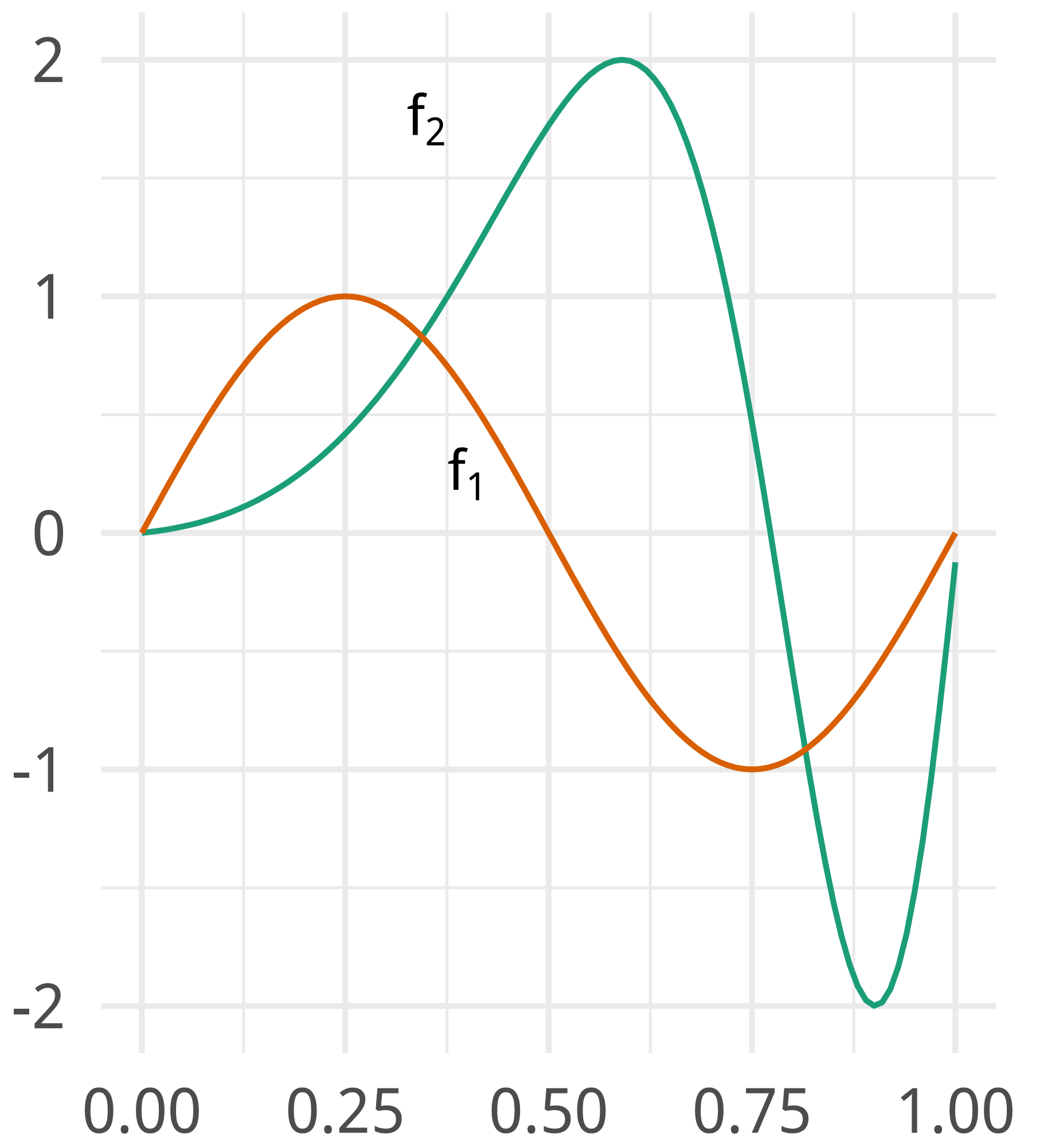
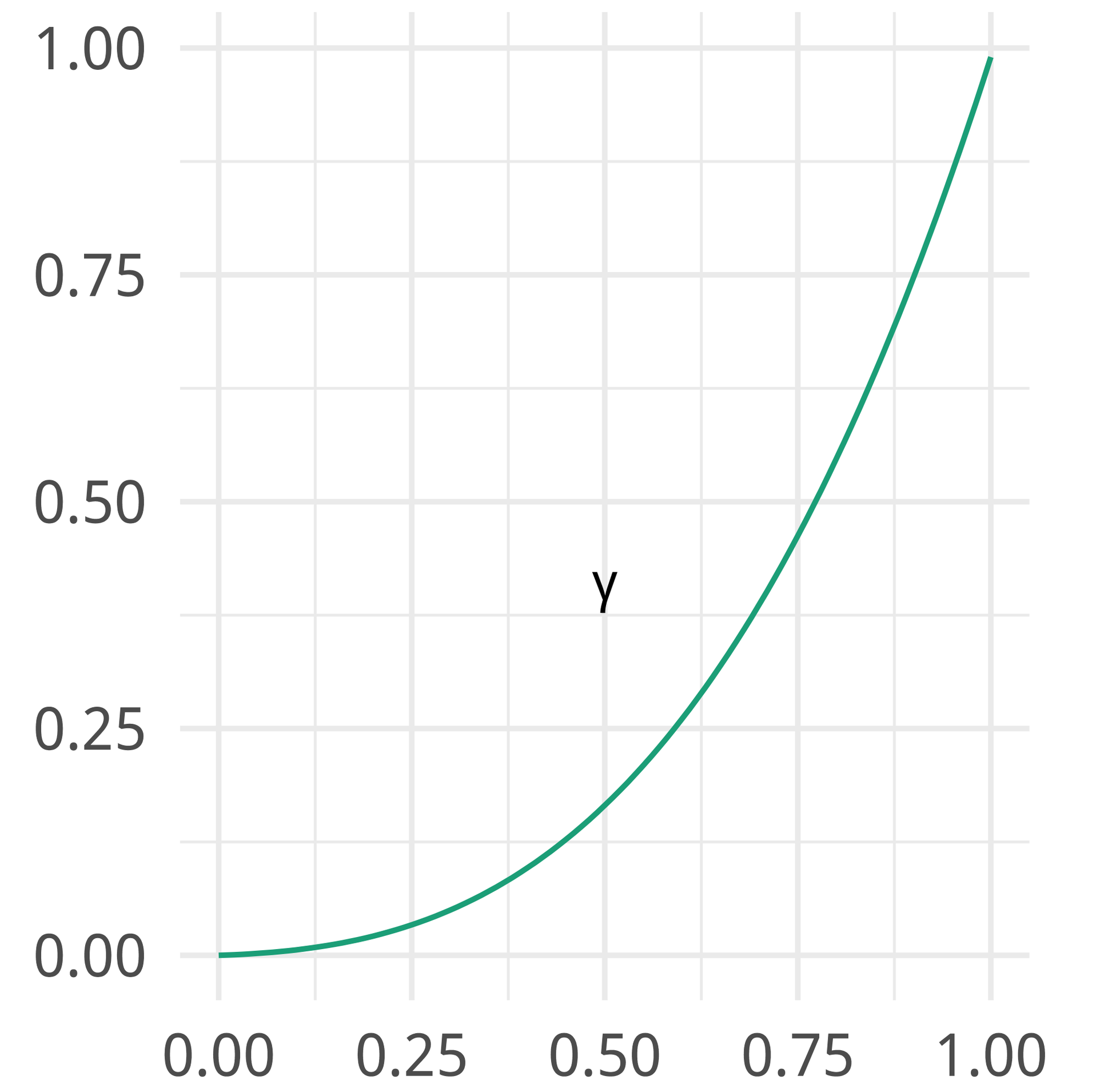
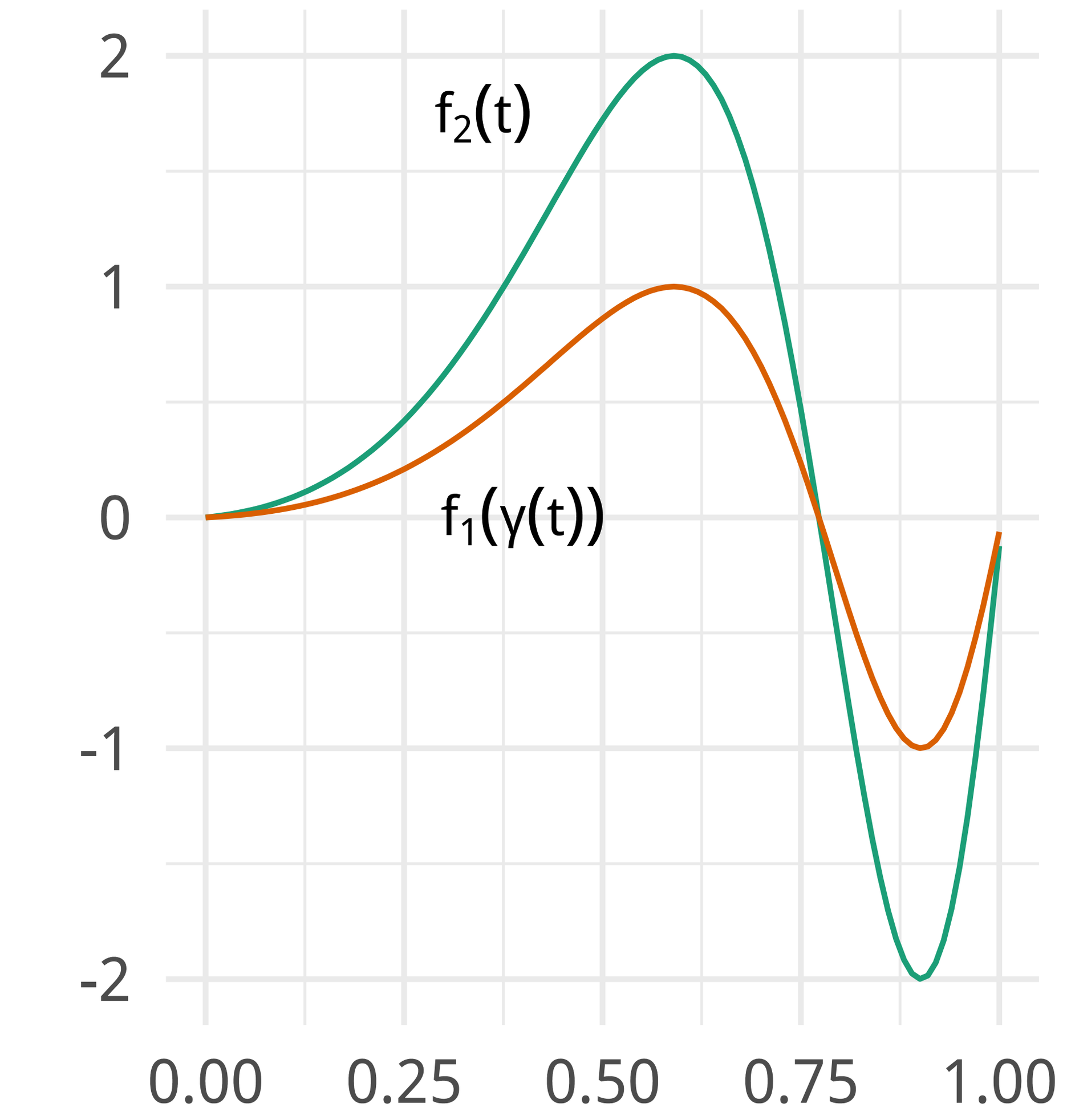
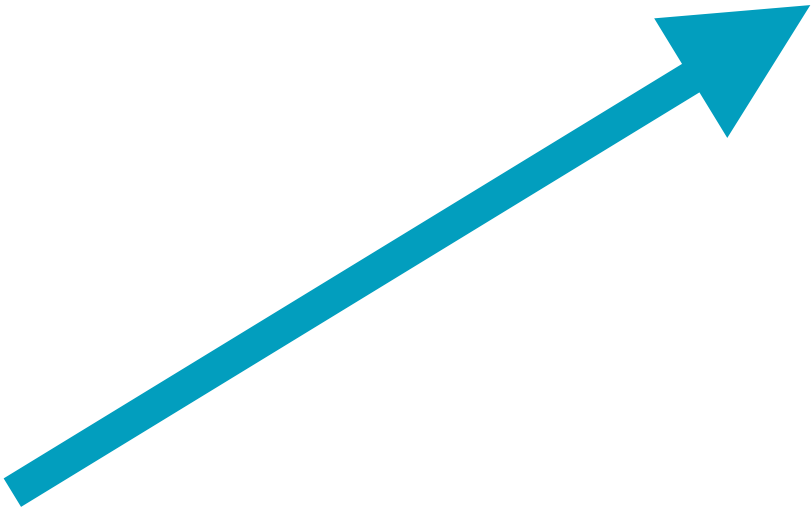
Components of Function Variability

5


2
1
0
-1
-2
f_2
f_1
0.00
0.25
0.50
0.75
1.00


1.00
0.75
0.50
0.25
0.00
y
0.00
0.25
0.50
0.75
1.00

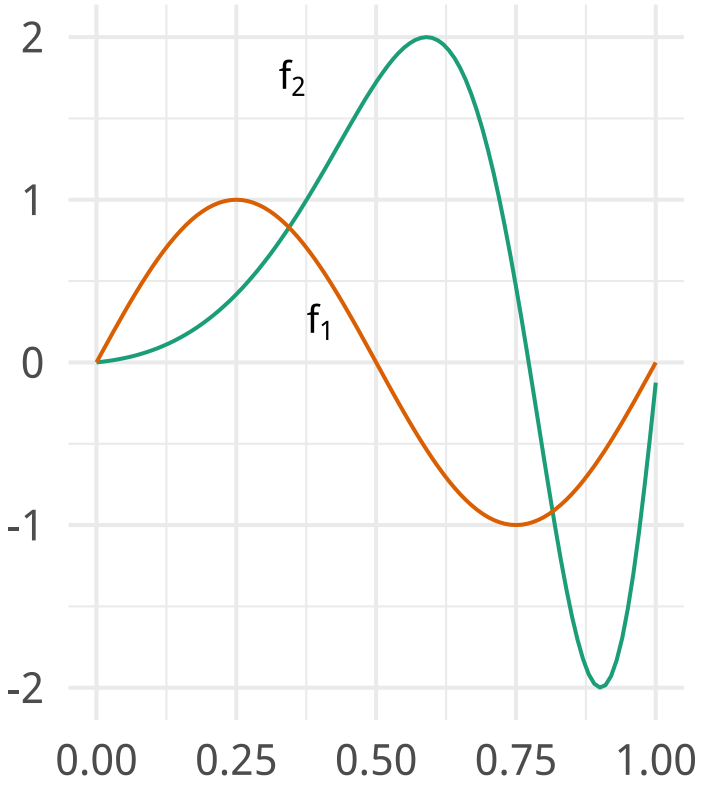

2
1
0
-1
-2
$f_2(t)$
$f_1(y(t))$
0.00
0.25
0.50
0.75
1.00



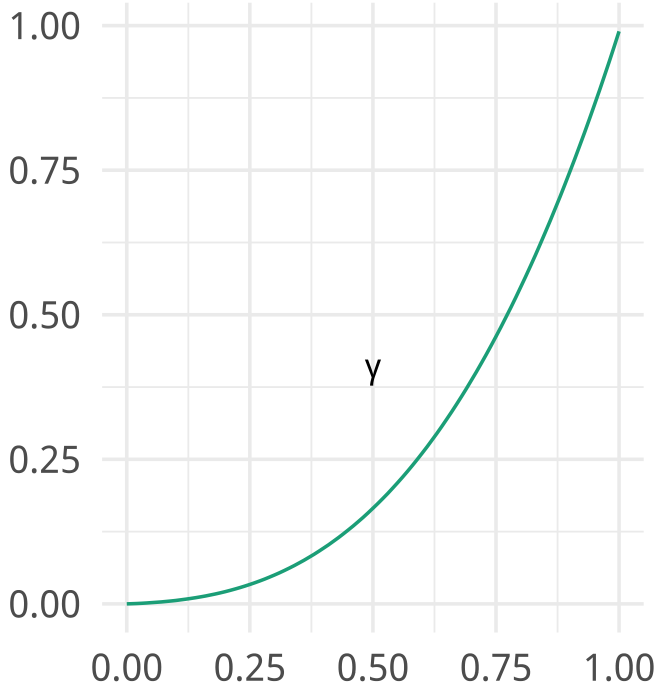
Aligned Functions: "y-variability"

Warping Functions: "x-variability"

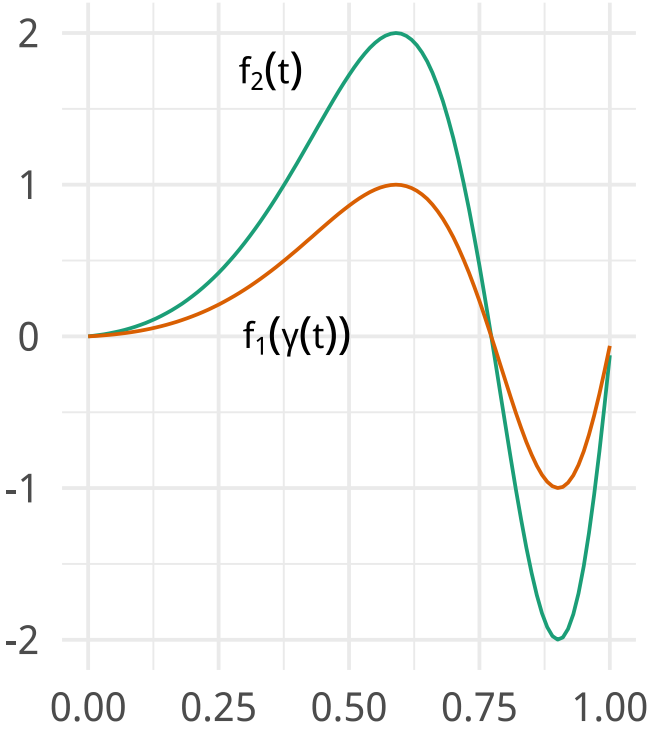
Components of Function Variability

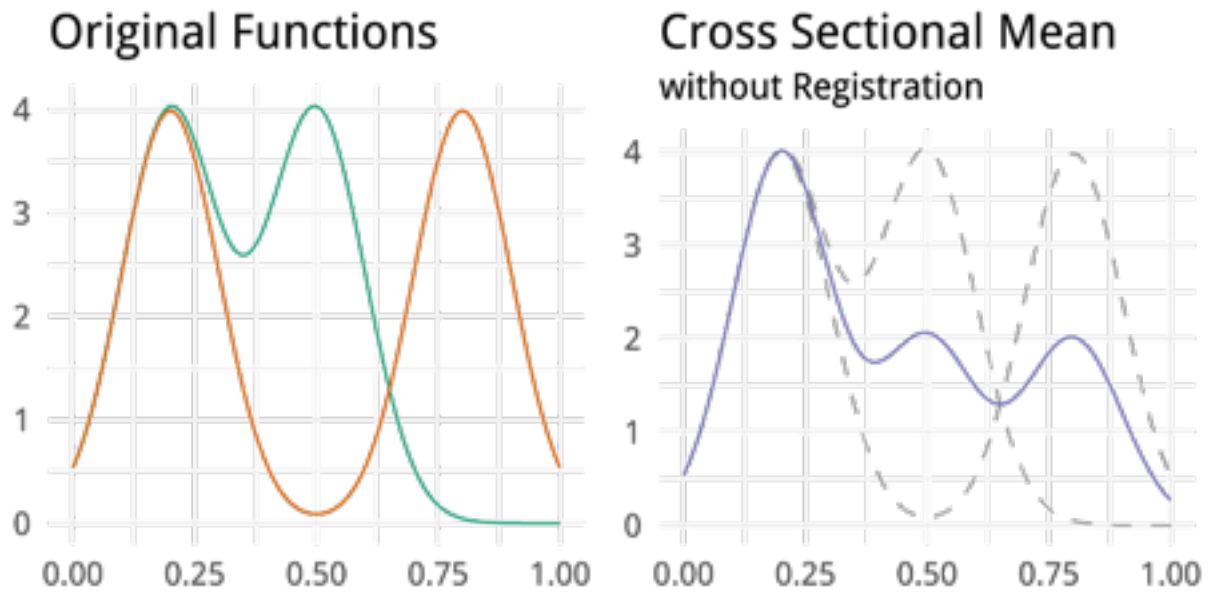


Warping Functions: "x-variability"



Aligned Functions: "y-variability"



CLASSICAL FDA: LOSS OF STRUCTURE

Cross-sectional statistics ignore horizontal component, often destroys structures