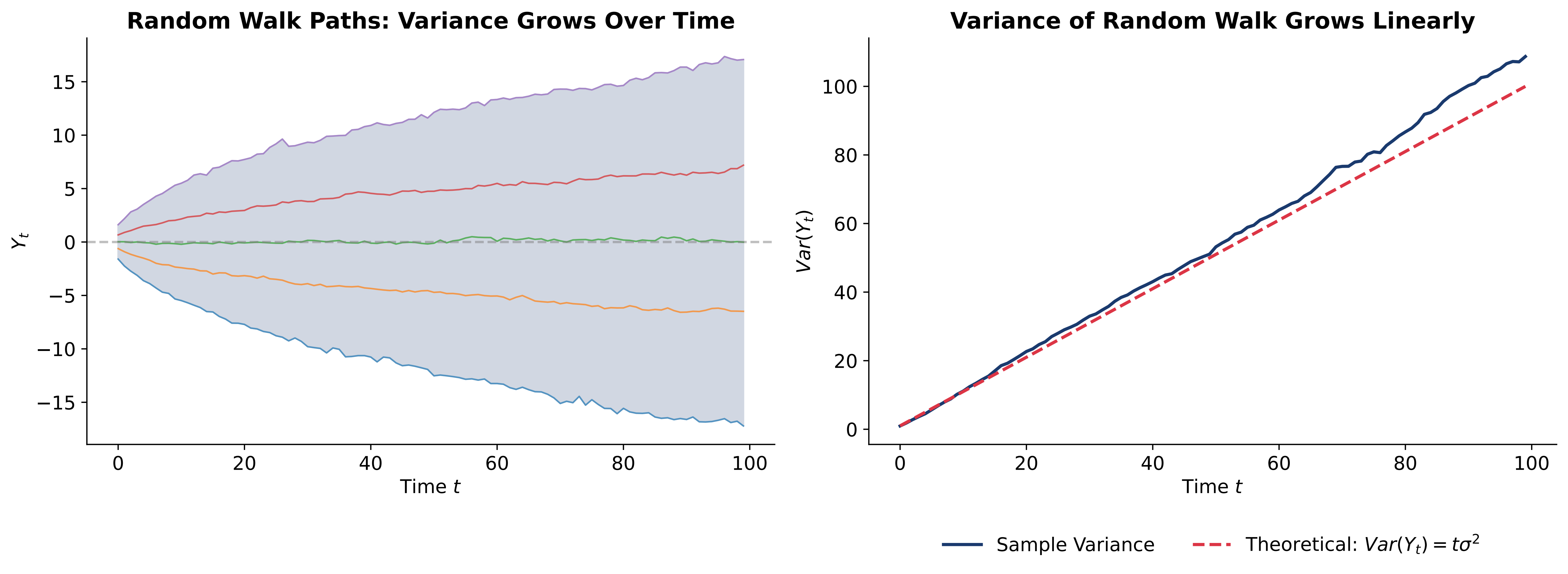

Random Walk Paths: Variance Grows Over Time
Y_t
15
10
5
0
−5
−10
−15
0
20
40
60
80
100
Time t
Variance of Random Walk Grows Linearly
$Var(Y_t)$
100
80
60
40
20
0
0
20
40
60
80
100
Time t
Sample Variance
Theoretical: $Var(Y_t) = t\sigma^2$