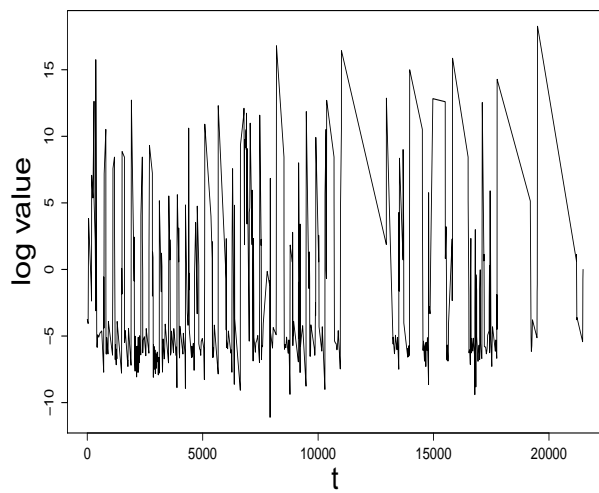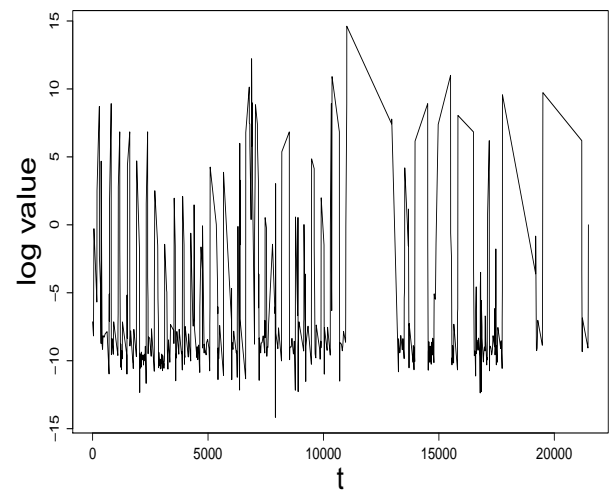**Log penalty function of original data on x**
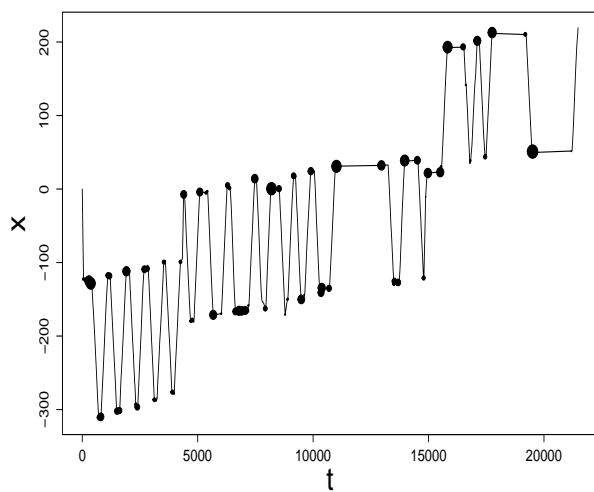
(a)

Log penalty function of original data on y
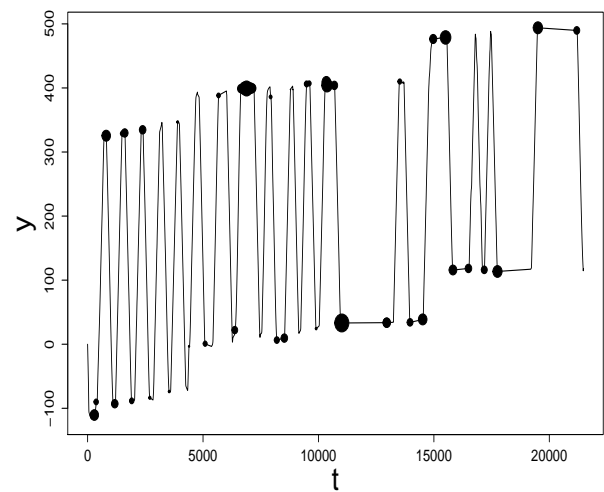
(b)

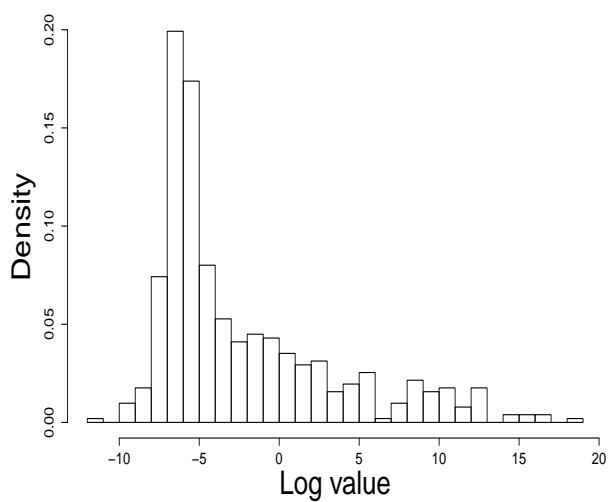**Reconstruction and log penalty function on x**
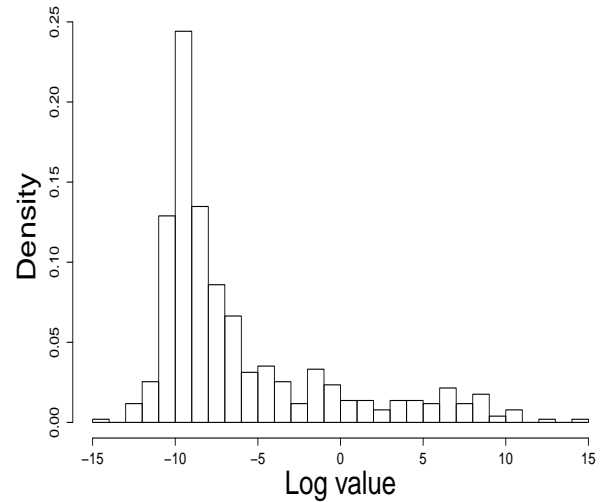
(c)

Reconstruction and log penalty function on y

(d)

Histogram of log penalty function of x

(e)

Histogram of log penalty function of y

(f)