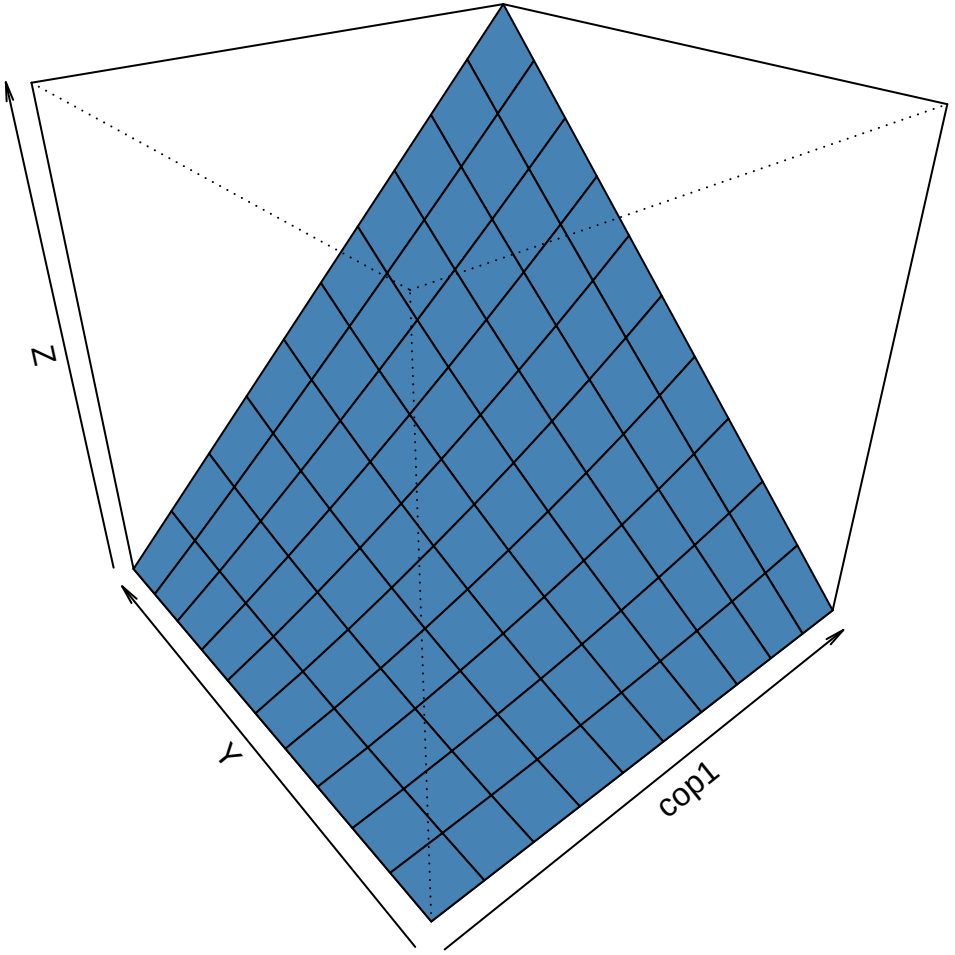


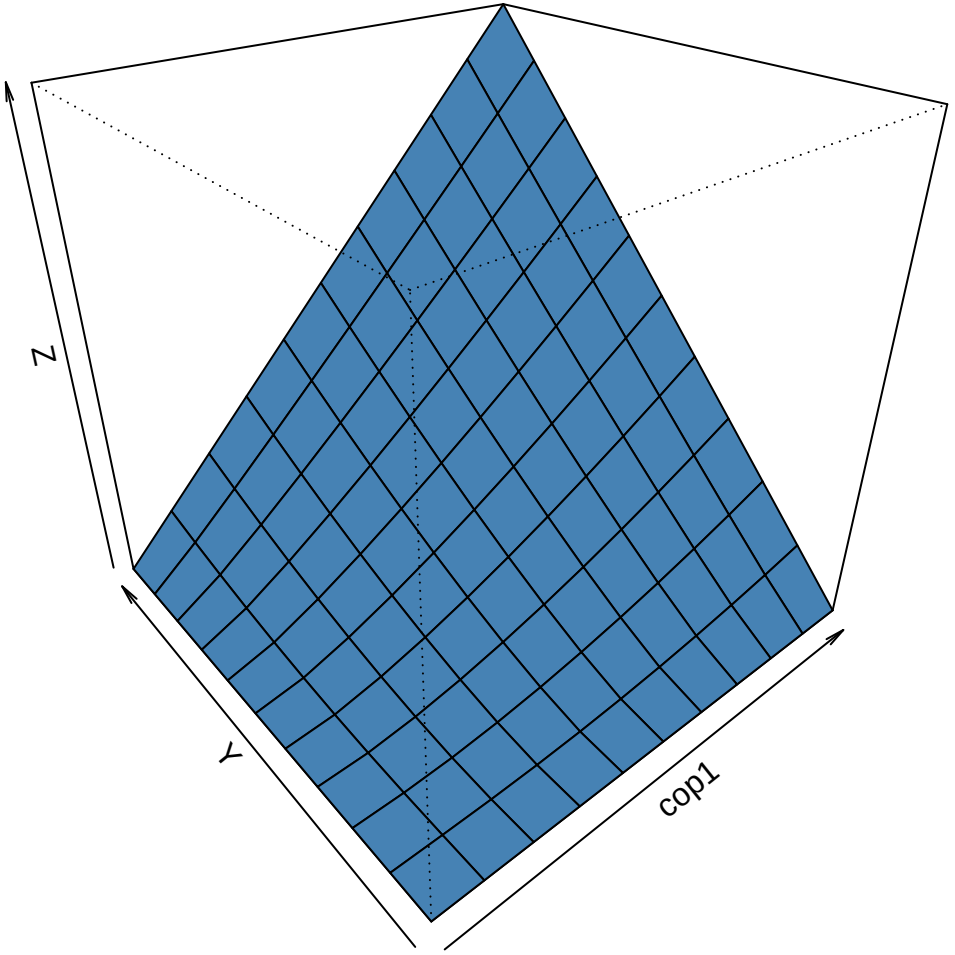

Z
Y
cop1

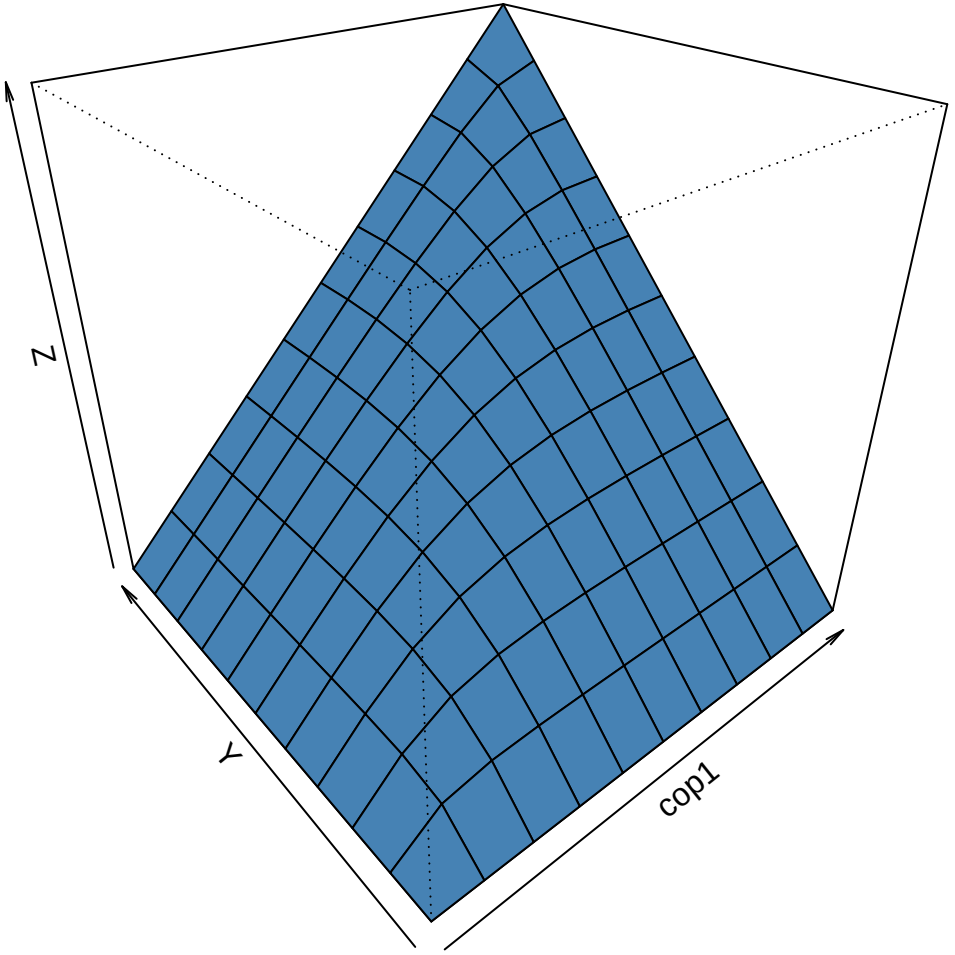

Z
Y
cop1

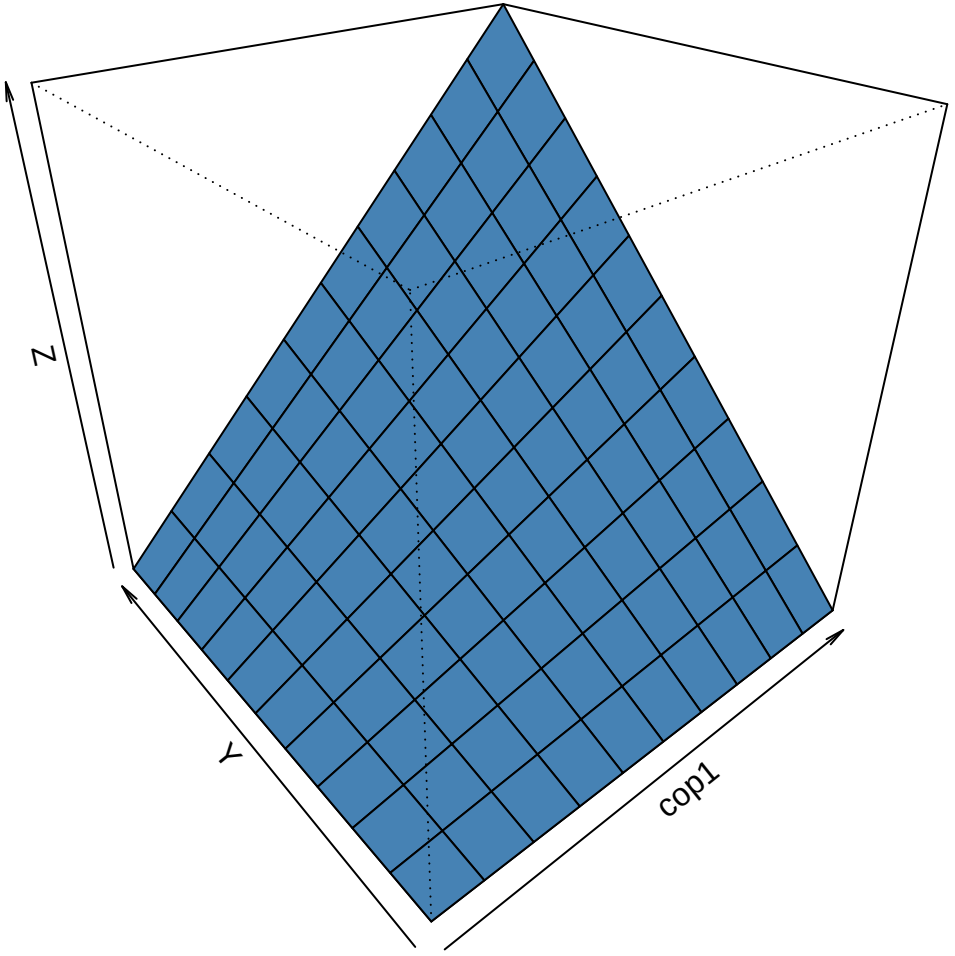

Z
Y
cop1

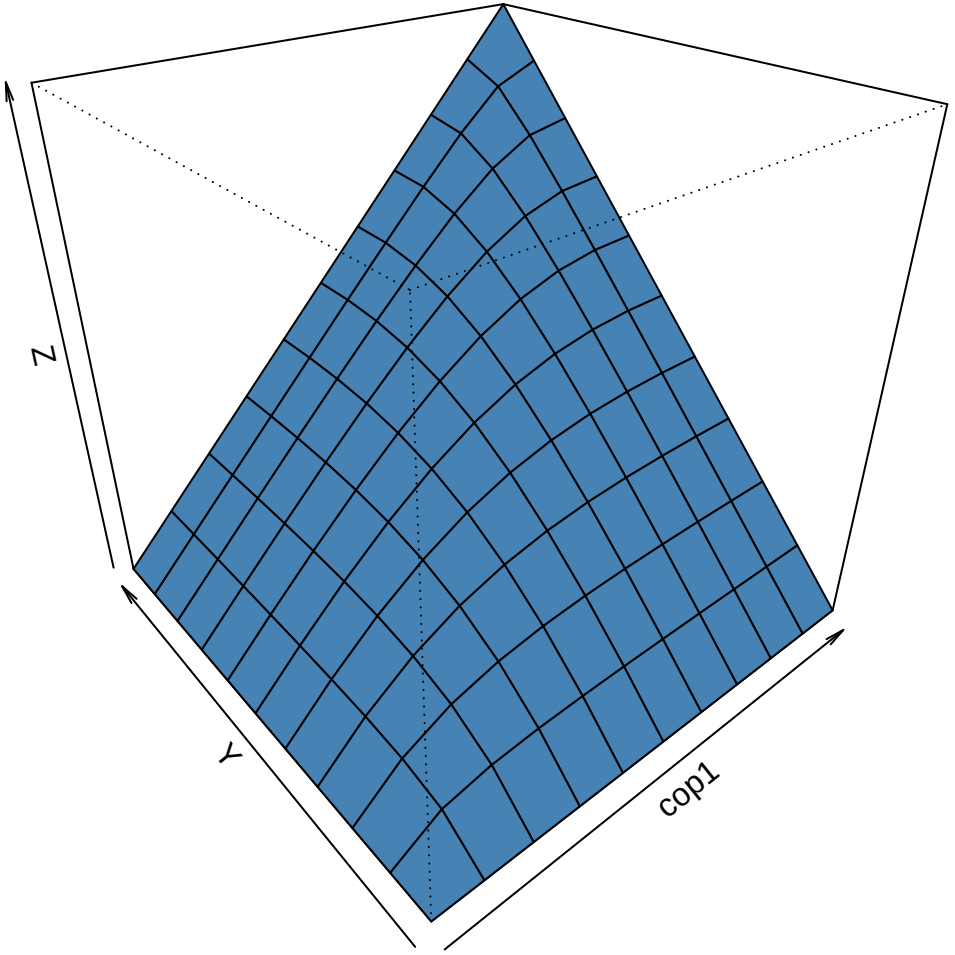

Z
Y
cop1

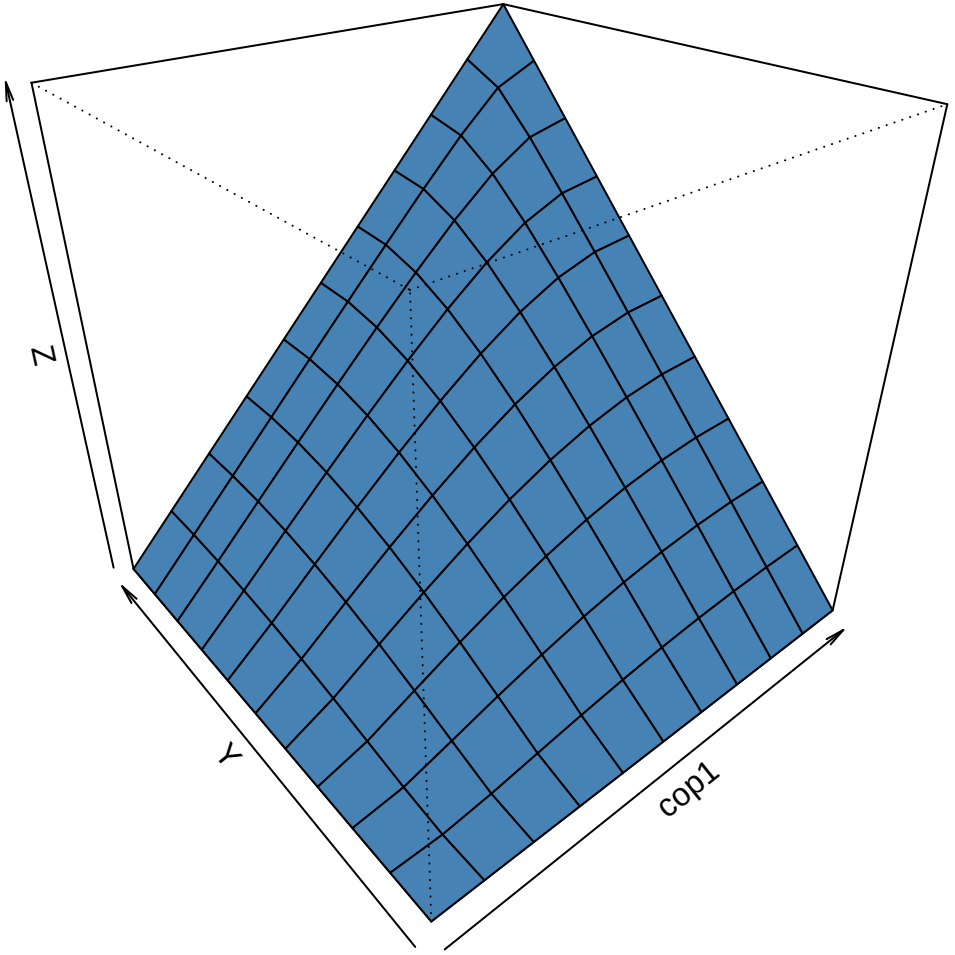

Z
Y
cop1

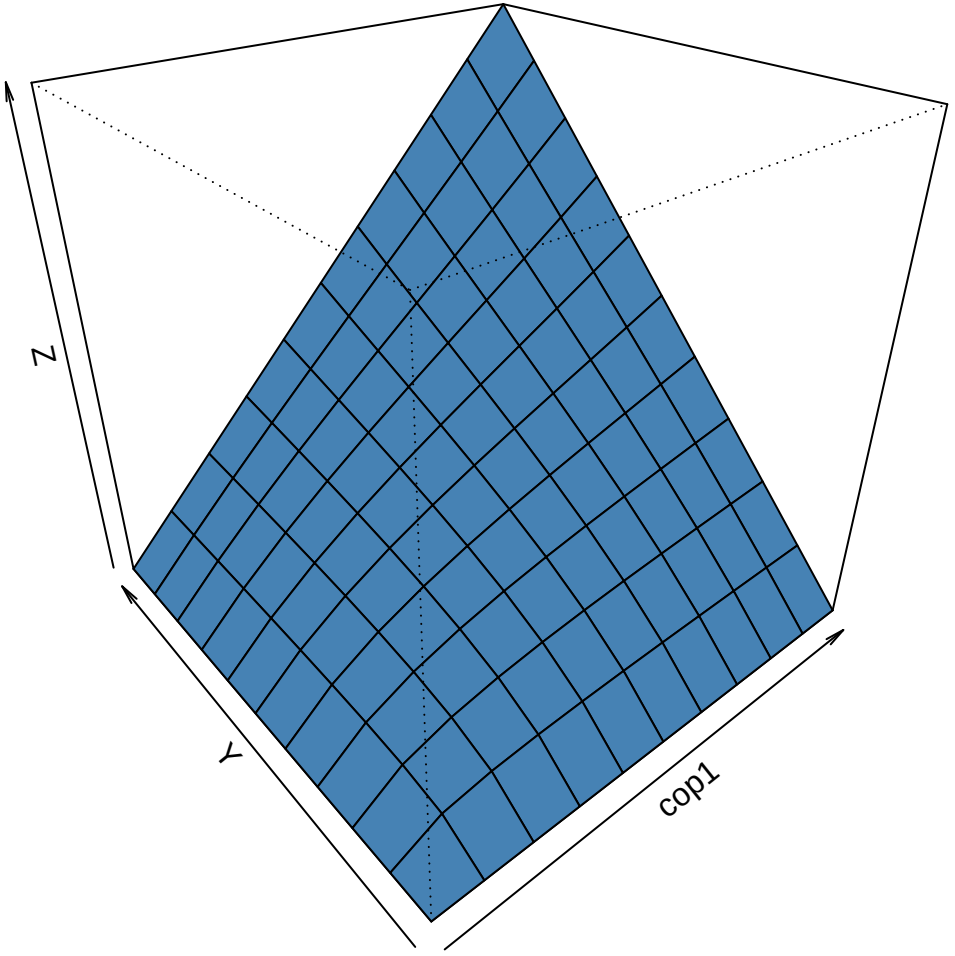

Z
Y
cop1

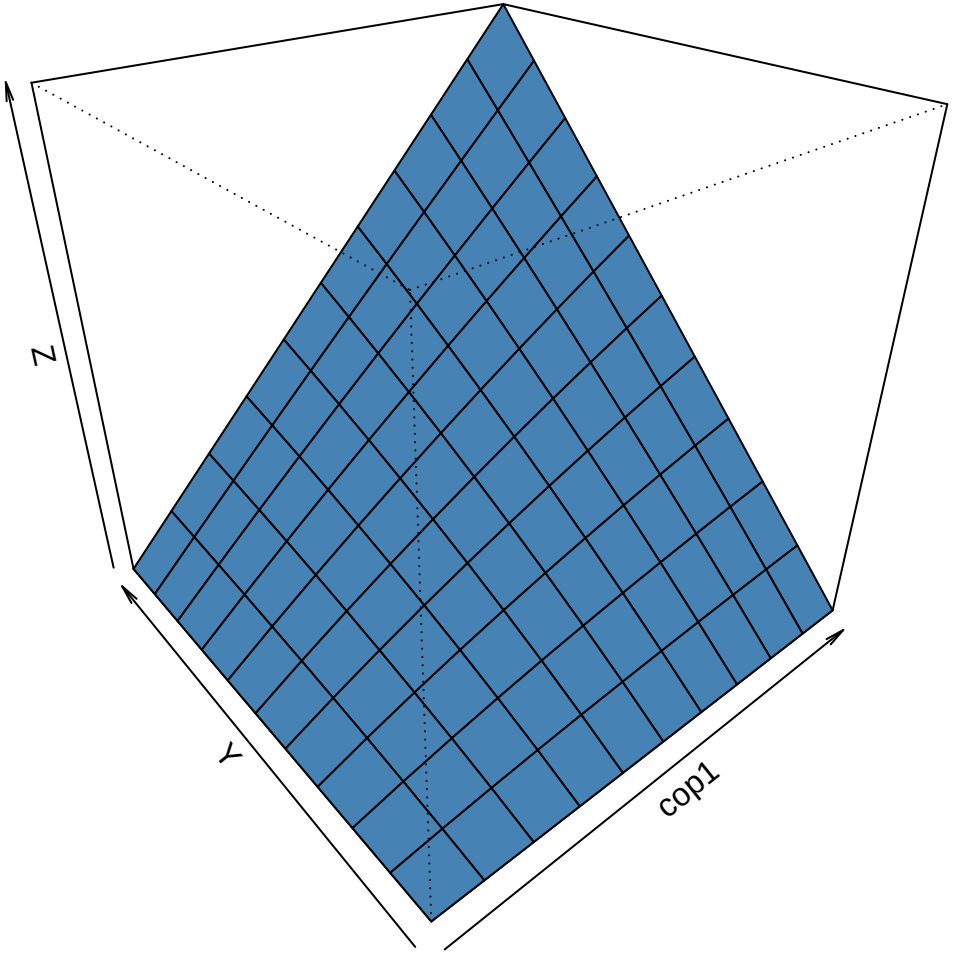

Z
Y
cop1

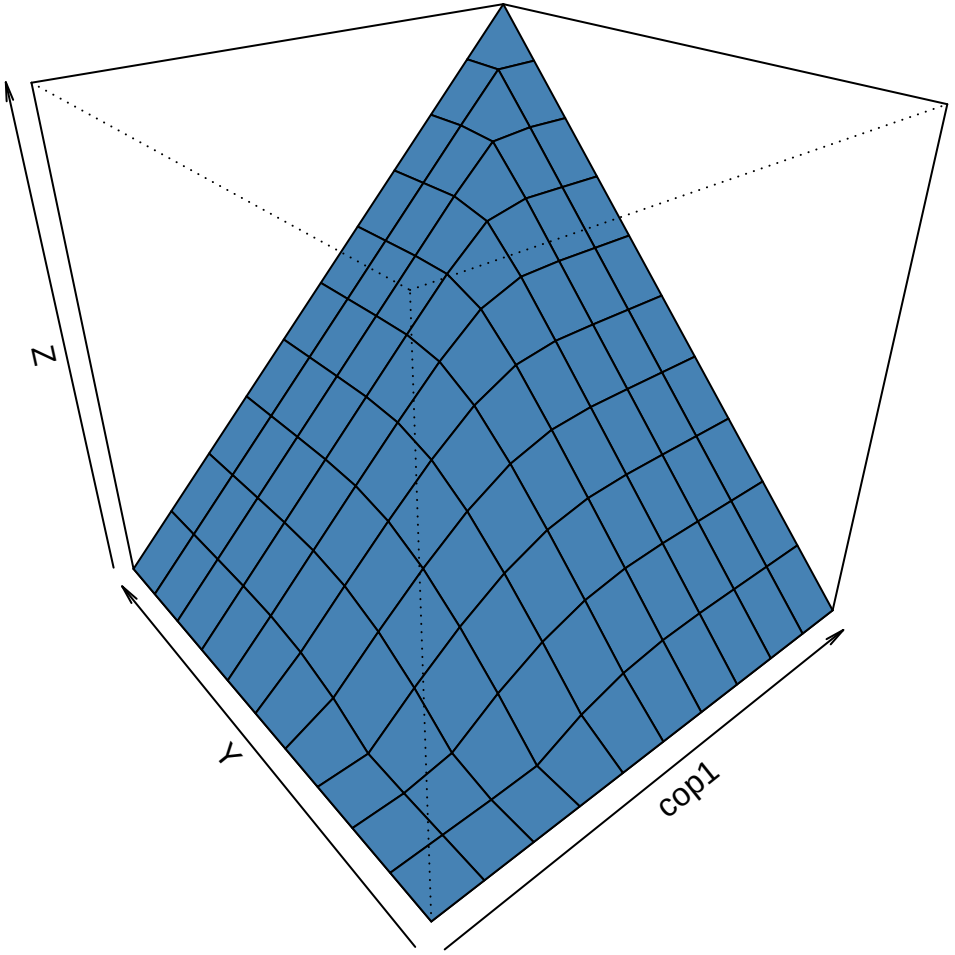

Z
Y
cop1

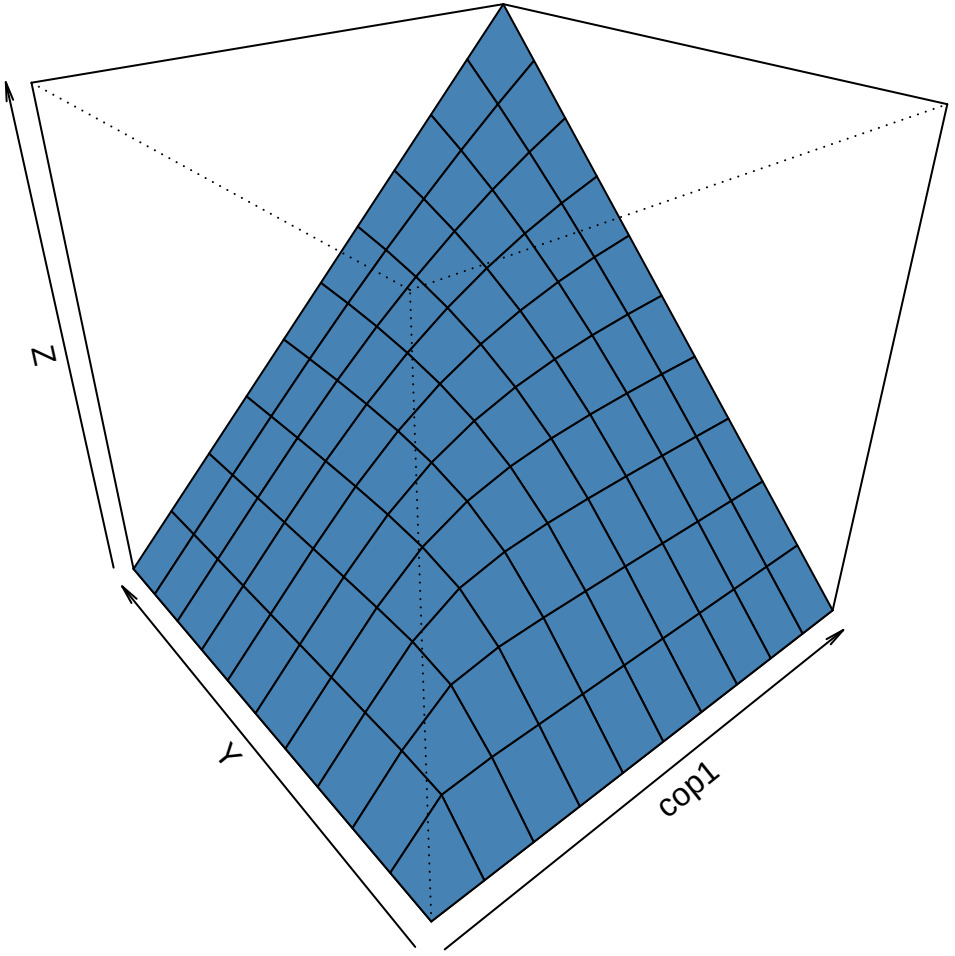

Z
Y
cop1

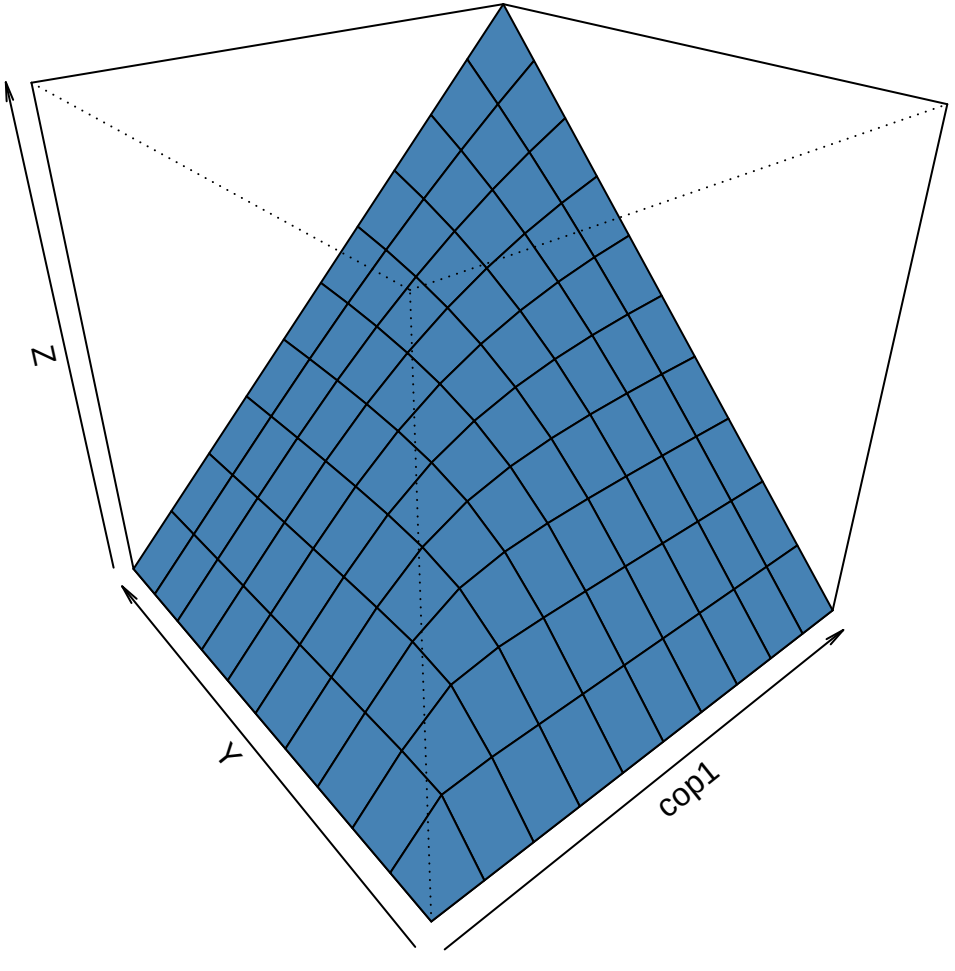

Z
Y
cop1

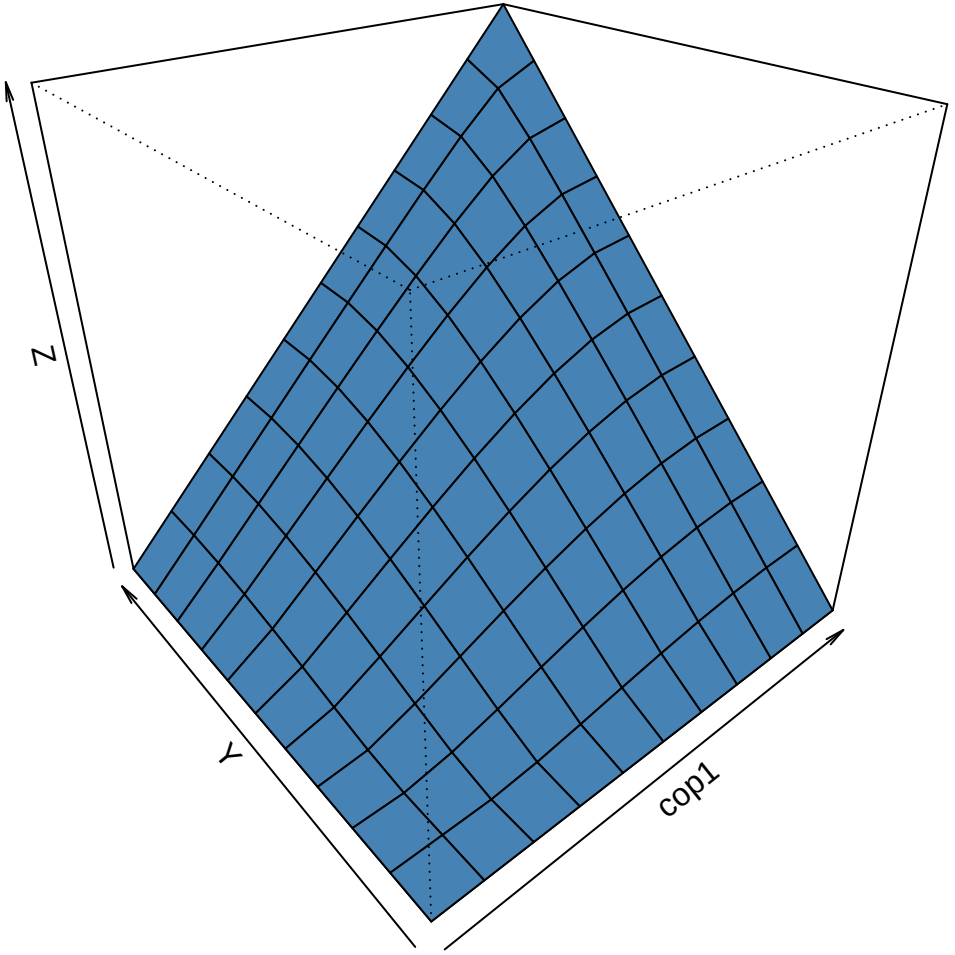

Z
Y
cop1

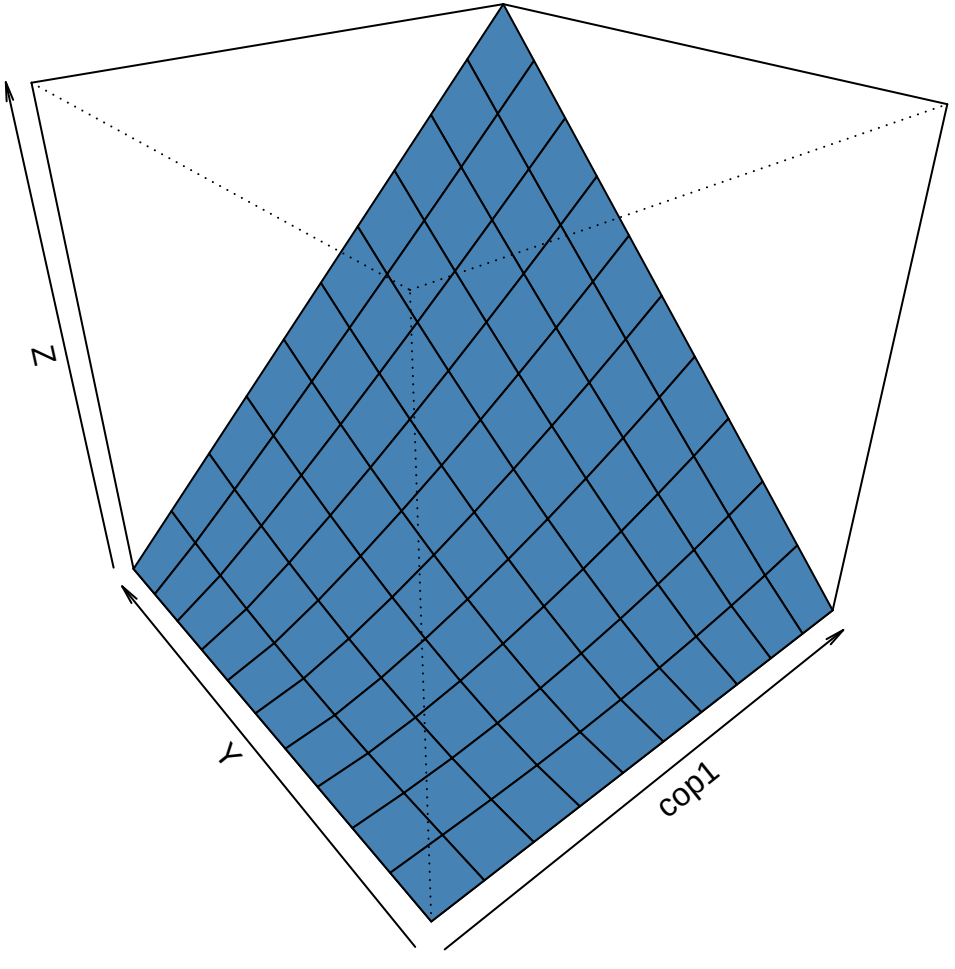

Z
Y
cop1

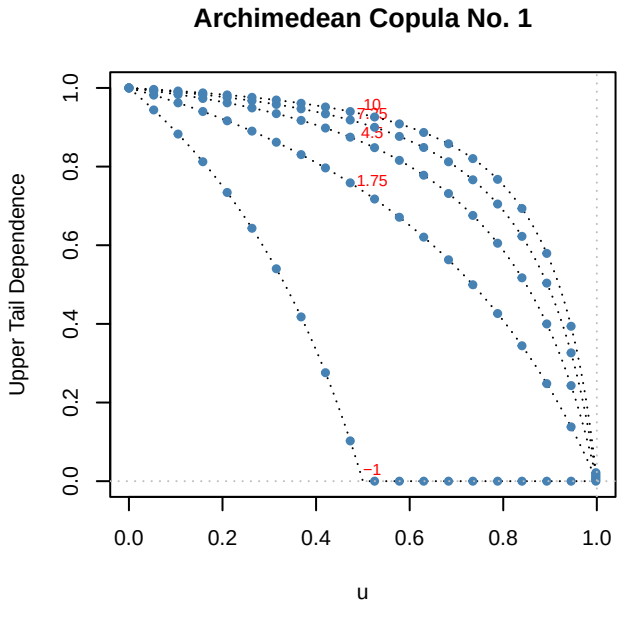

Z
Y
cop1

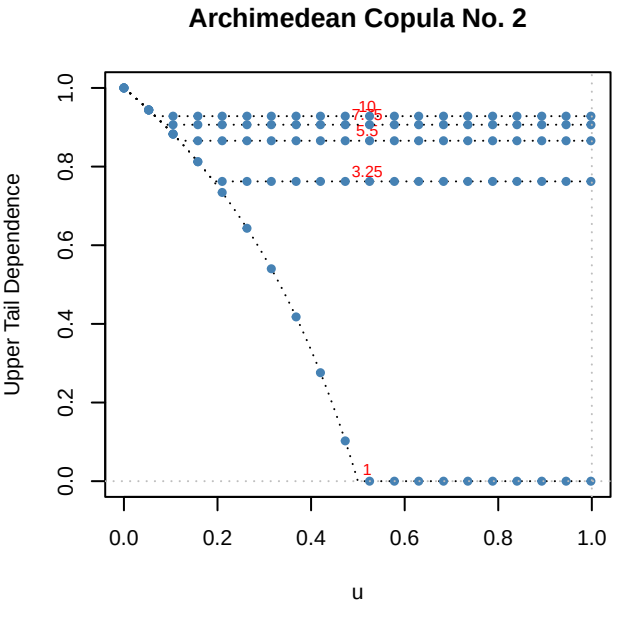

Z
Y
cop1

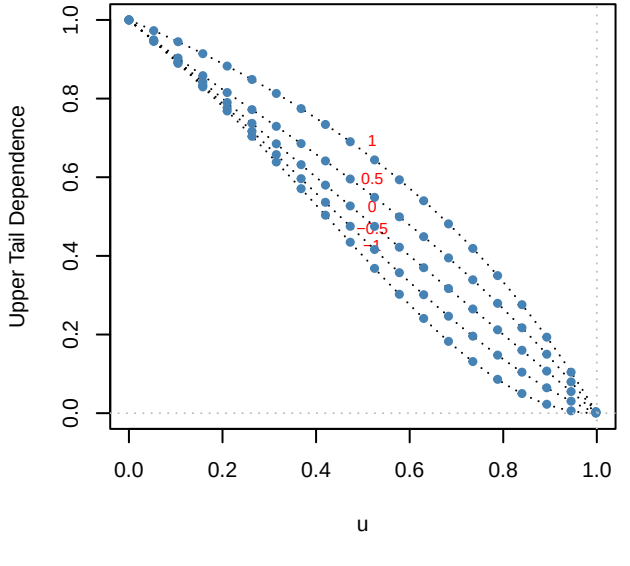

Z
Y
cop1

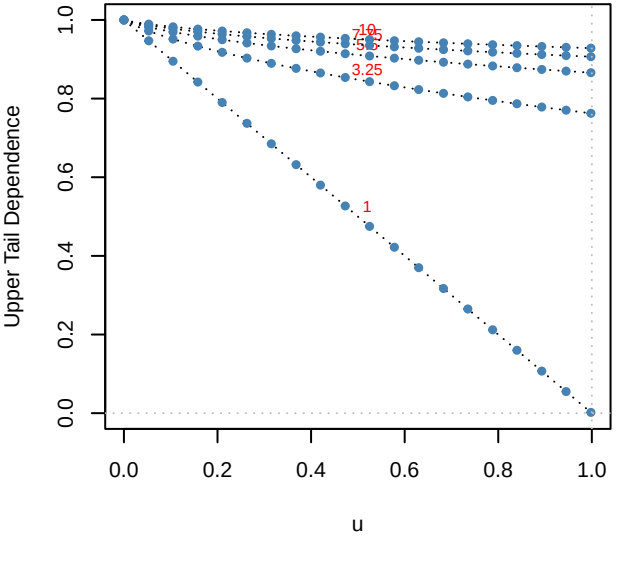

Z
Y
cop1

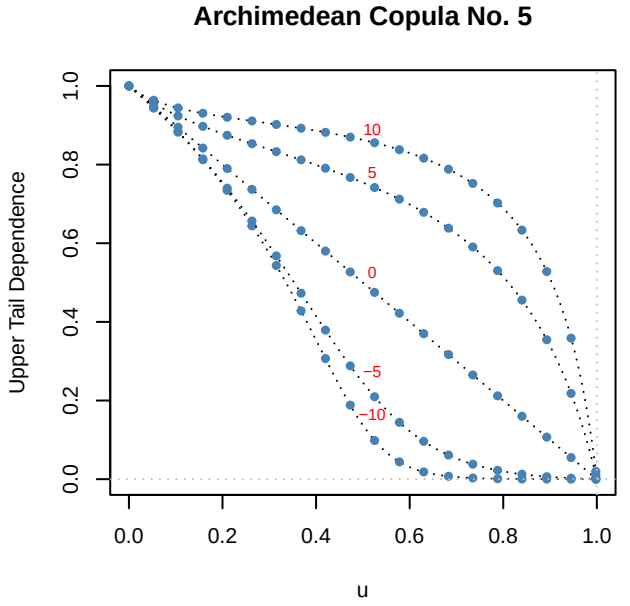

Z
Y
cop1

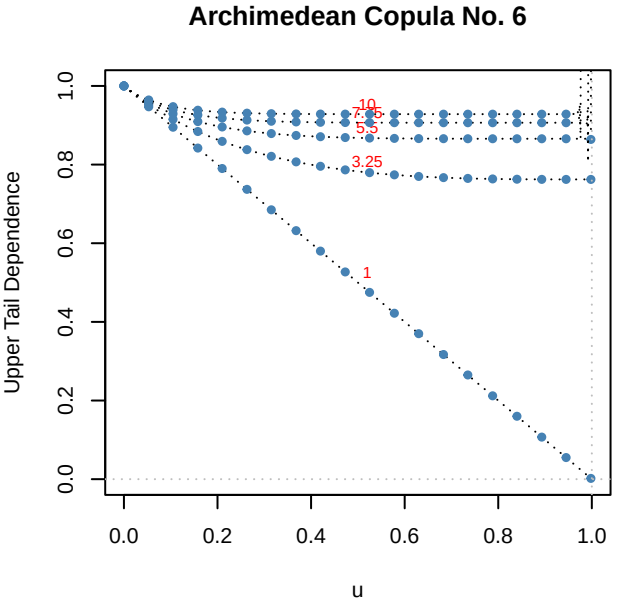

Archimedean Copula No. 1
Upper Tail Dependence
u
10
7.5
4.3
1.75
−1
0.0
0.2
0.4
0.6
0.8
1.0

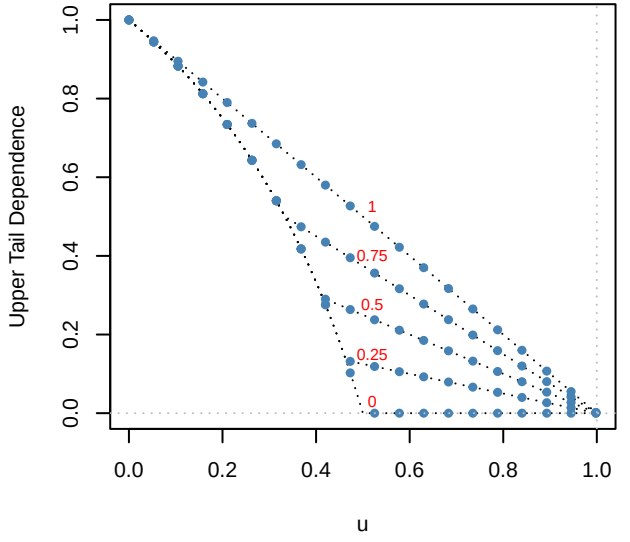

Archimedean Copula No. 2
Upper Tail Dependence
u
10
7.5
5.5
3.25
1
0.0
0.2
0.4
0.6
0.8
1.0

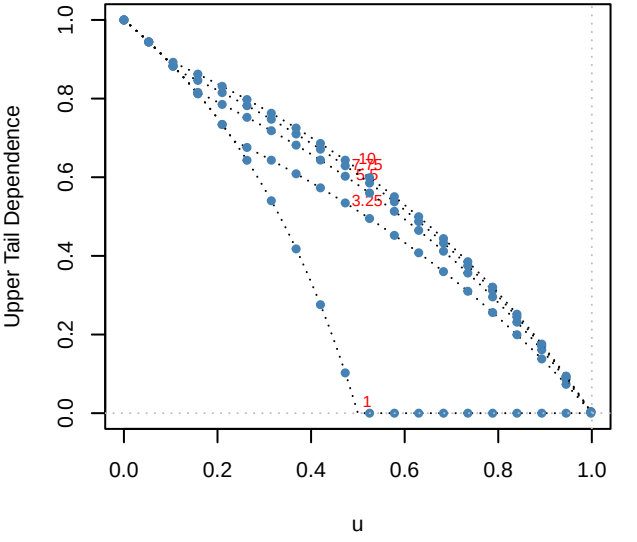

Archimedean Copula No. 3
Upper Tail Dependence
u
1
0.5
0
−0.5
−1
0.0
0.2
0.4
0.6
0.8
1.0

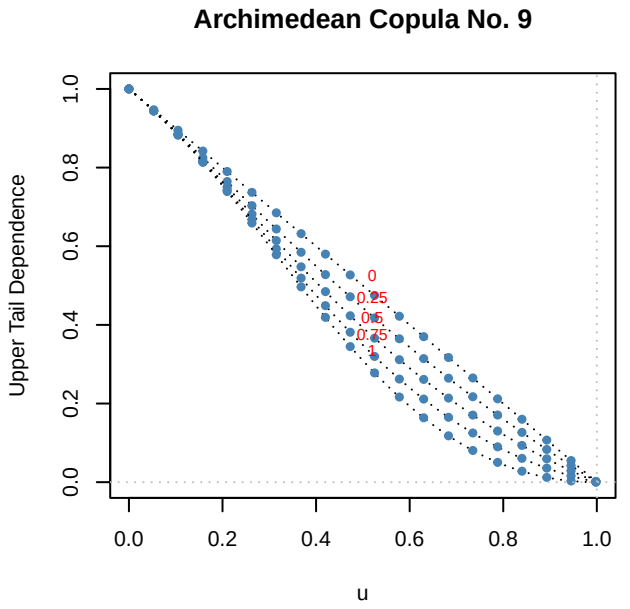

Archimedean Copula No. 4
Upper Tail Dependence
u
10
7.5
5.5
3.25
1
0.0
0.2
0.4
0.6
0.8
1.0

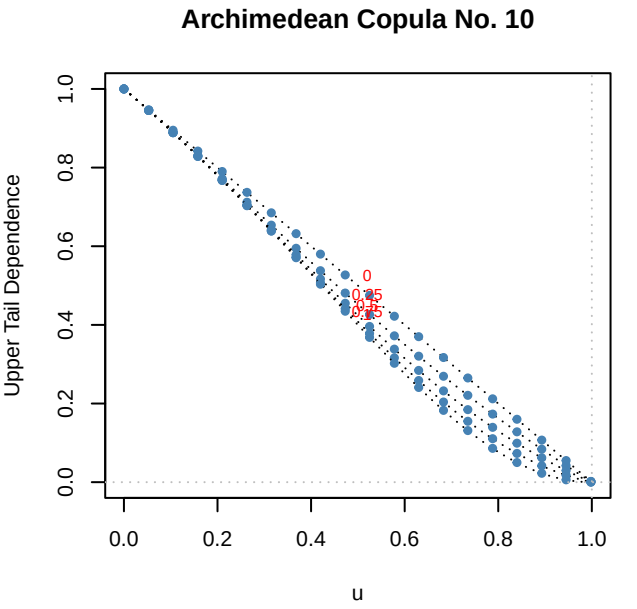

Archimedean Copula No. 5
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
5
0
−5
−10

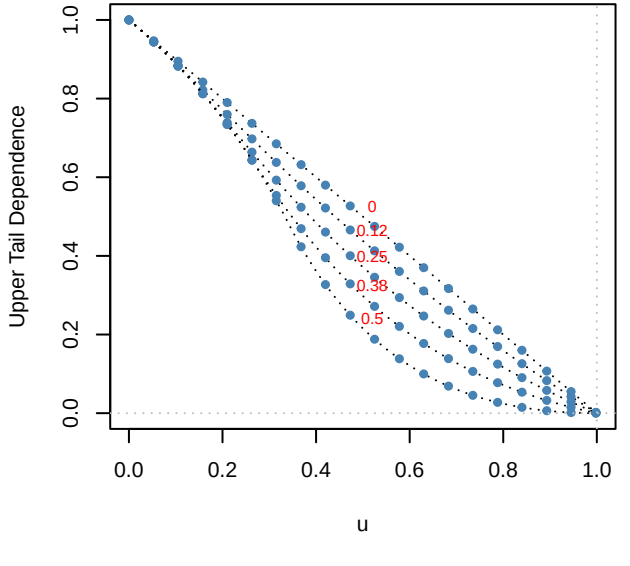

Archimedean Copula No. 6
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
7.75
5.5
3.25
1

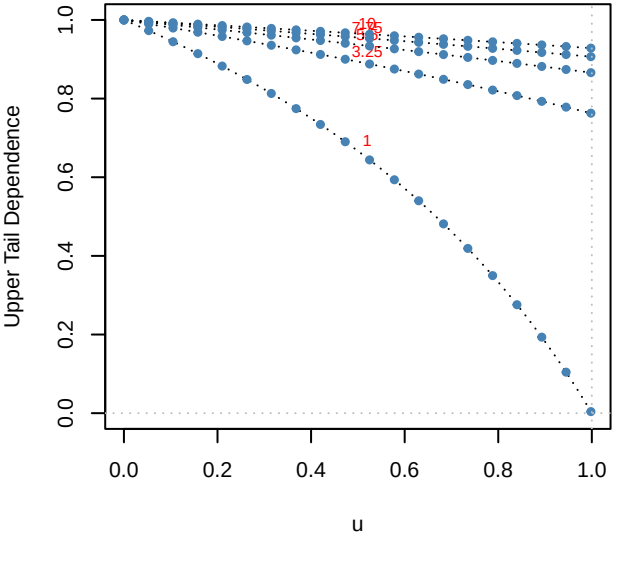

Archimedean Copula No. 7
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
1
0.75
0.5
0.25
0

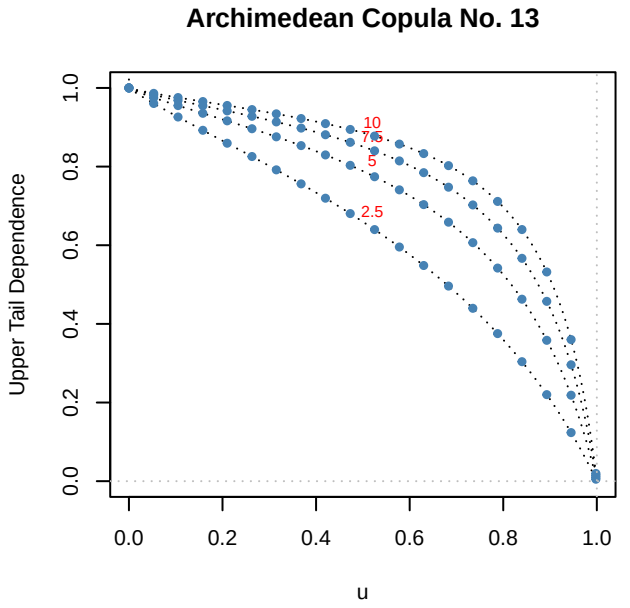

Archimedean Copula No. 8
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
7.75
5.5
3.25
1

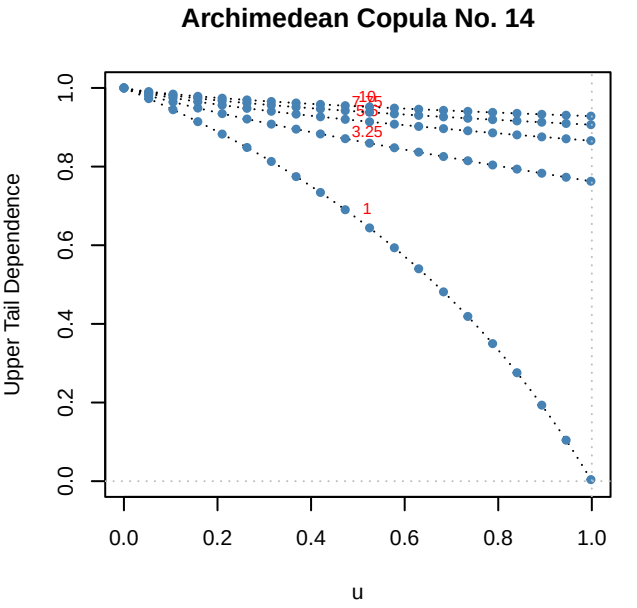

Archimedean Copula No. 9
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
0
0.25
0.5
0.75
1

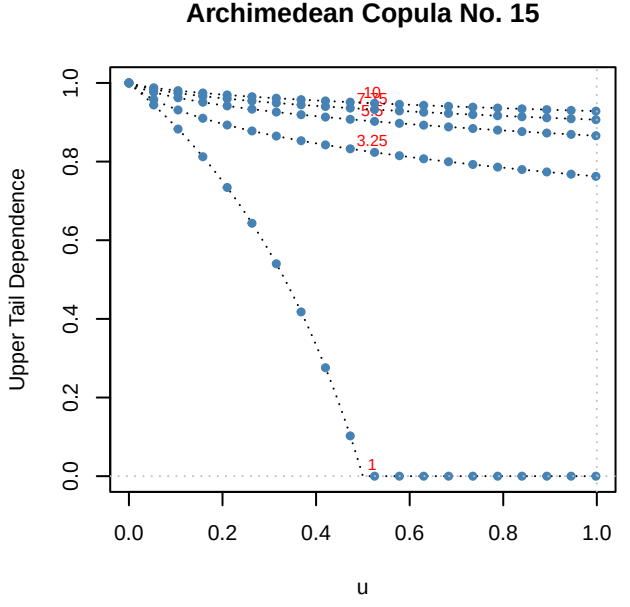

Archimedean Copula No. 10
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
0

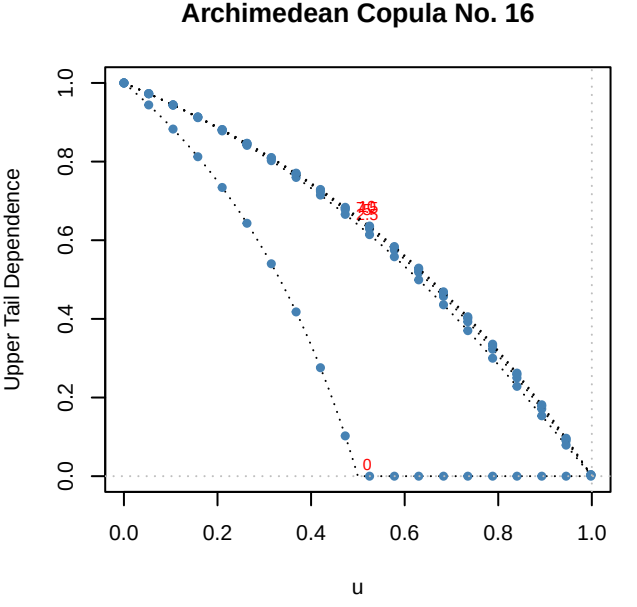

Archimedean Copula No. 11
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
0
0.12
0.25
0.38
0.5

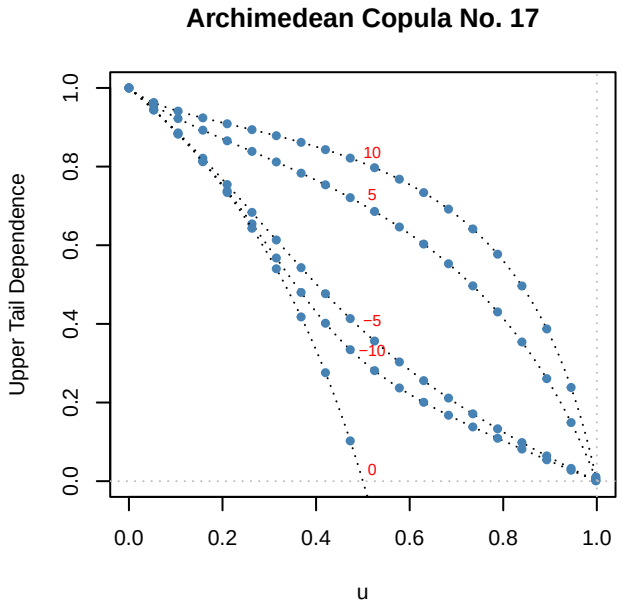

Archimedean Copula No. 12
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
3.25
1

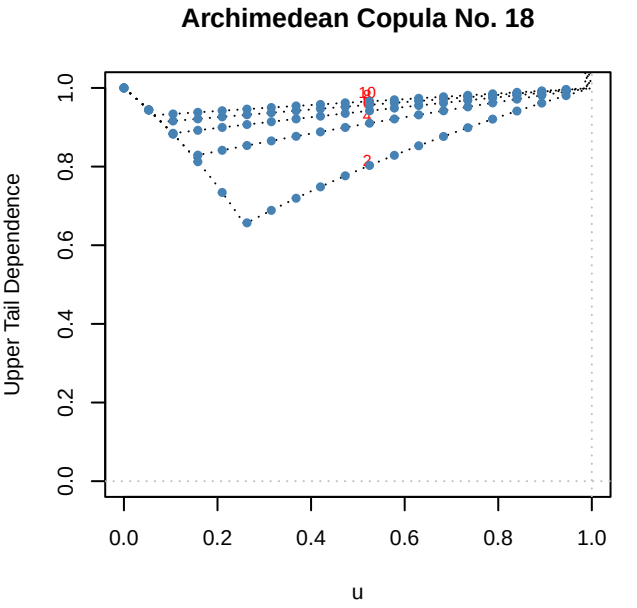

Archimedean Copula No. 13
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
7.5
5
2.5

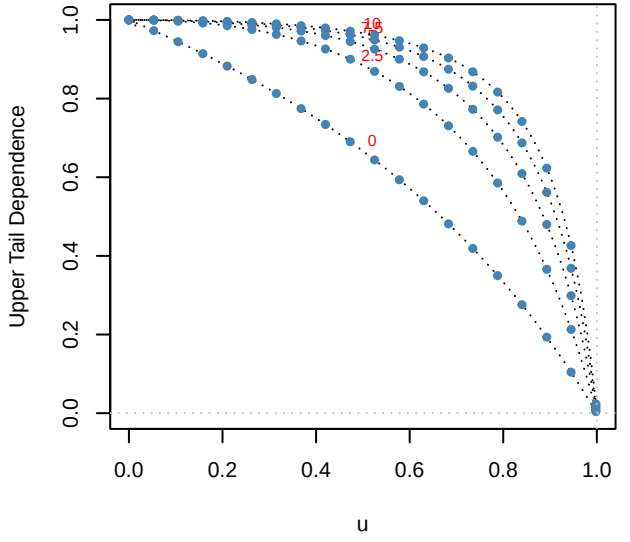

Archimedean Copula No. 14
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
7.5
5
3.25
1

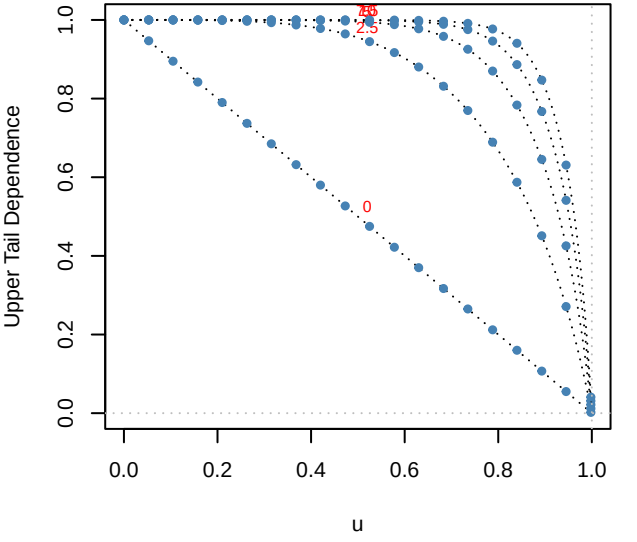

Archimedean Copula No. 15
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
7.5
5
3.25
1

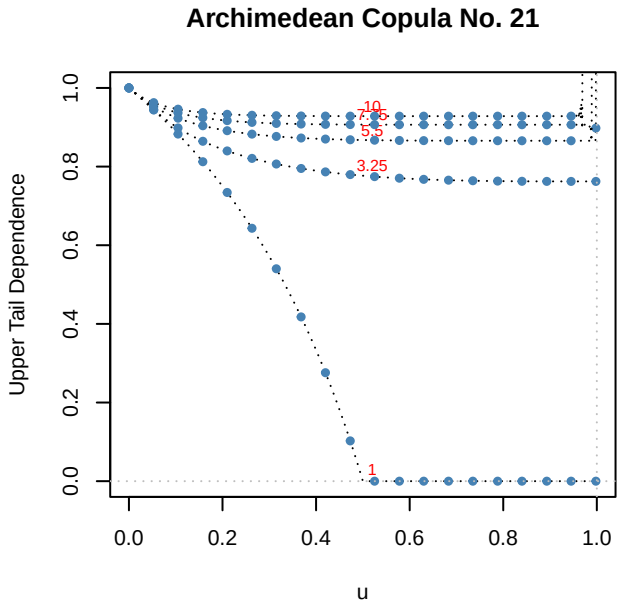

Archimedean Copula No. 16
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
0

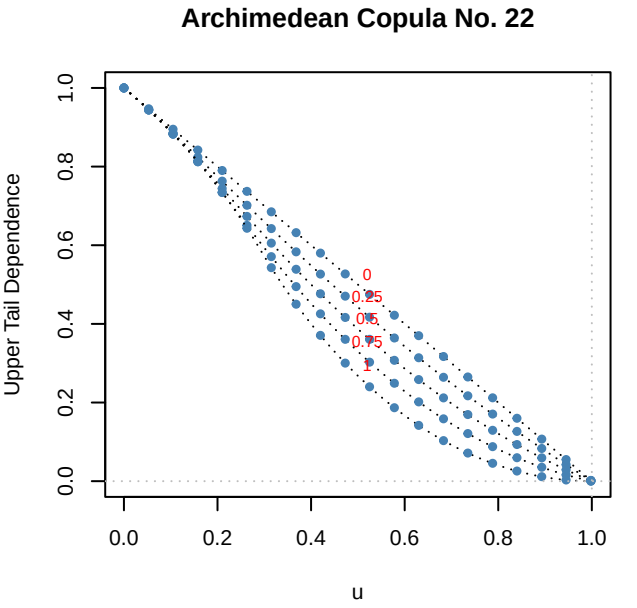

Archimedean Copula No. 17
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
5
−5
−10
0

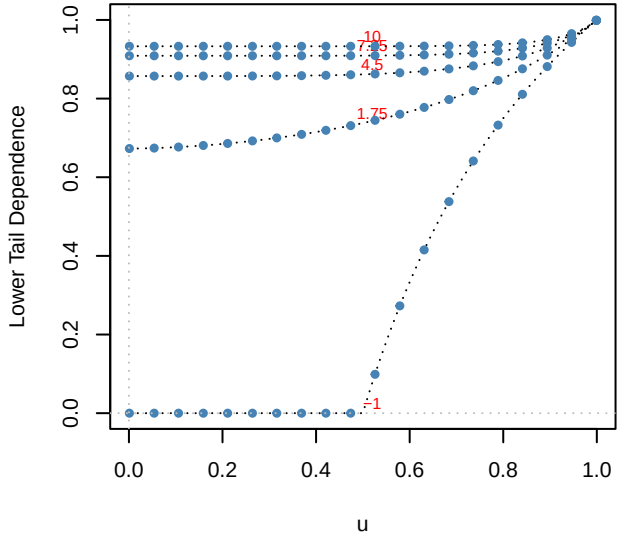

Archimedean Copula No. 18
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
2

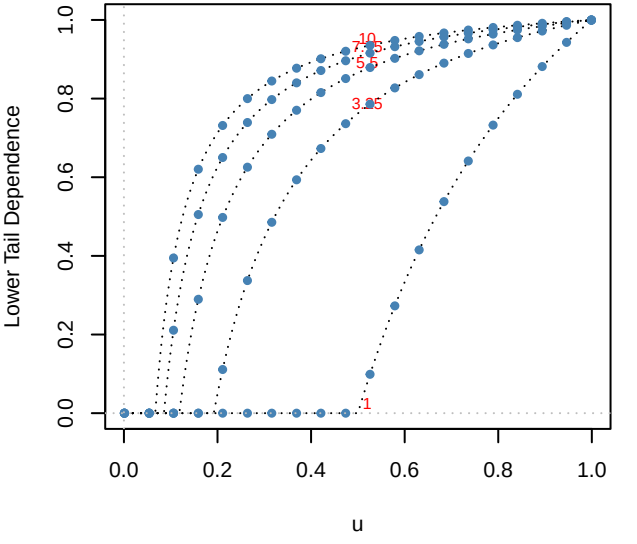

Archimedean Copula No. 19
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
2.5
0

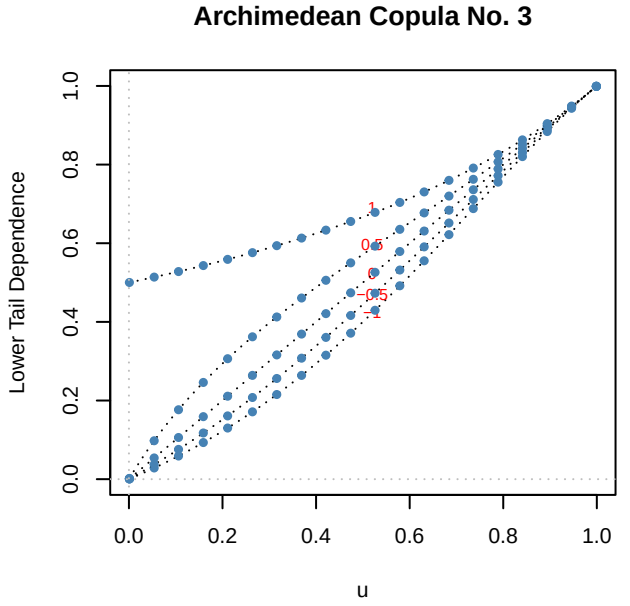

Archimedean Copula No. 20
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
2.5
0

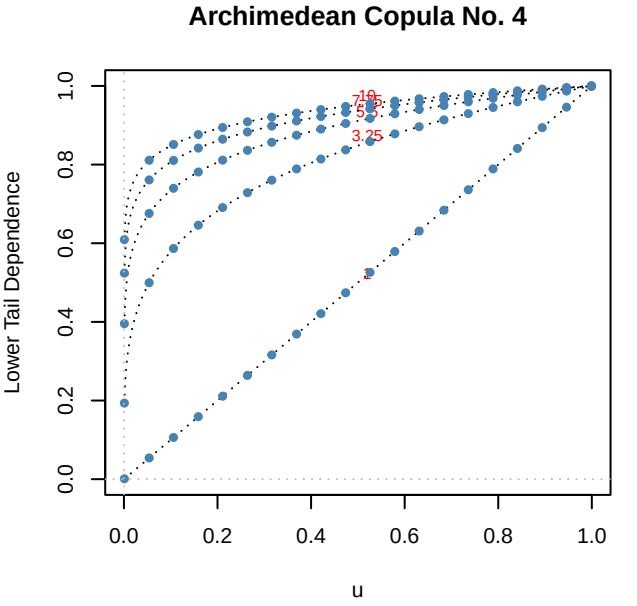

Archimedean Copula No. 21
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
7.75
5.5
3.25
1

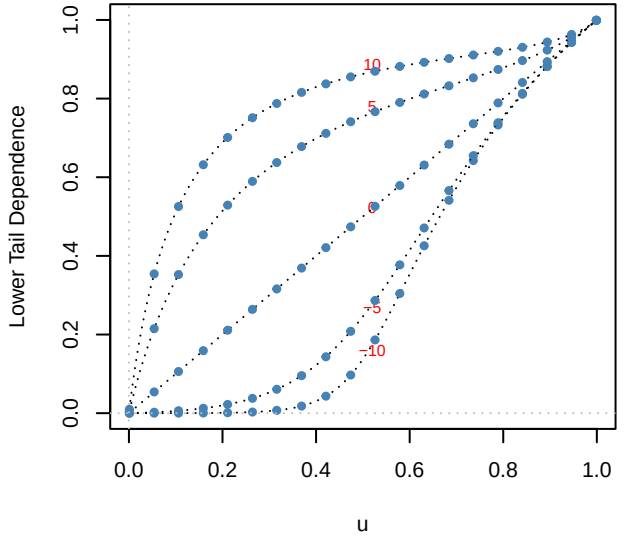

Archimedean Copula No. 22
Upper Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
0
0.25
0.5
0.75
1

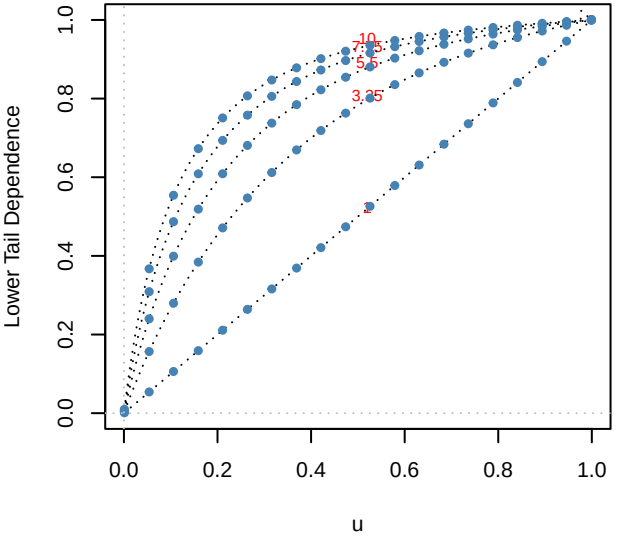

Archimedean Copula No. 1
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
7.75
4.5
1.75
1

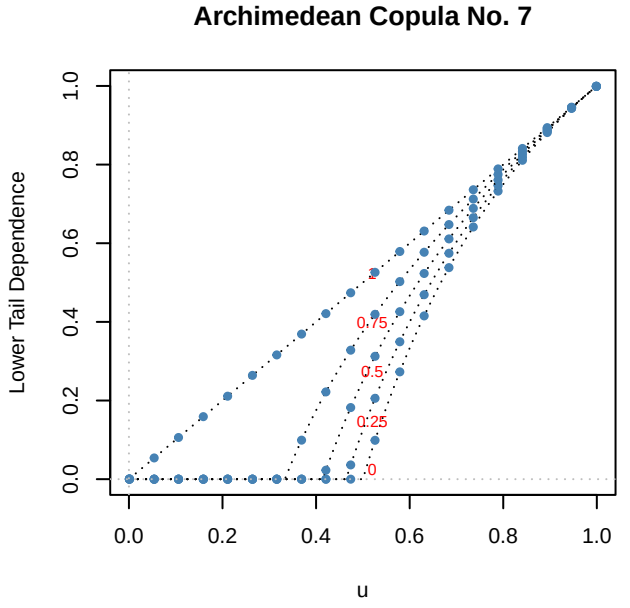

Archimedean Copula No. 2
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
7.75
5.5
3.25
1

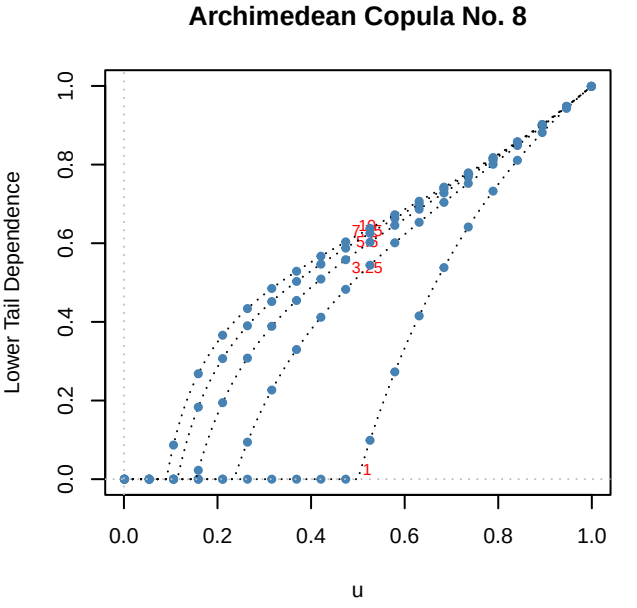

Archimedean Copula No. 3
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
1
0.5
0
−0.5
−1

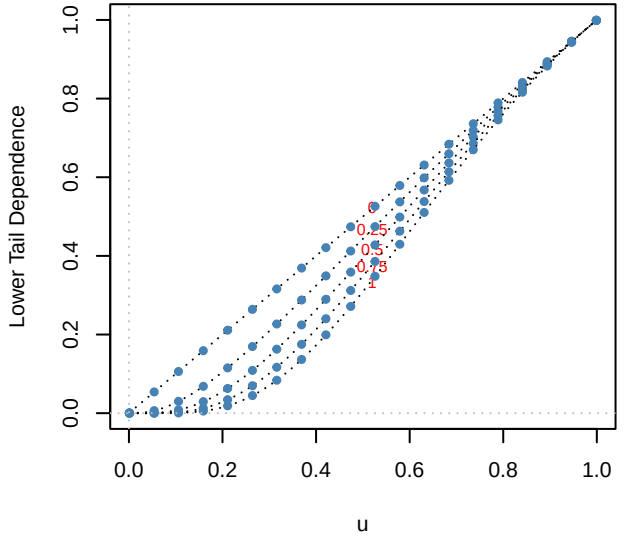

Archimedean Copula No. 4
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
7.5
5
3.25
1

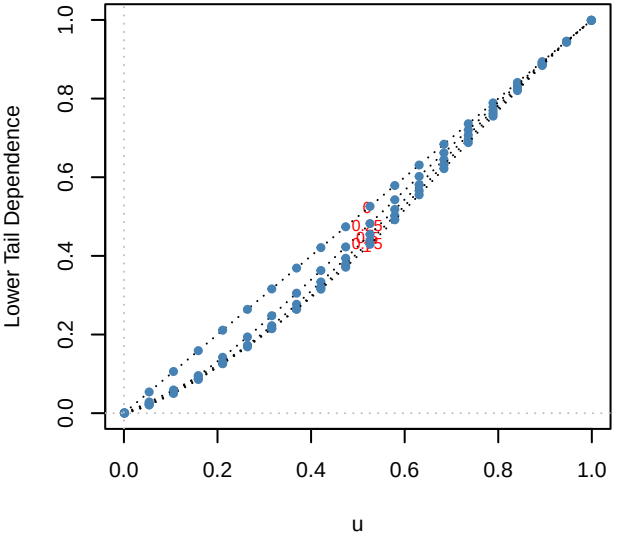

Archimedean Copula No. 5
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
5
0
−5
−10

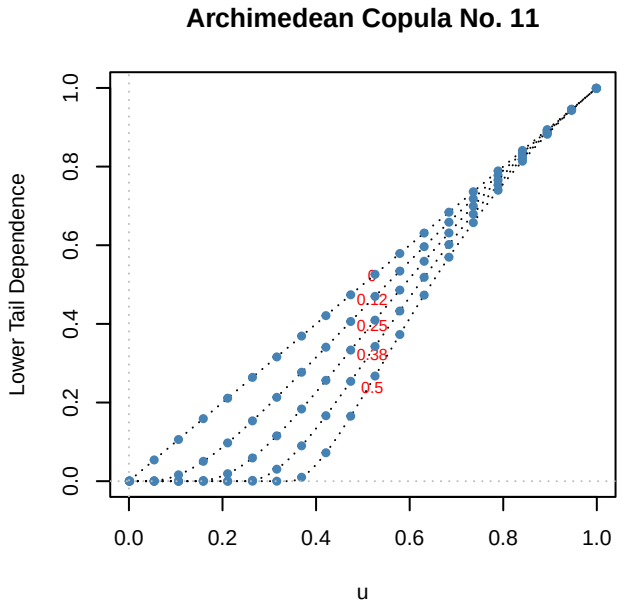

Archimedean Copula No. 6
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
7.5
5
3.25
1

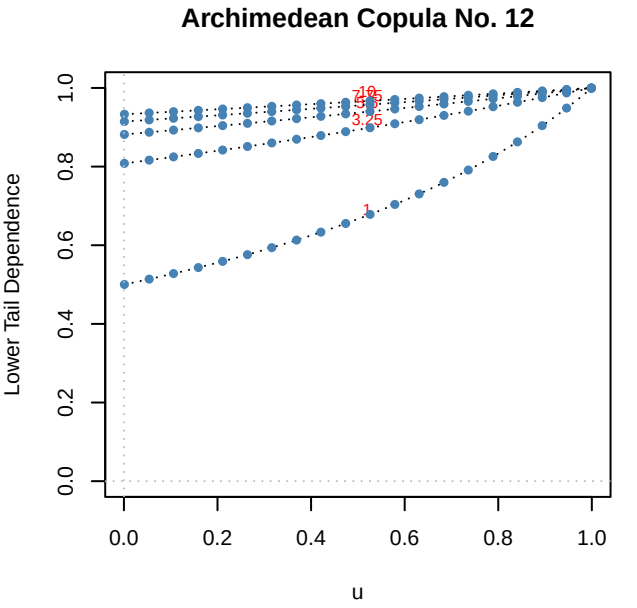

Archimedean Copula No. 7
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
0.75
0.5
0.25
0

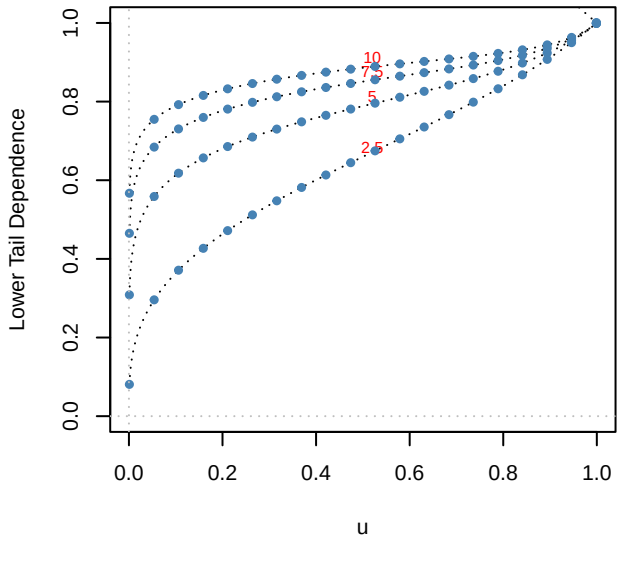

Archimedean Copula No. 8
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
3.25
1

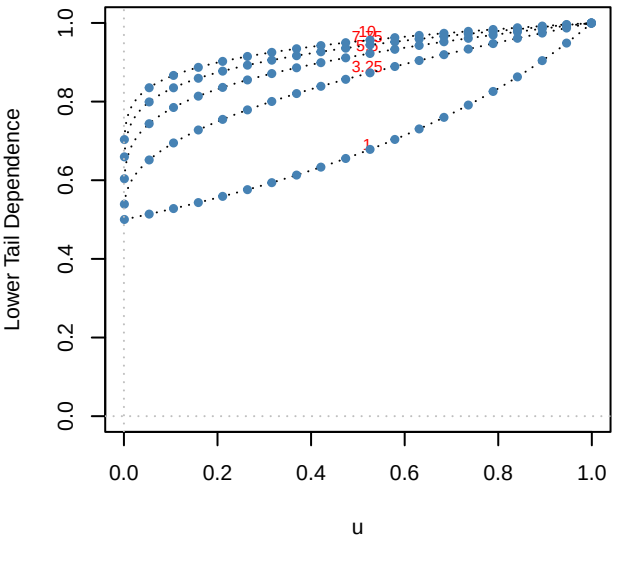

Archimedean Copula No. 9
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
0.25
0.5
0.75
1

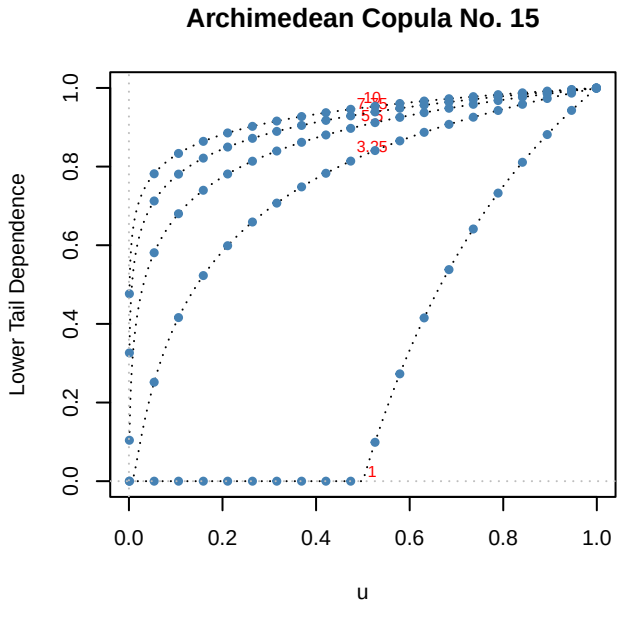

Archimedean Copula No. 10
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0

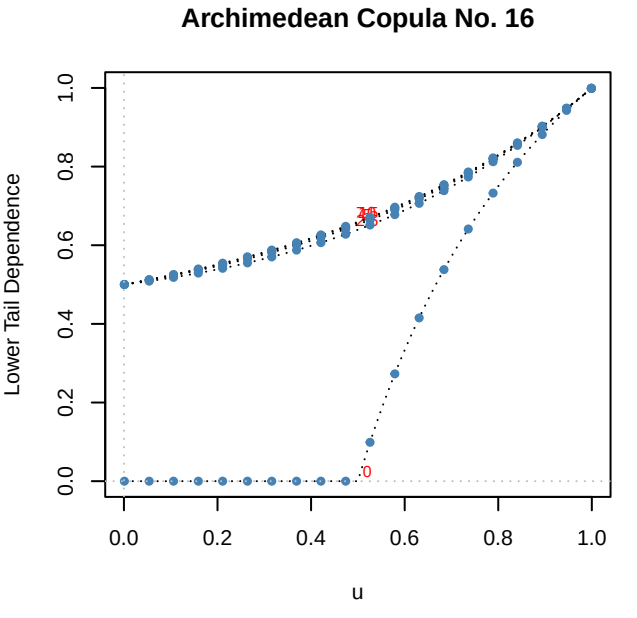

Archimedean Copula No. 11
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
0.12
0.25
0.38
0.5

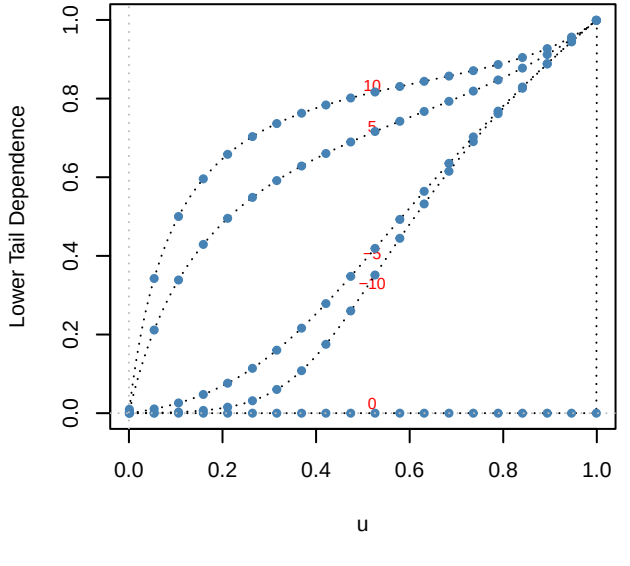

Archimedean Copula No. 12
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
7.5
5
3.25
1

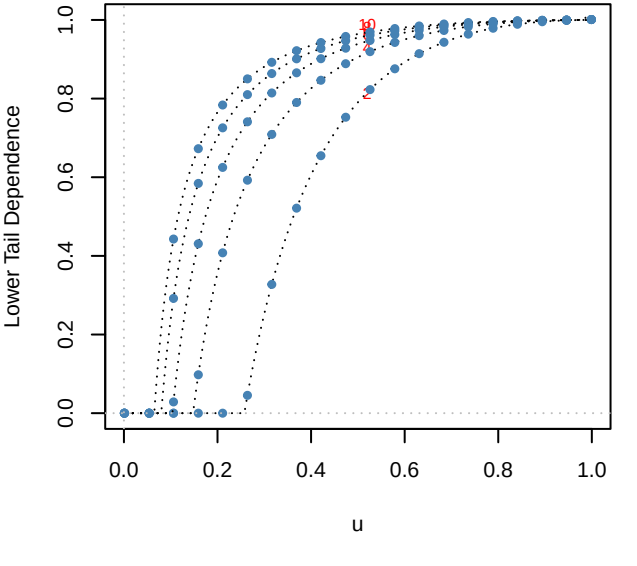

Archimedean Copula No. 13
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
7.5
5
2.5

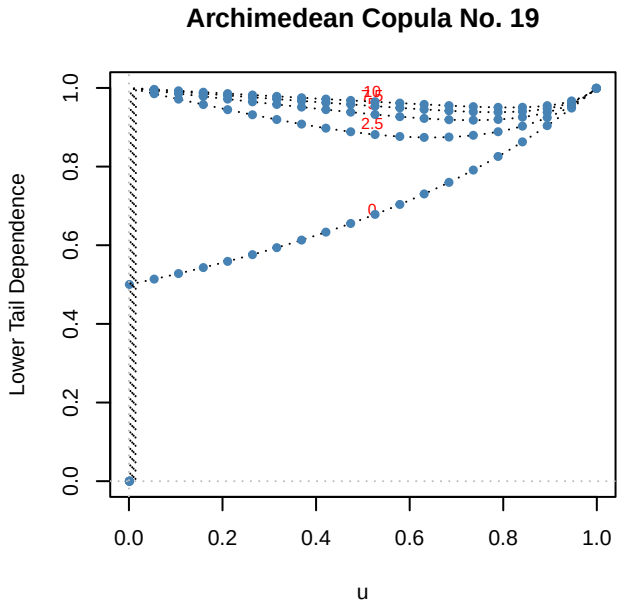

Archimedean Copula No. 14
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
7.5
5
3.25
1

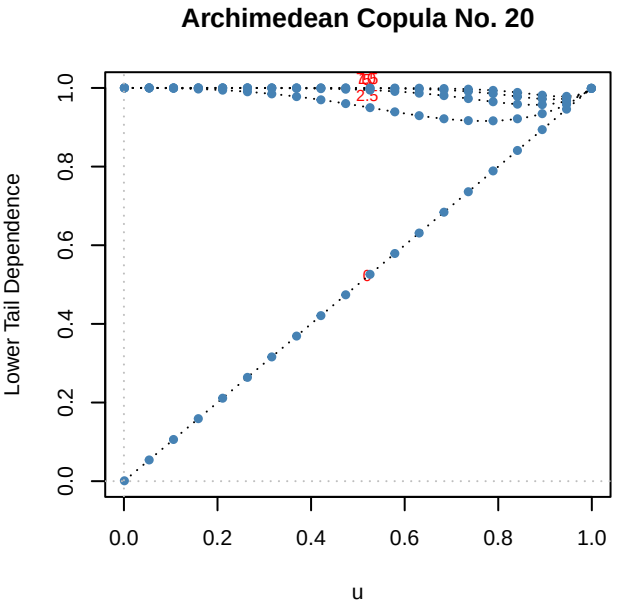

Archimedean Copula No. 15
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
5
3.25
1

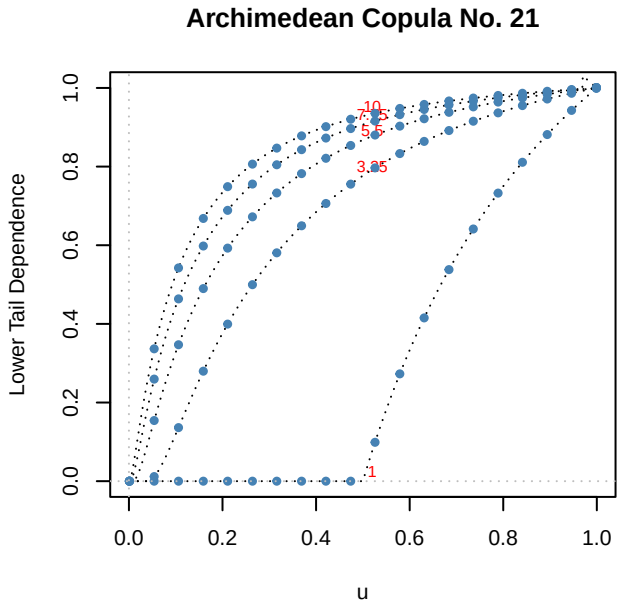

Archimedean Copula No. 16
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
0

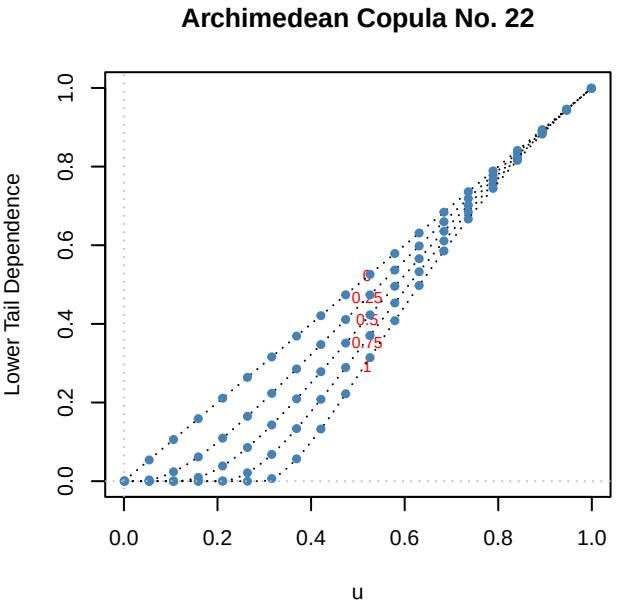

Archimedean Copula No. 17
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
5
−5
−10
0


Archimedean Copula No. 18
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0

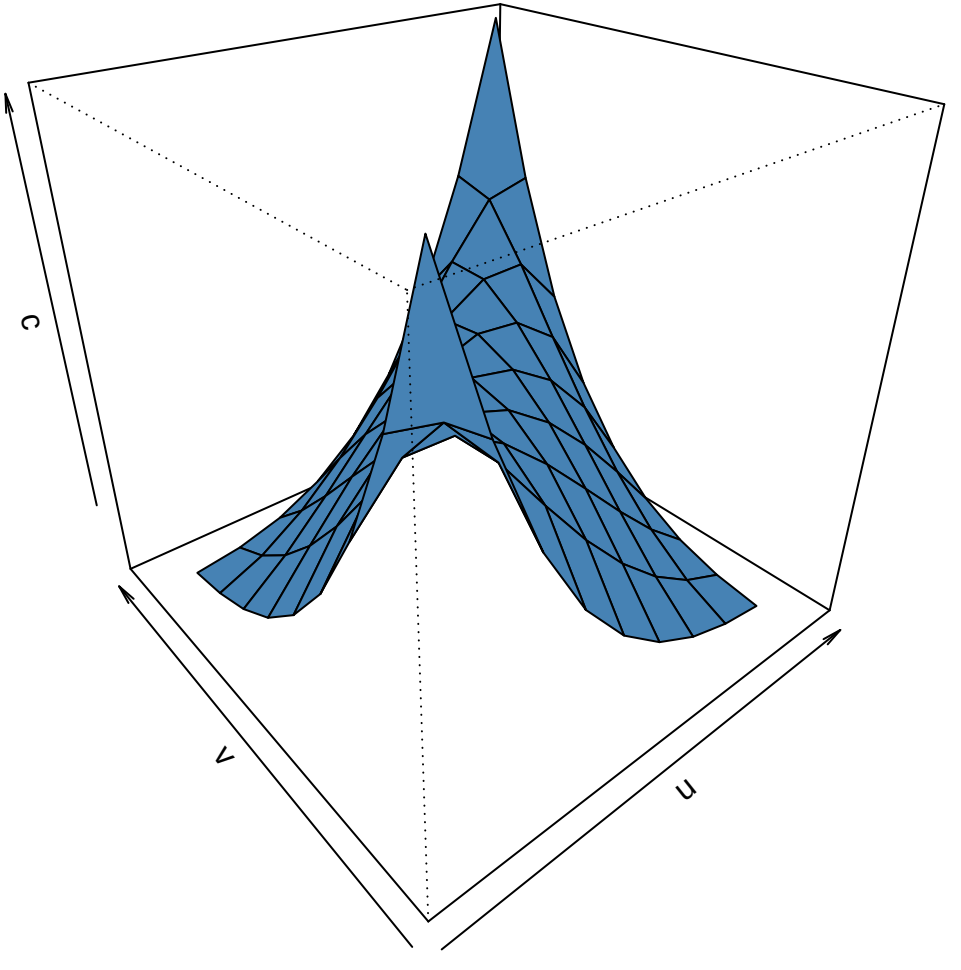

Archimedean Copula No. 19
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
5
2.5
0

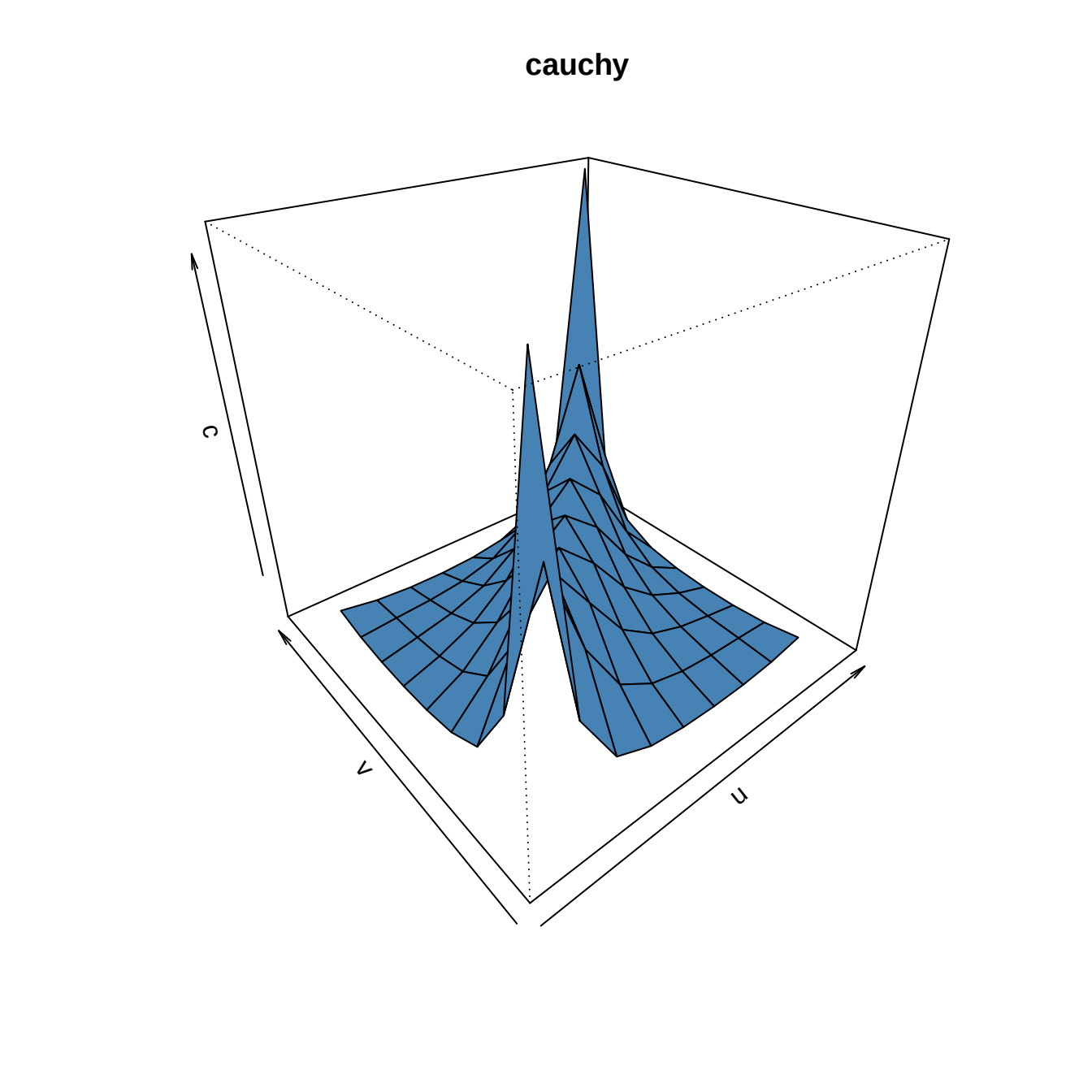

Archimedean Copula No. 20
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
2.5

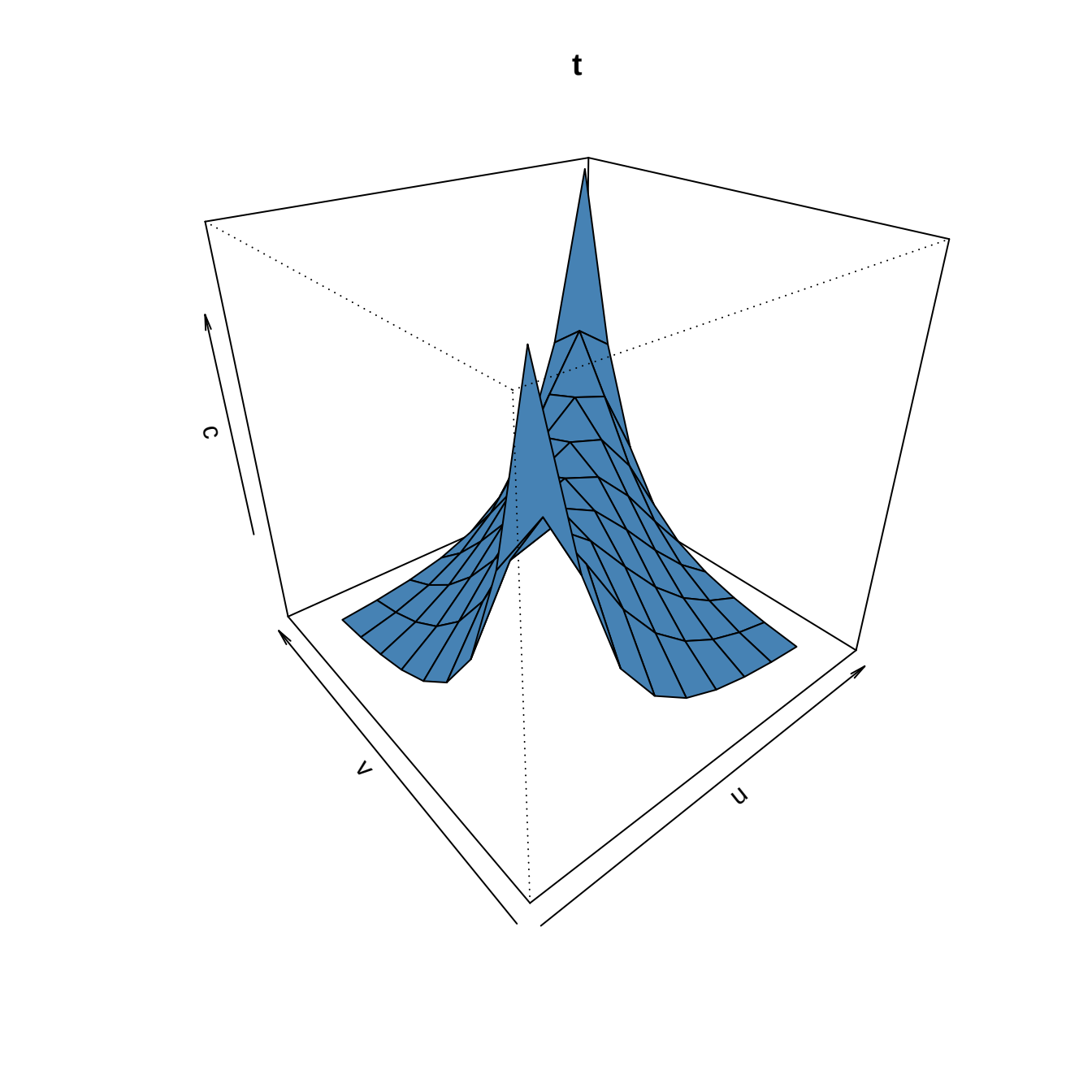

Archimedean Copula No. 21
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
10
7.5
5
3.5
1


Archimedean Copula No. 22
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
0.25
0.5
0.75
1

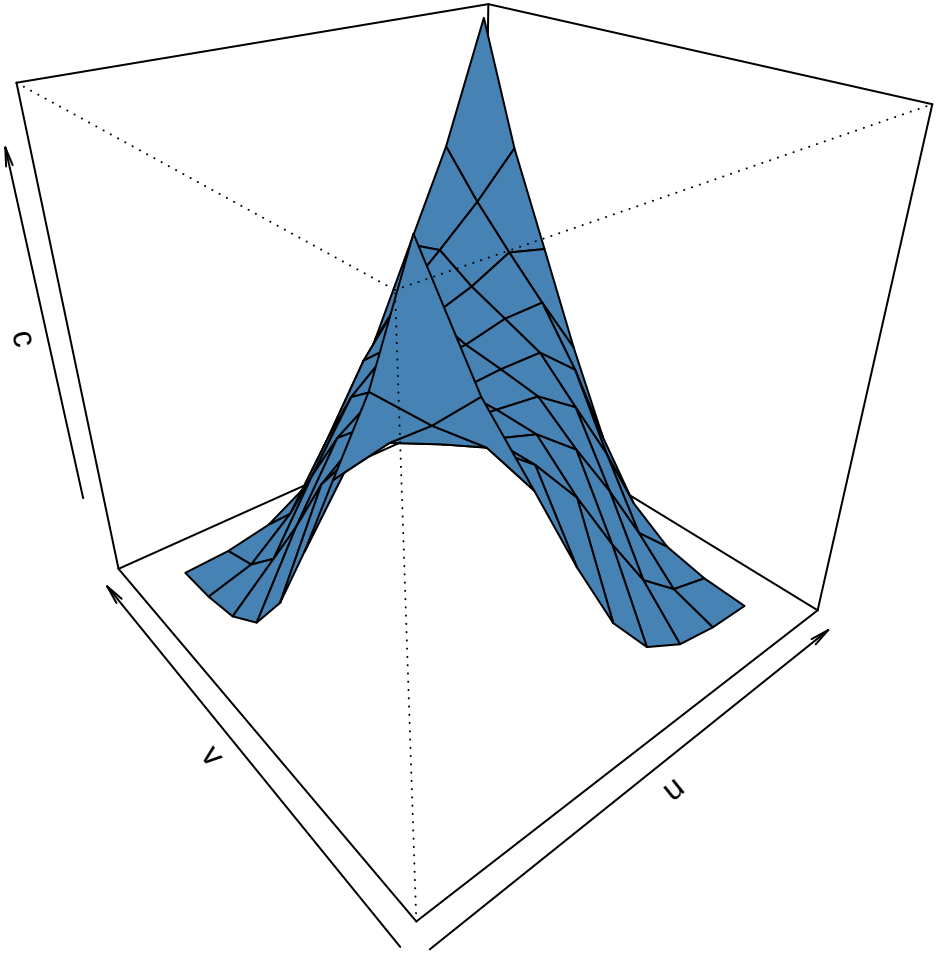
norm



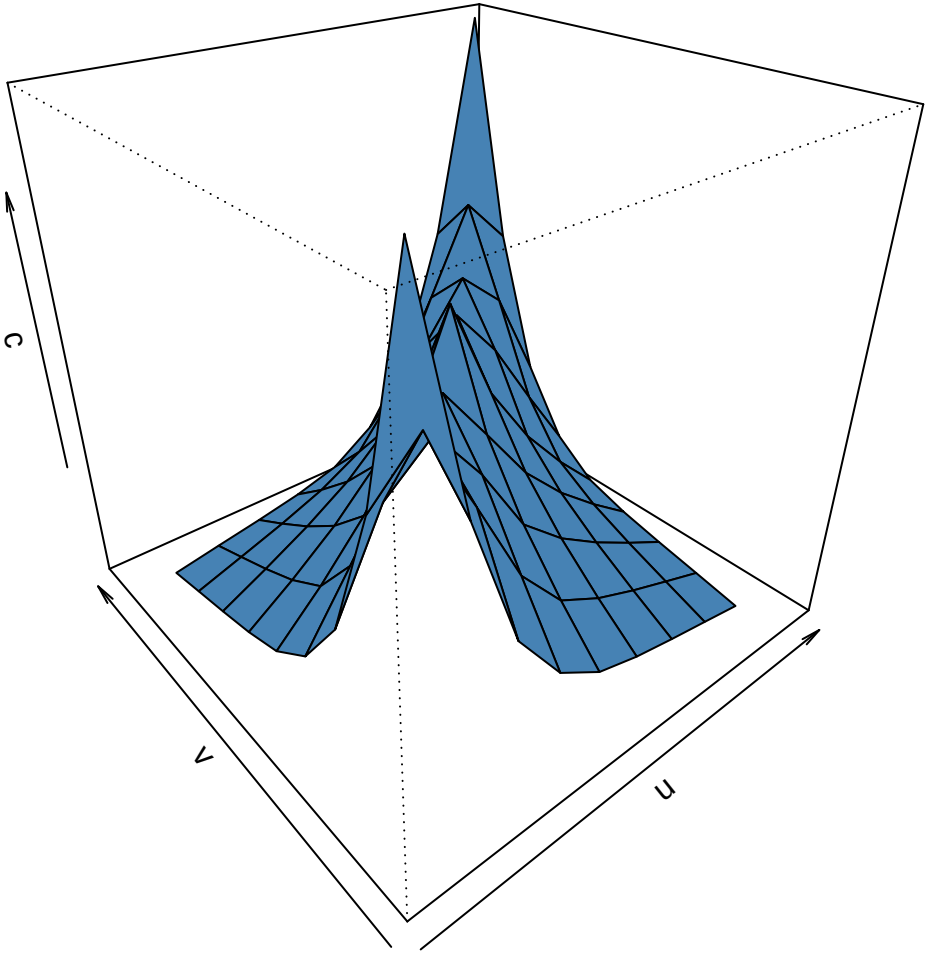

cauchy
c
v
u


t
c
v
u

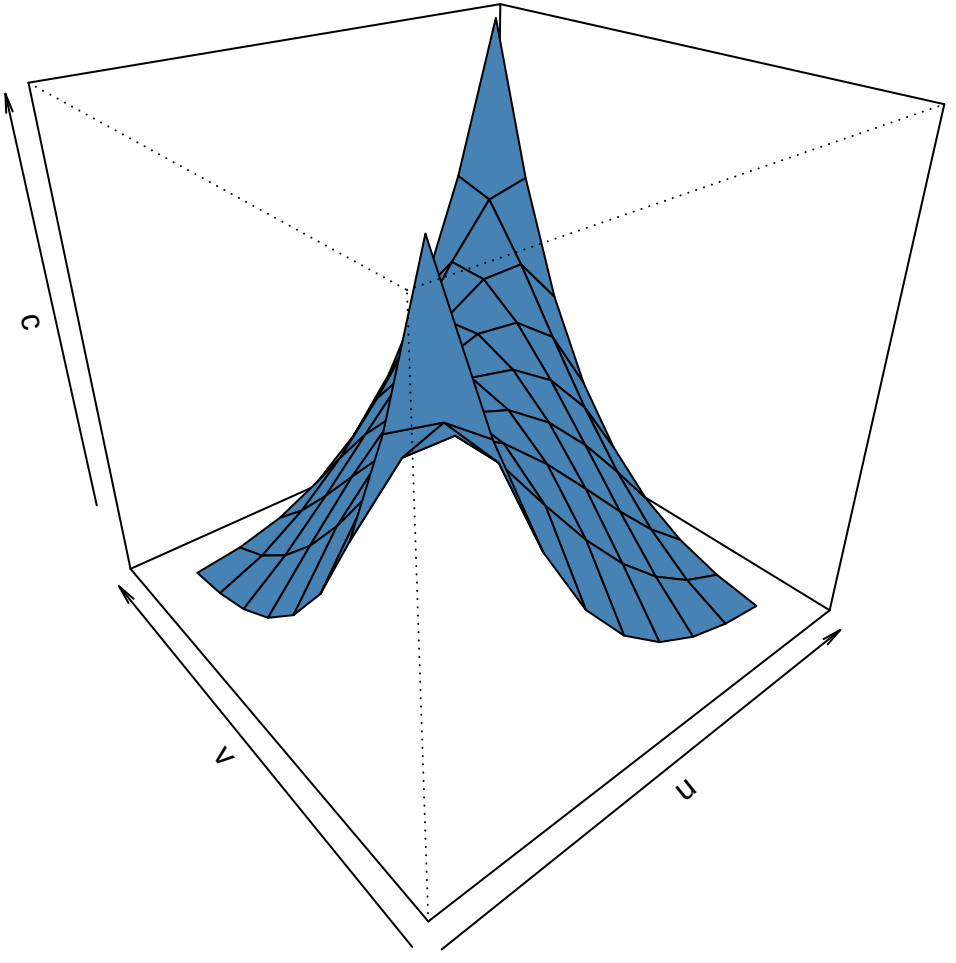
logistic

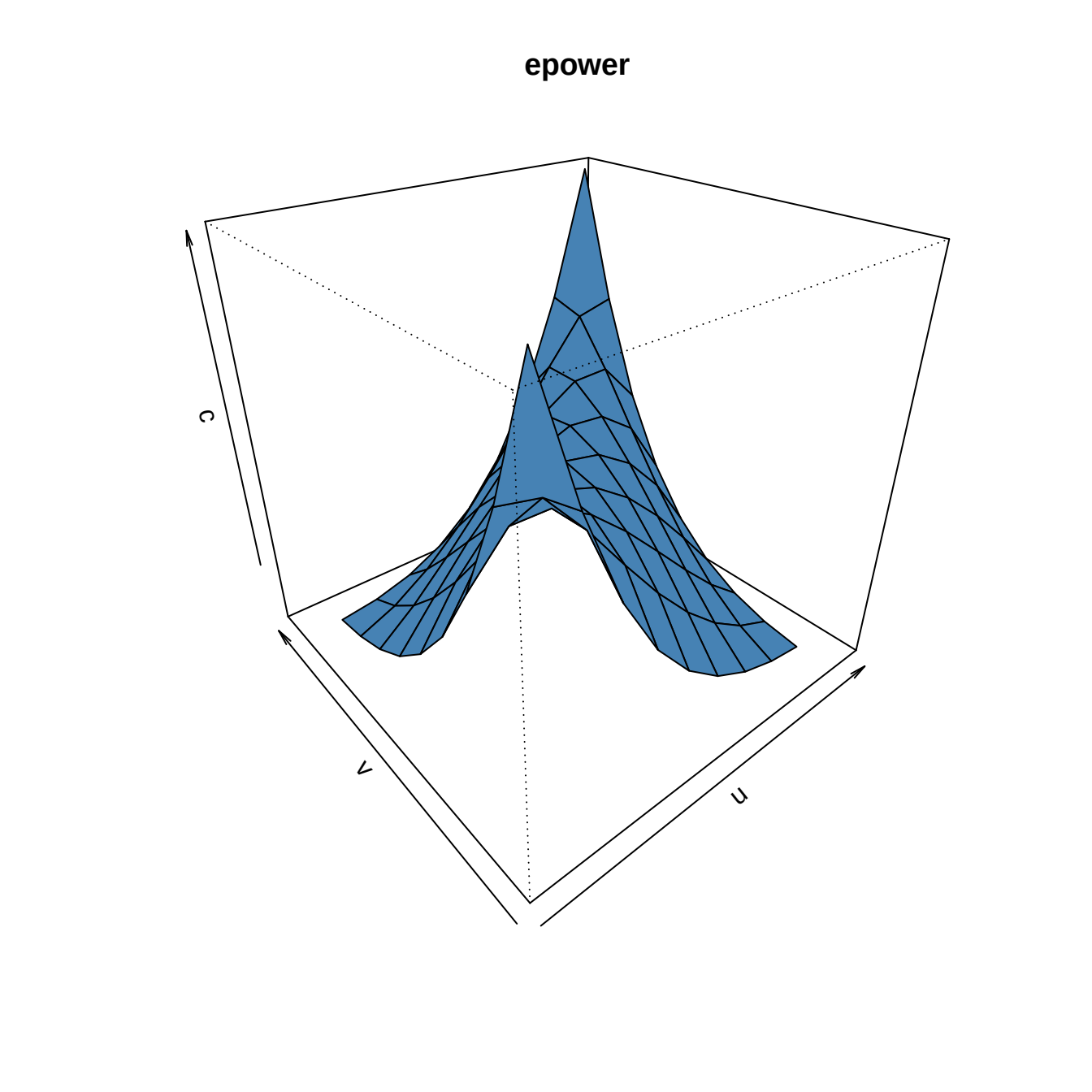


laplace

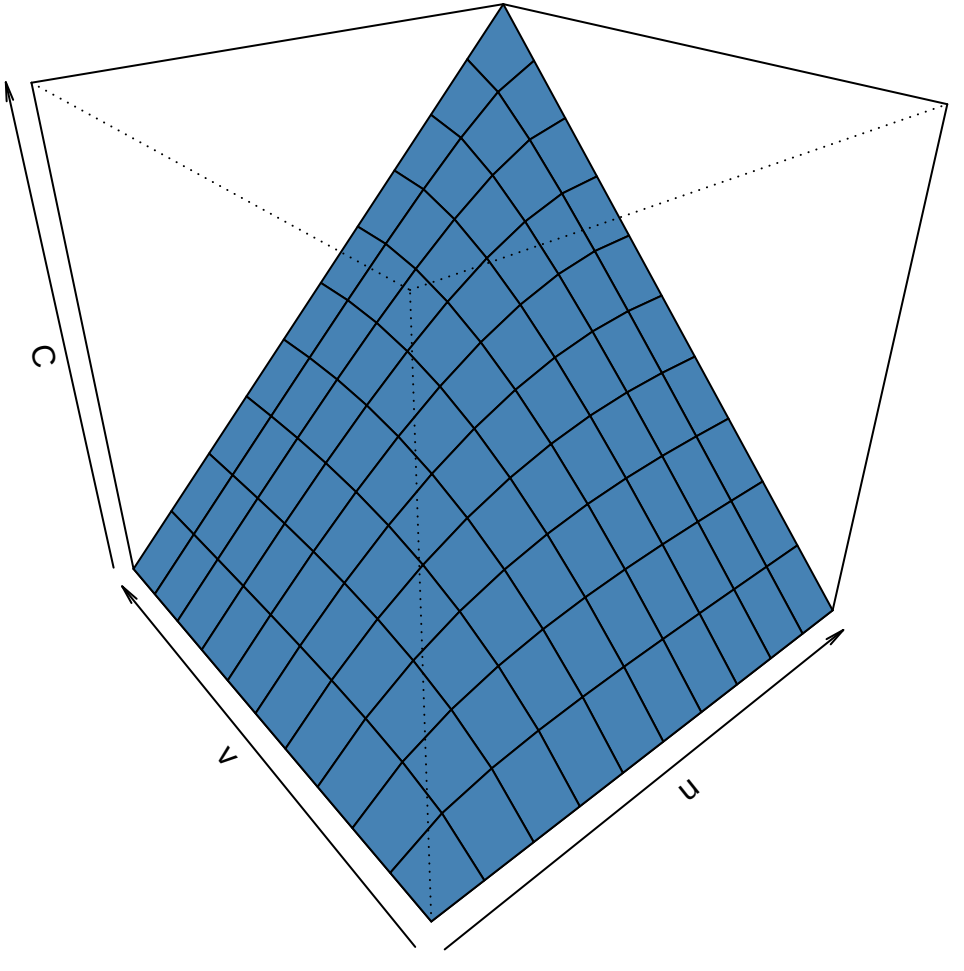


kotz

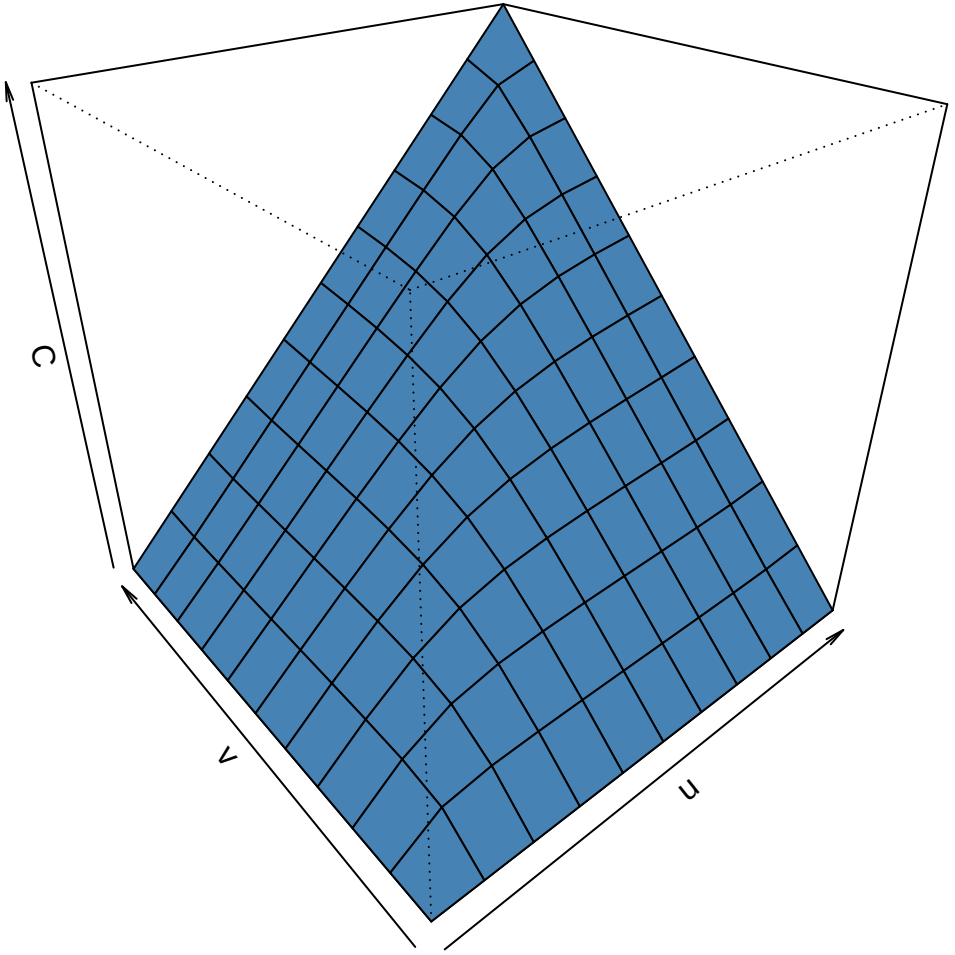


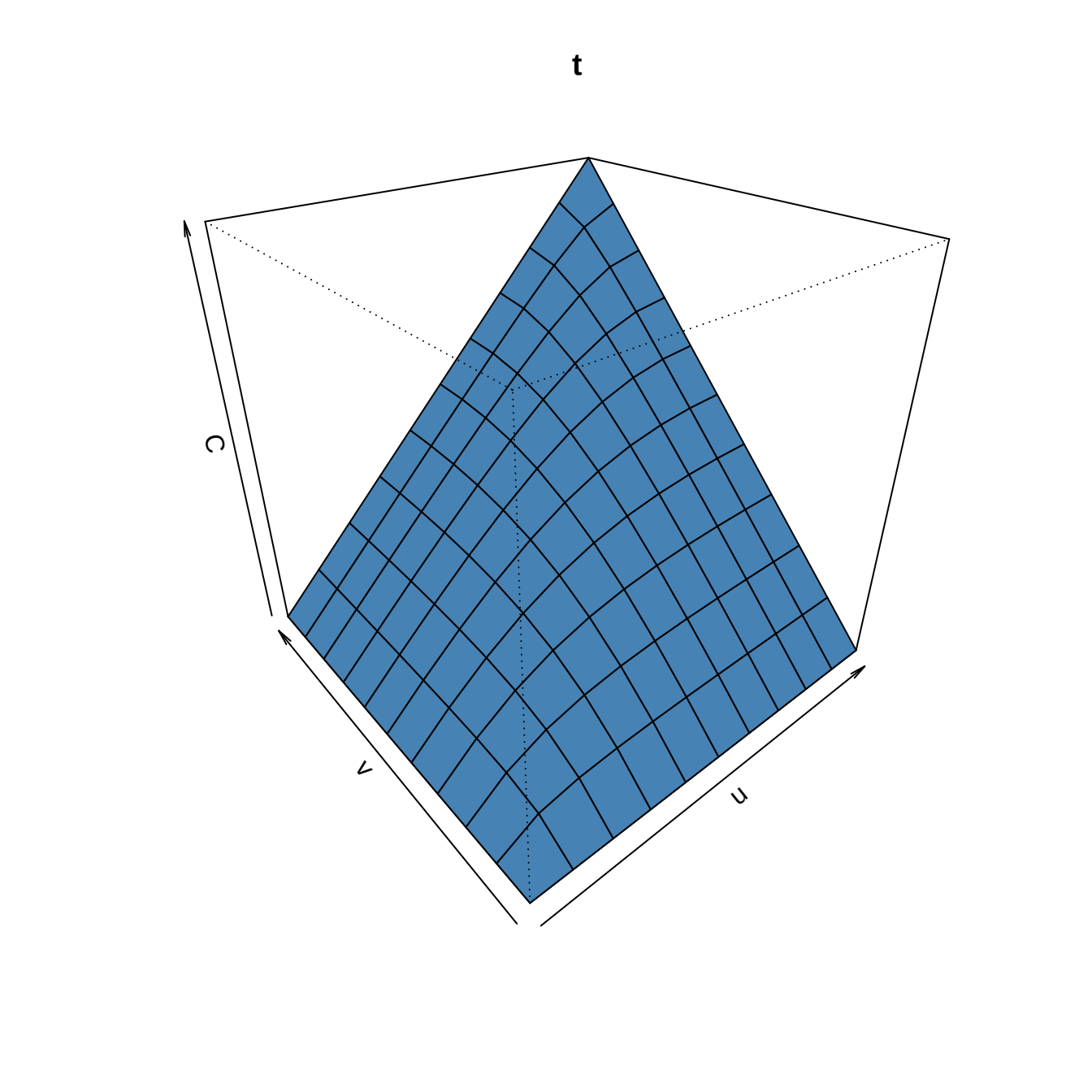

epower
c
v
u

norm

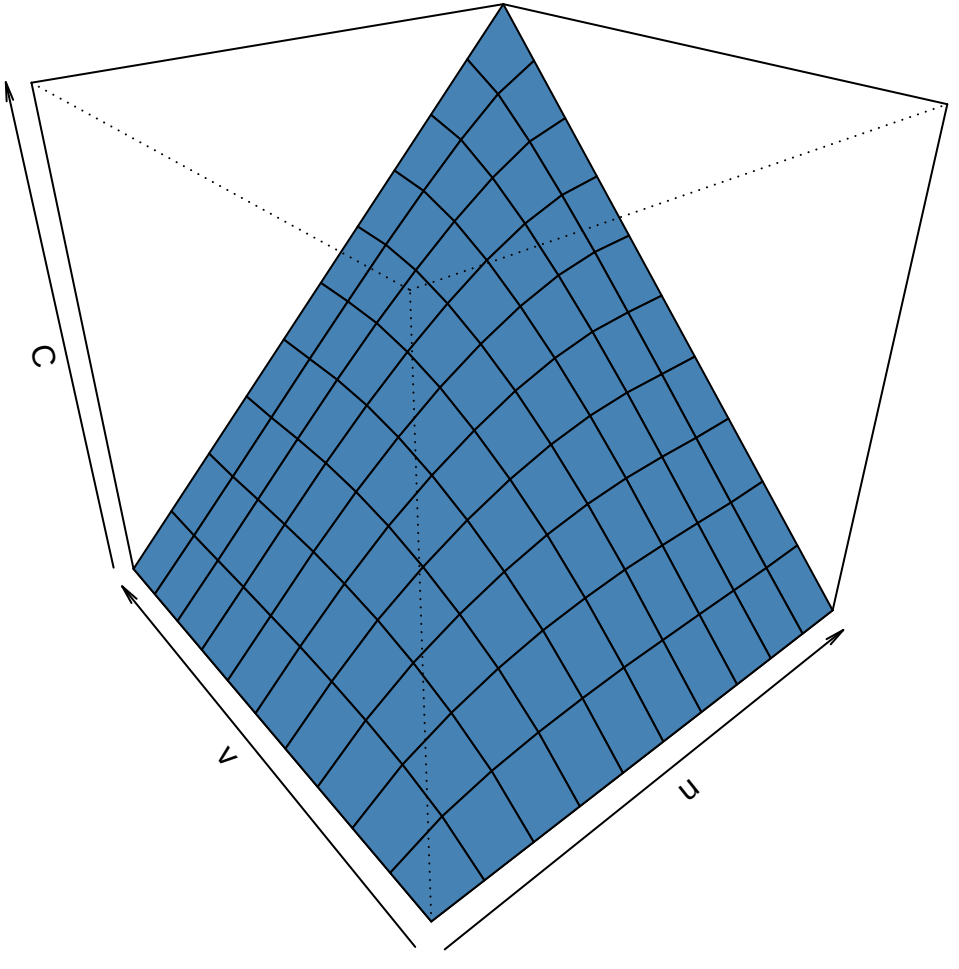


cauchy

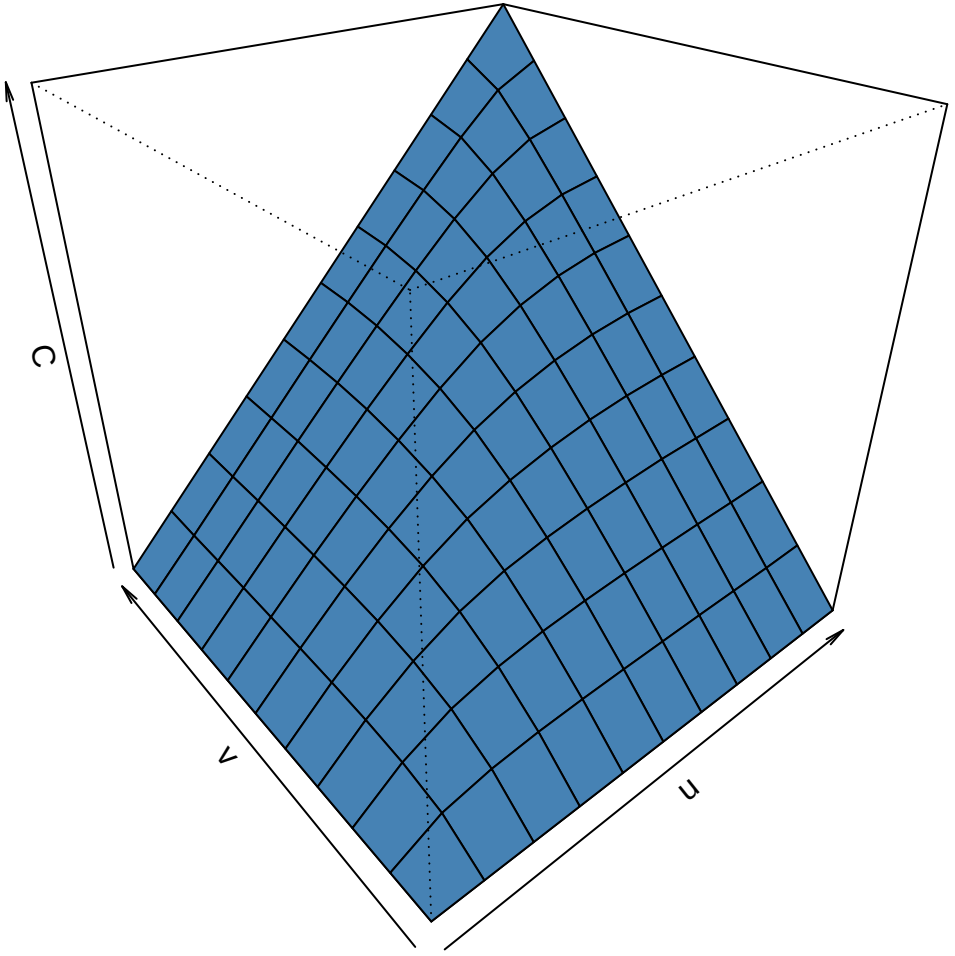


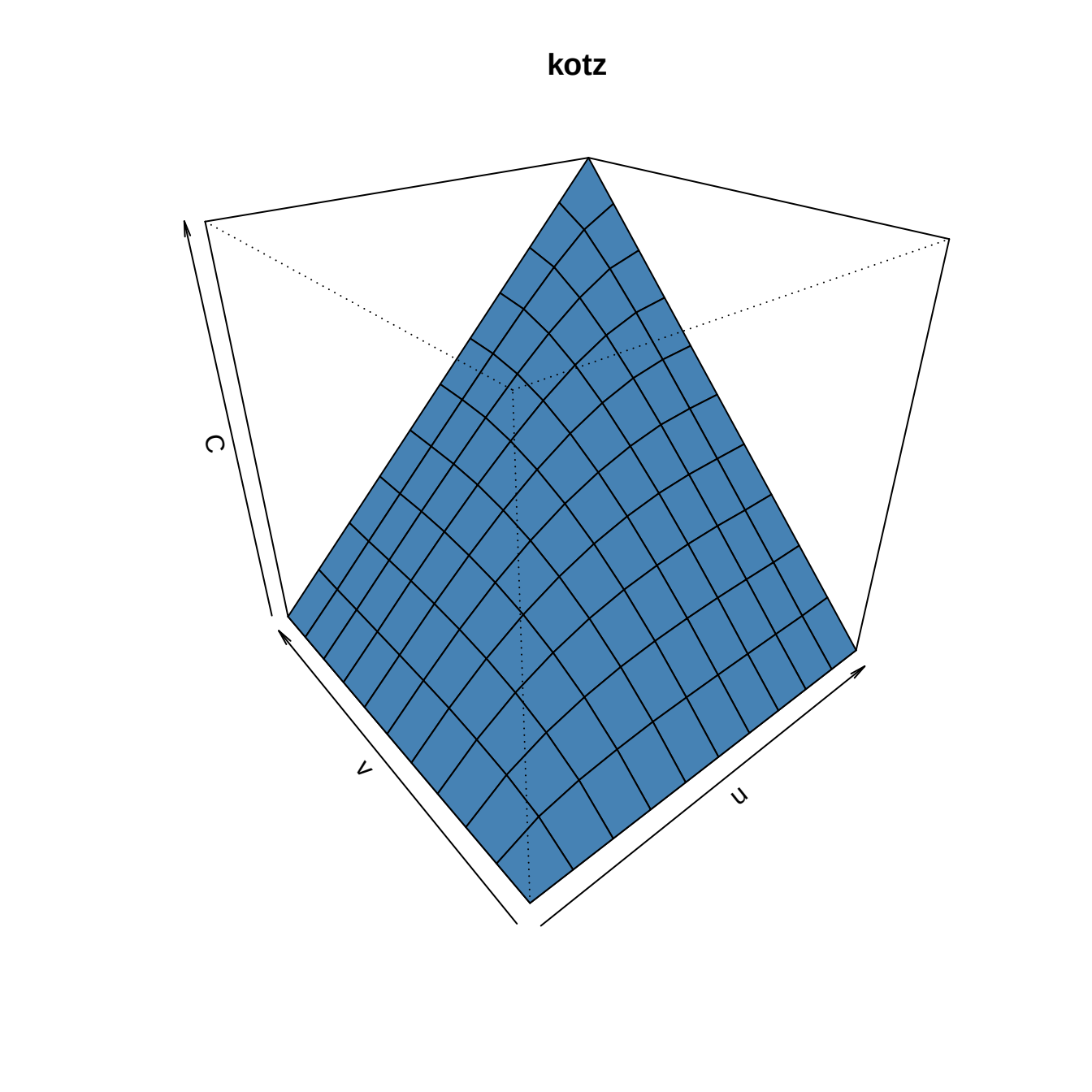

t
C
v
u

logistic

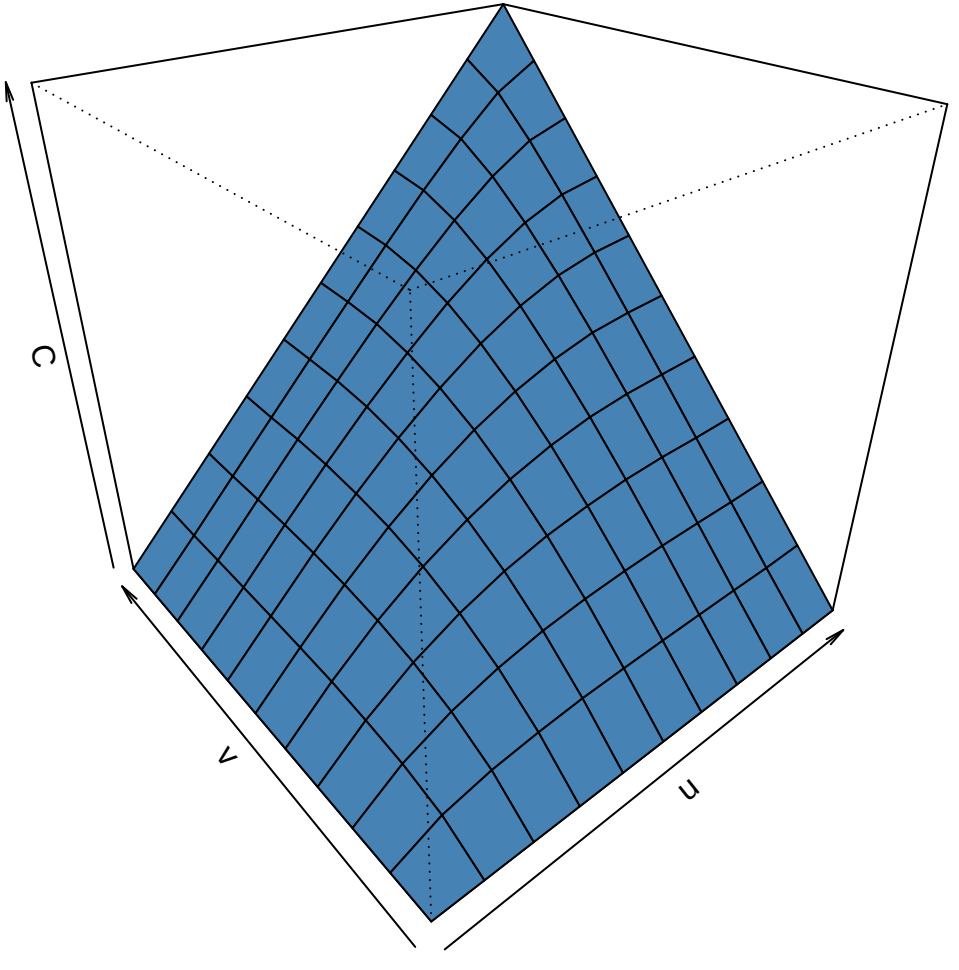


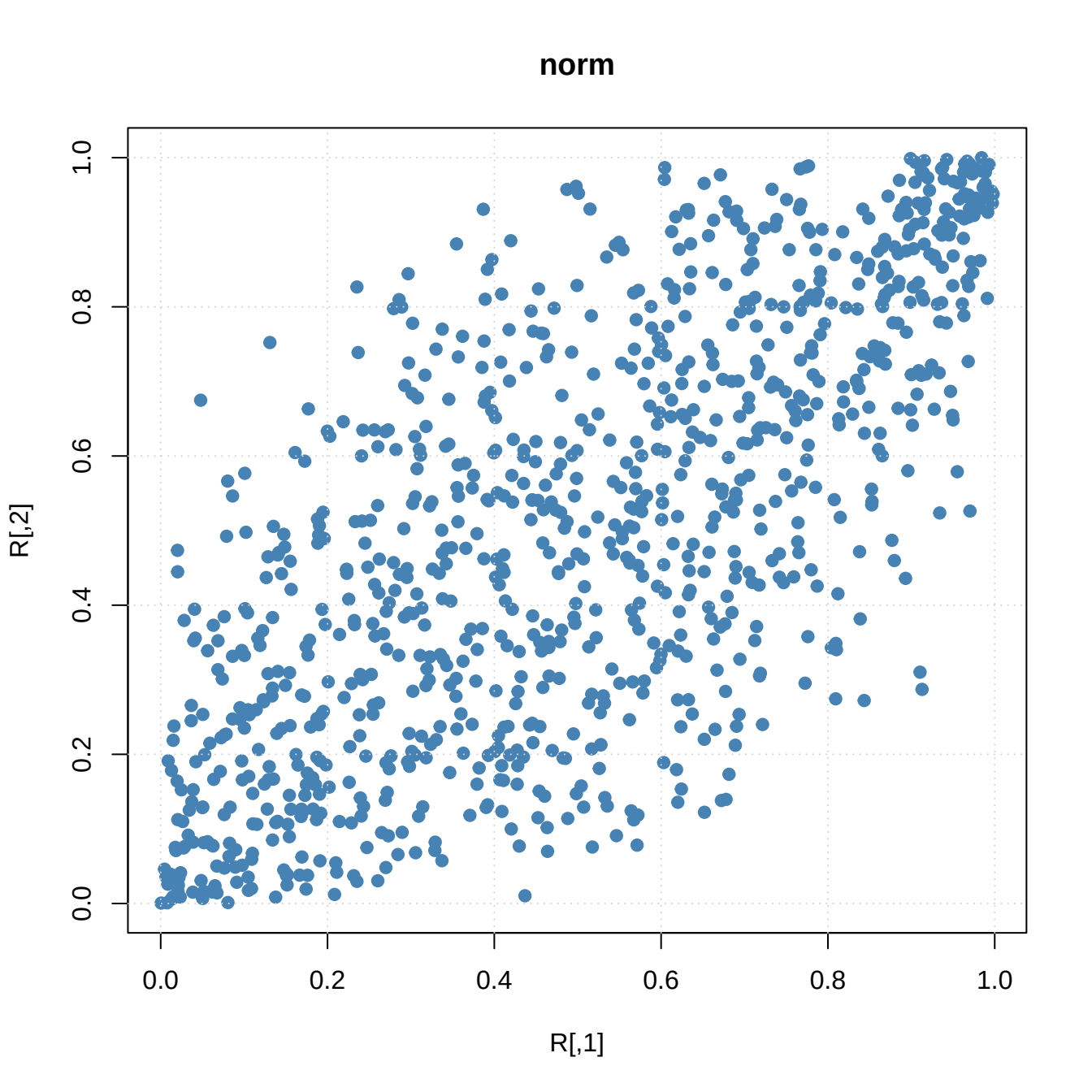
laplace

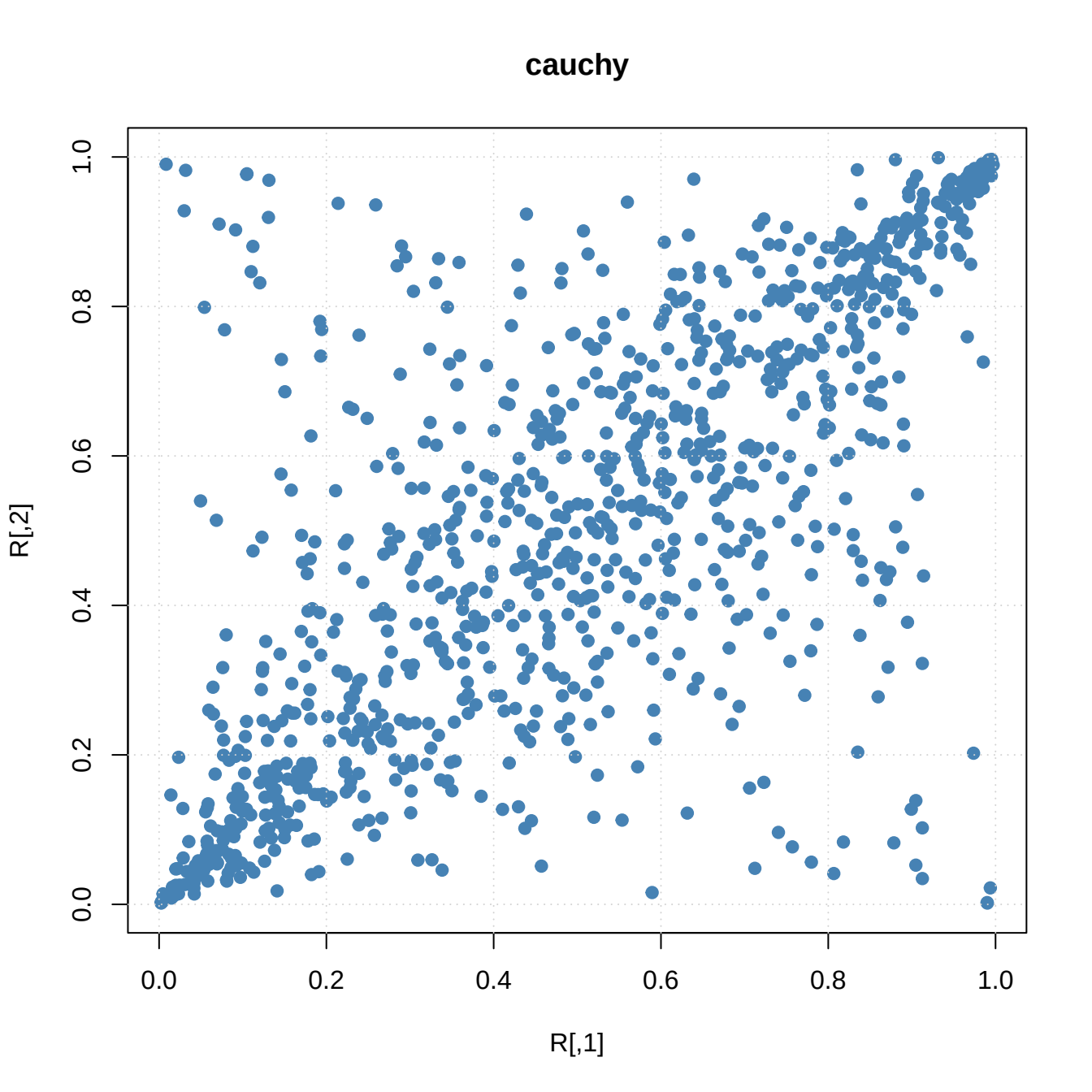


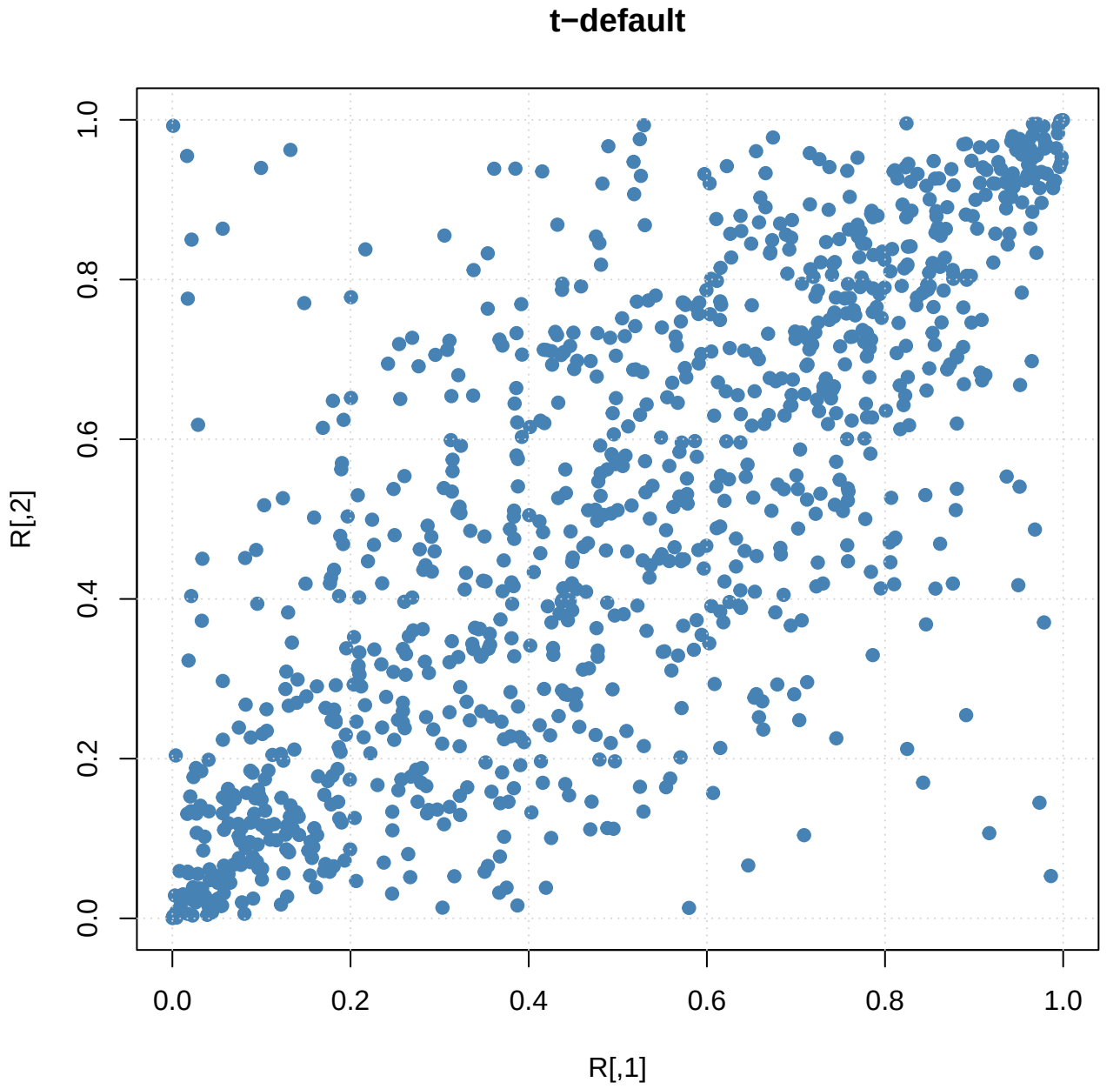

kotz
C
v
u

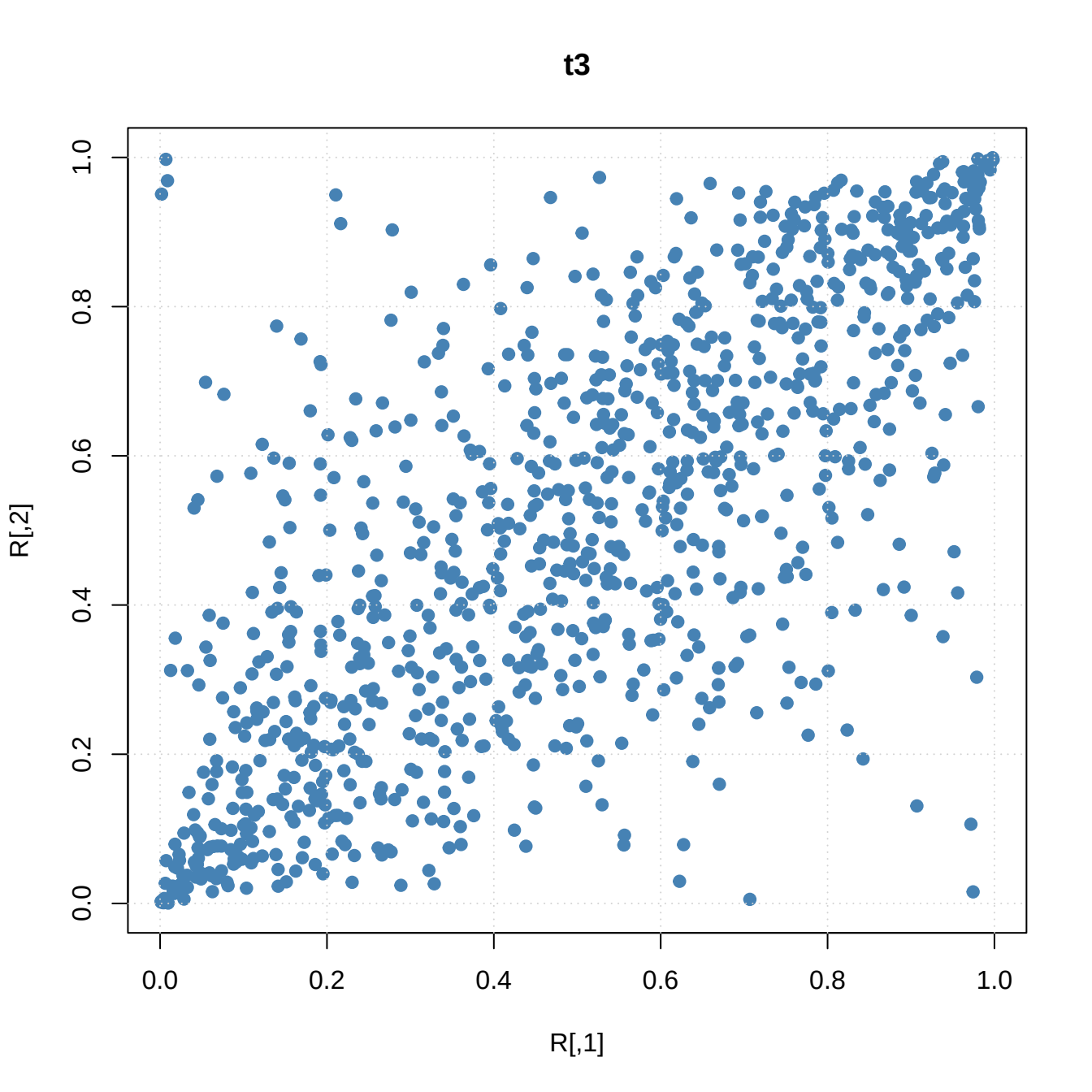
epower

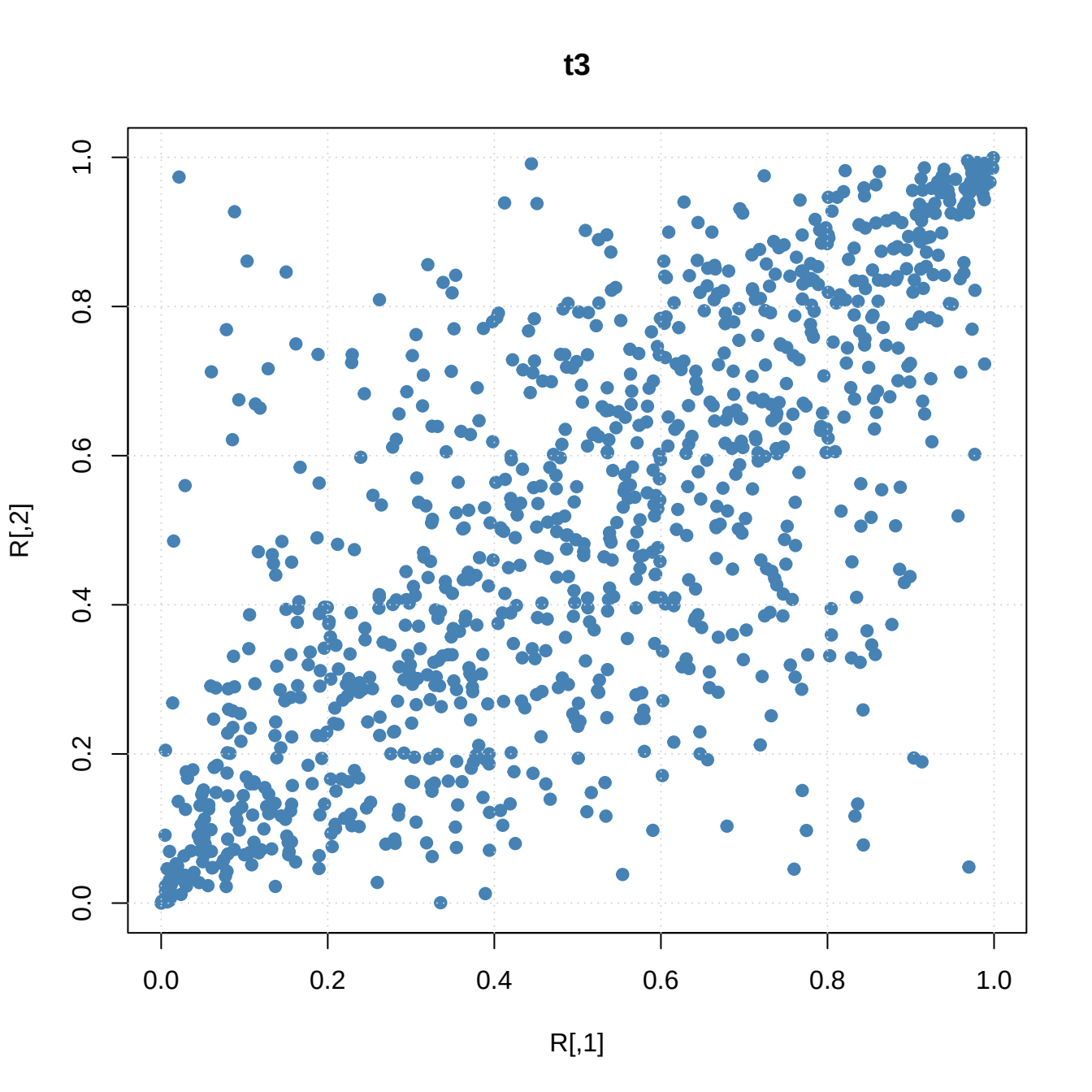


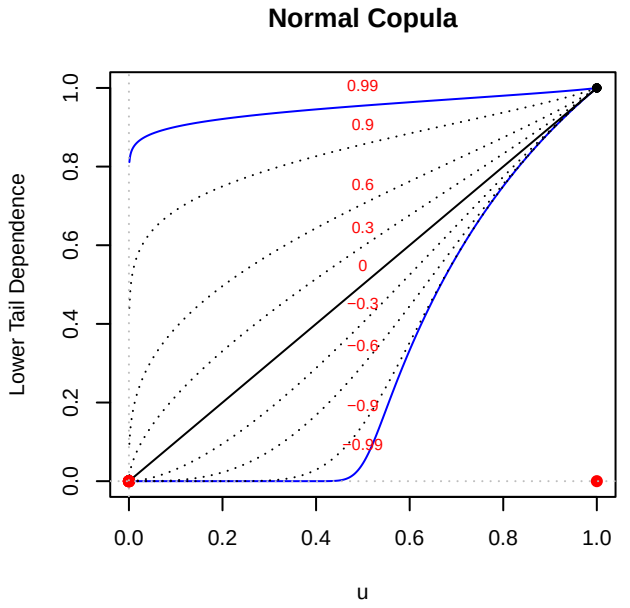

norm
R[,2]
R[,1]
0.0
0.2
0.4
0.6
0.8
1.0

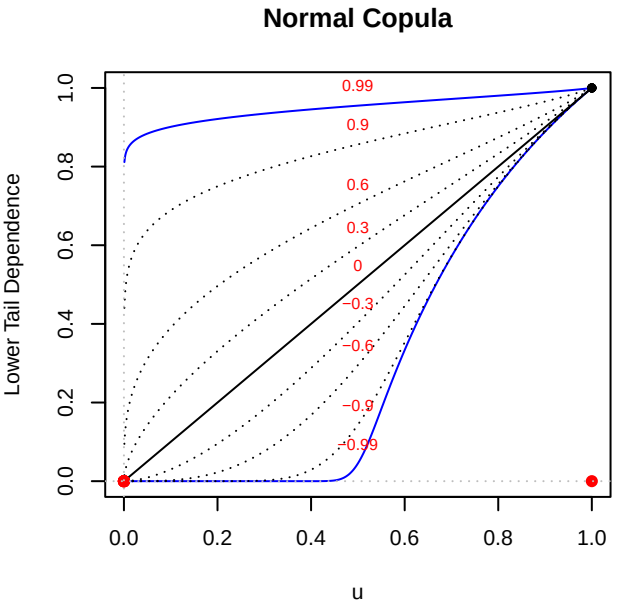

cauchy
R[,2]
R[,1]
0.0
0.2
0.4
0.6
0.8
1.0

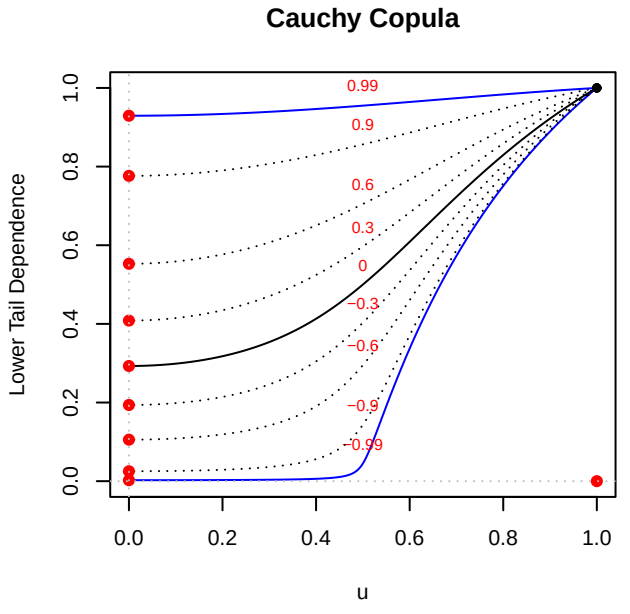

t−default
R[,2]
R[,1]
0.0
0.2
0.4
0.6
0.8
1.0

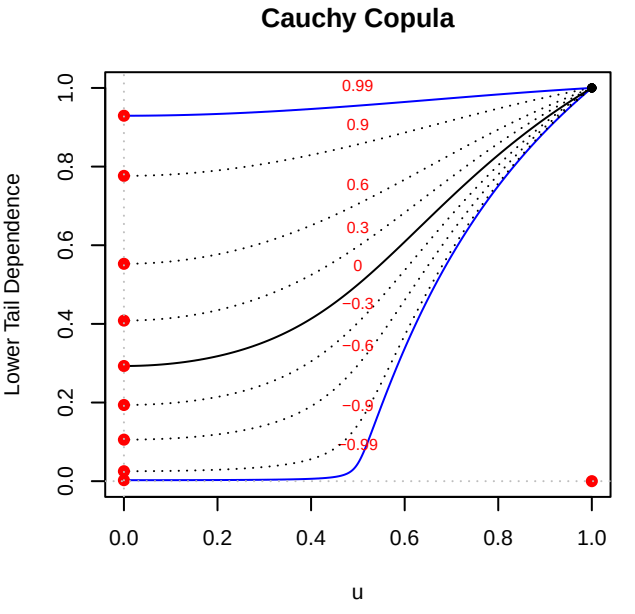

t3
R[,2]
R[,1]
0.0
0.2
0.4
0.6
0.8
1.0

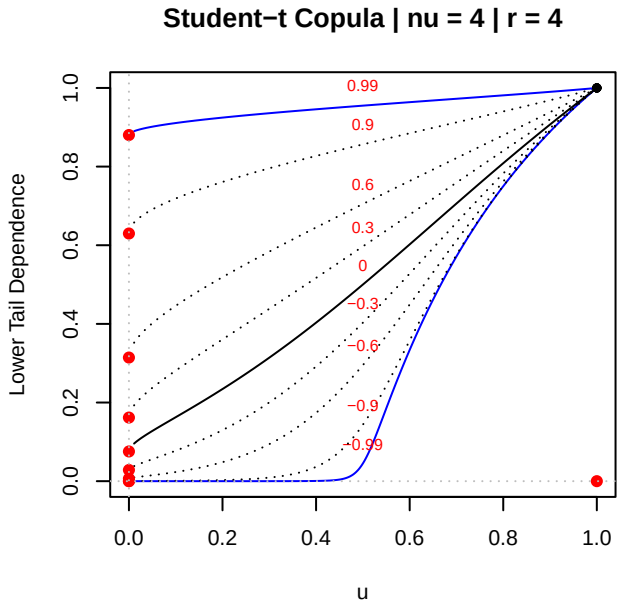

t3
R[,2]
R[,1]
0.0
0.2
0.4
0.6
0.8
1.0

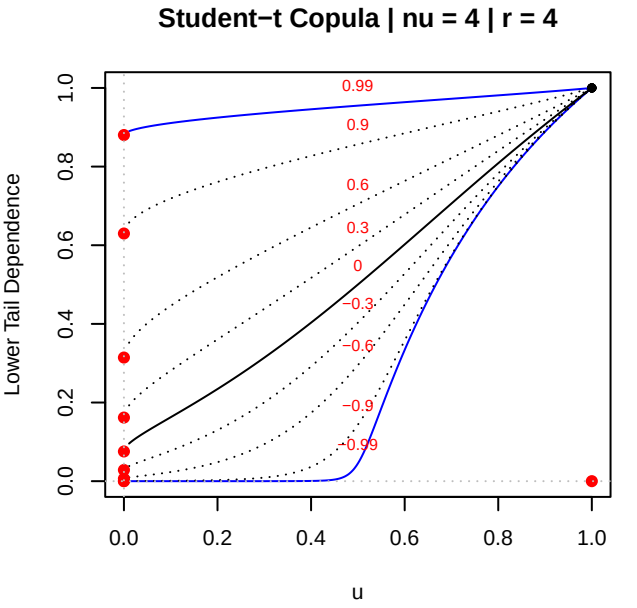

Normal Copula
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
0.99
0.9
0.6
0.3
0
−0.3
−0.6
−0.9
−0.99

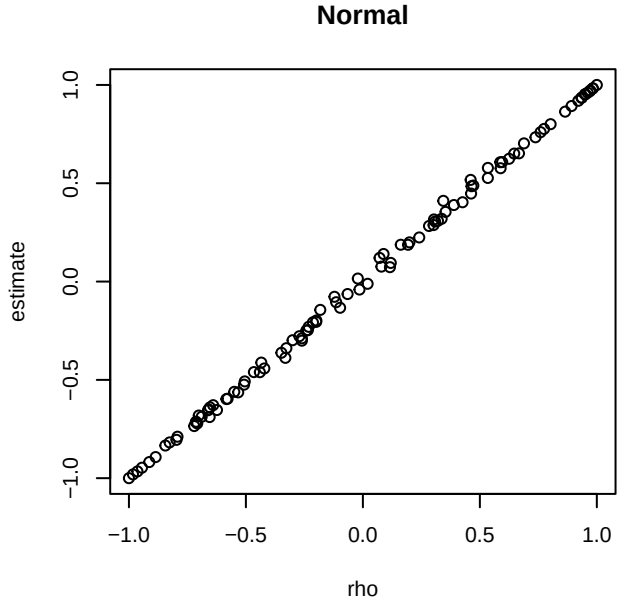

Normal Copula
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
0.99
0.9
0.6
0.3
0
−0.3
−0.6
−0.9
−0.99

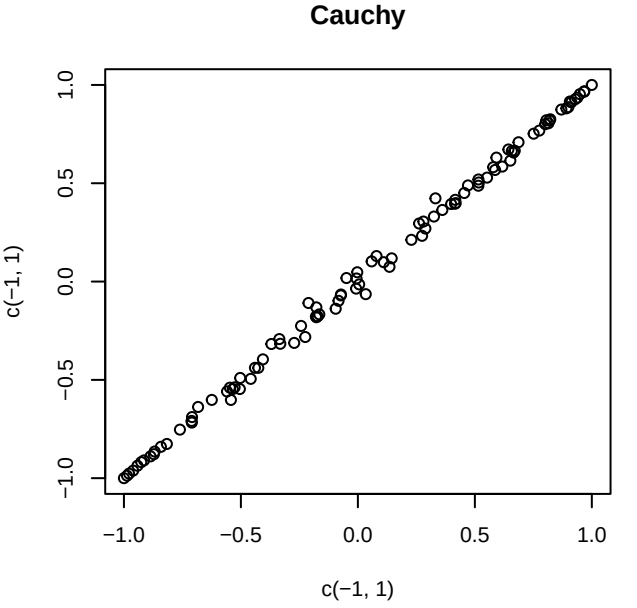

Cauchy Copula
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
0.99
0.9
0.6
0.3
0
−0.3
−0.6
−0.9
−0.99

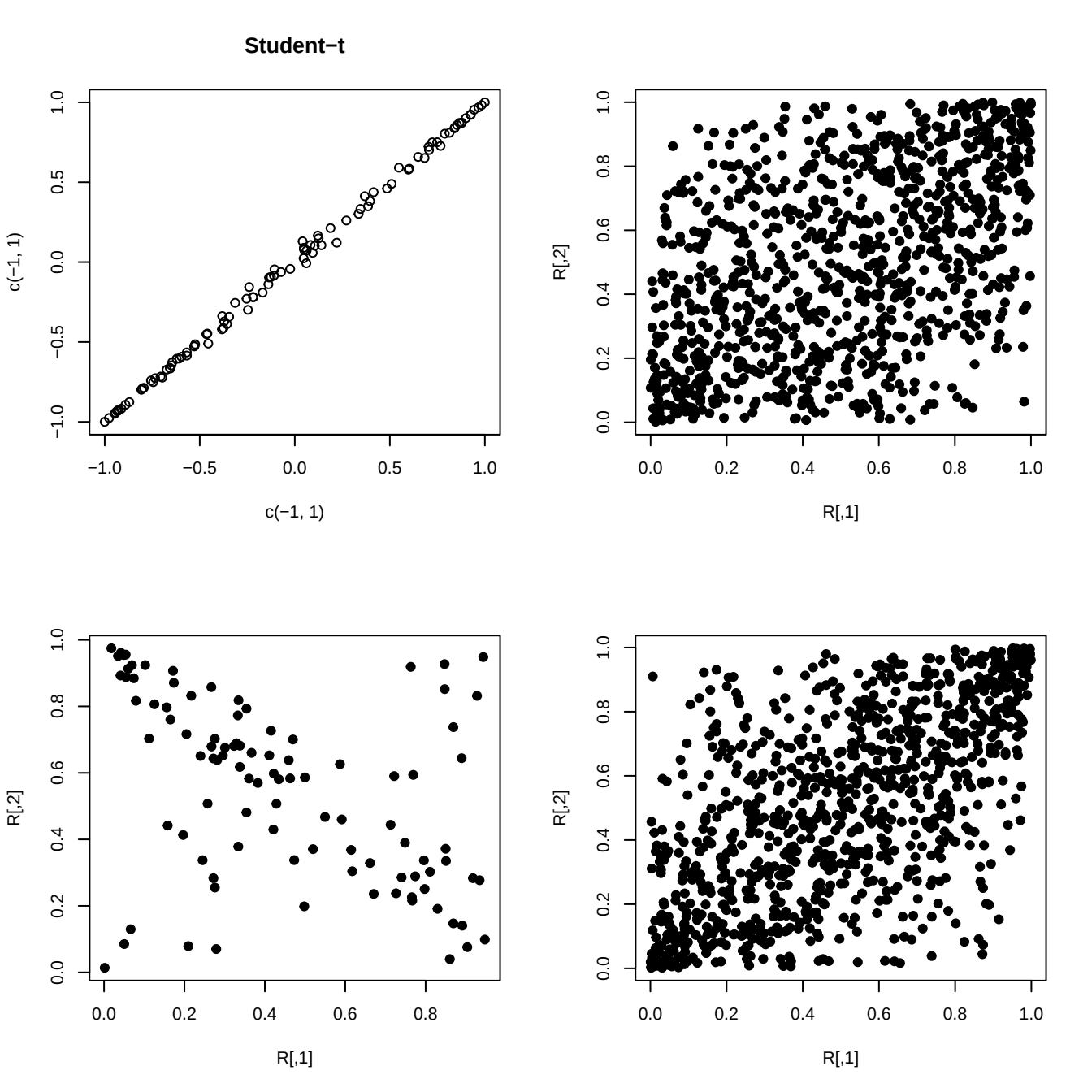

Cauchy Copula
Lower Tail Dependence
u
0.0
0.2
0.4
0.6
0.8
1.0
0.99
0.9
0.6
0.3
0
−0.3
−0.6
−0.9
−0.99

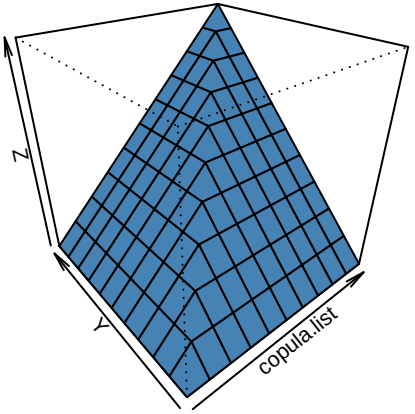

Student−t Copula | nu = 4 | r = 4
Lower Tail Dependence
u
0.99
0.9
0.6
0.3
0
−0.3
−0.6
−0.9
−0.99
0.0
0.2
0.4
0.6
0.8
1.0

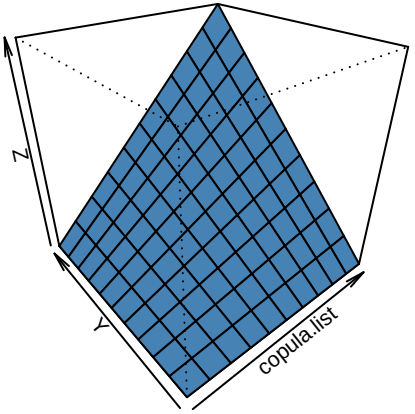

Student−t Copula | nu = 4 | r = 4
Lower Tail Dependence
u
0.99
0.9
0.6
0.3
0
−0.3
−0.6
−0.9
−0.99
0.0
0.2
0.4
0.6
0.8
1.0

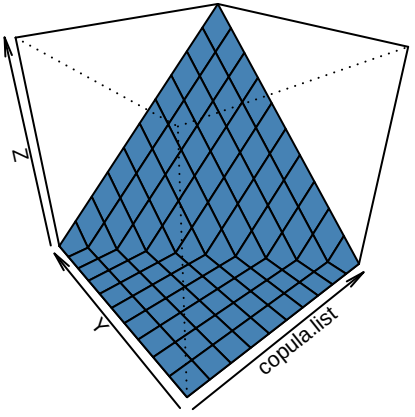

Normal
estimate
rho
−1.0
−0.5
0.0
0.5
1.0


Cauchy
c(−1, 1)
c(−1, 1)
−1.0
−0.5
0.0
0.5
1.0


Student−t
c(−1, 1)
c(−1, 1)
−1.0
−0.5
0.0
0.5
1.0
R[,2]
R[,1]
0.0
0.2
0.4
0.6
0.8
1.0


Z
Y
copula.list


Z
Y
copula.list


Z
Y
copula.list