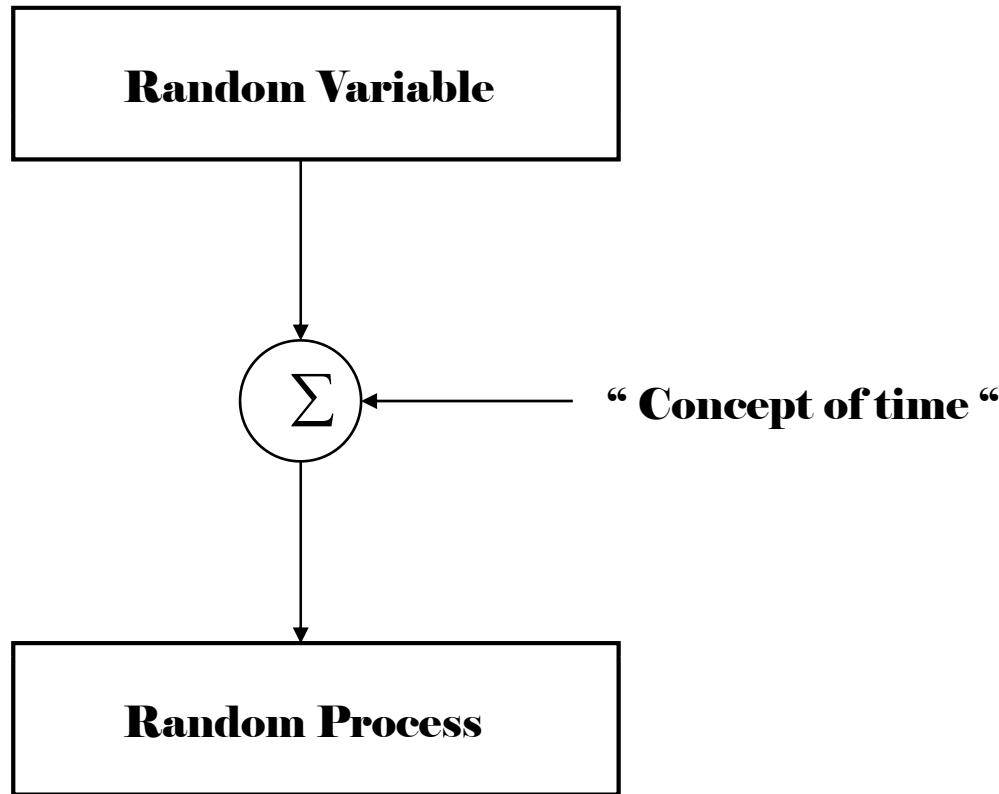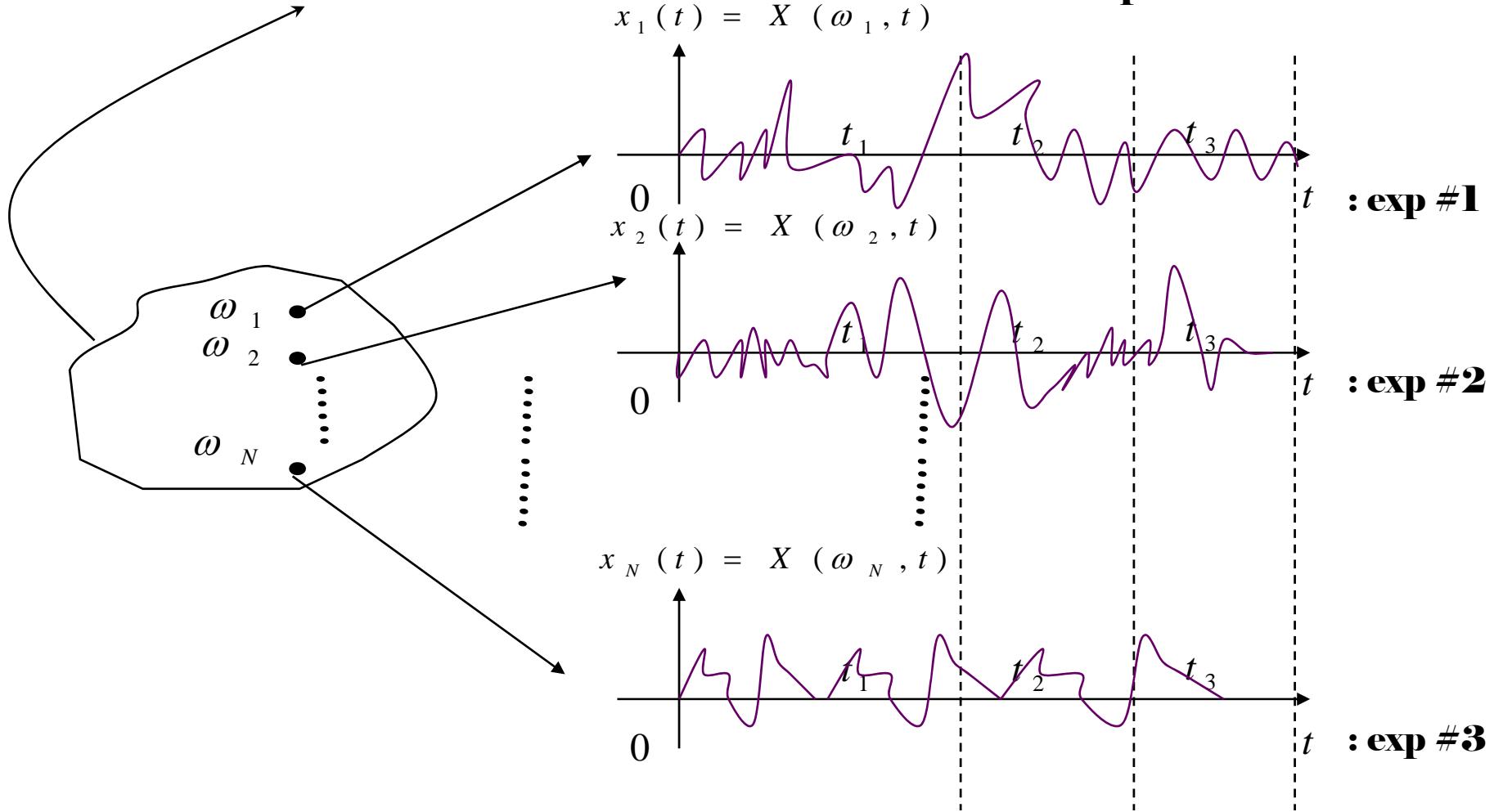**Figure** 7.1

Figure 7.2
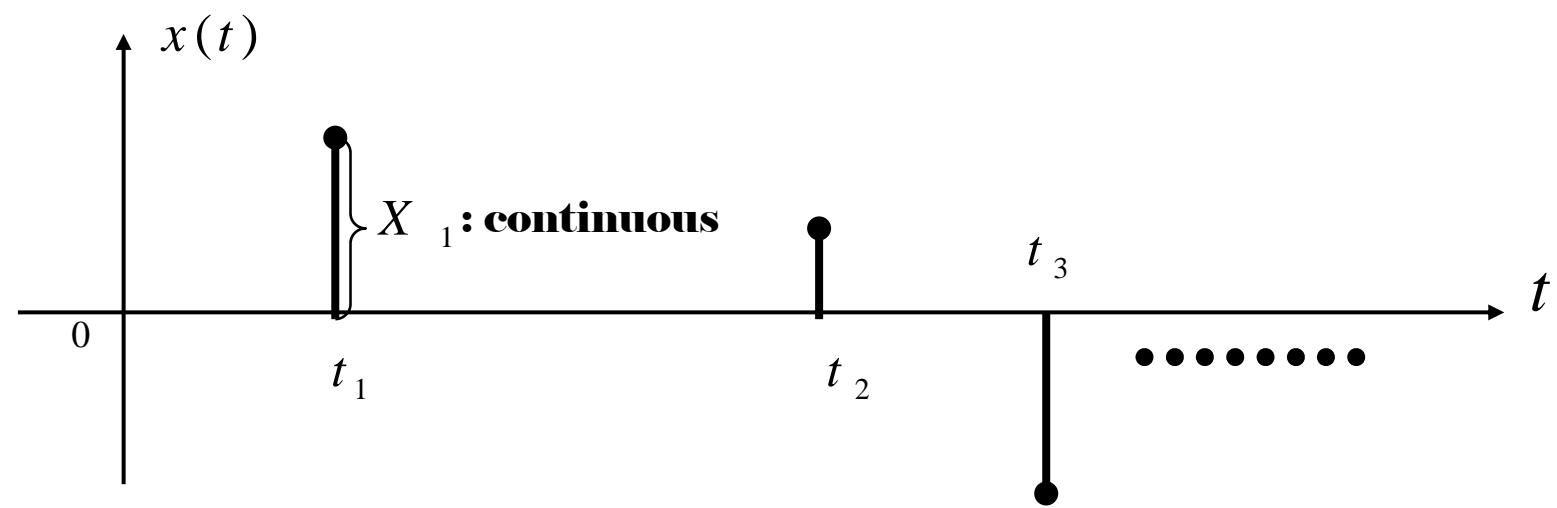
Whole family = Random Process $X(\omega, t)$

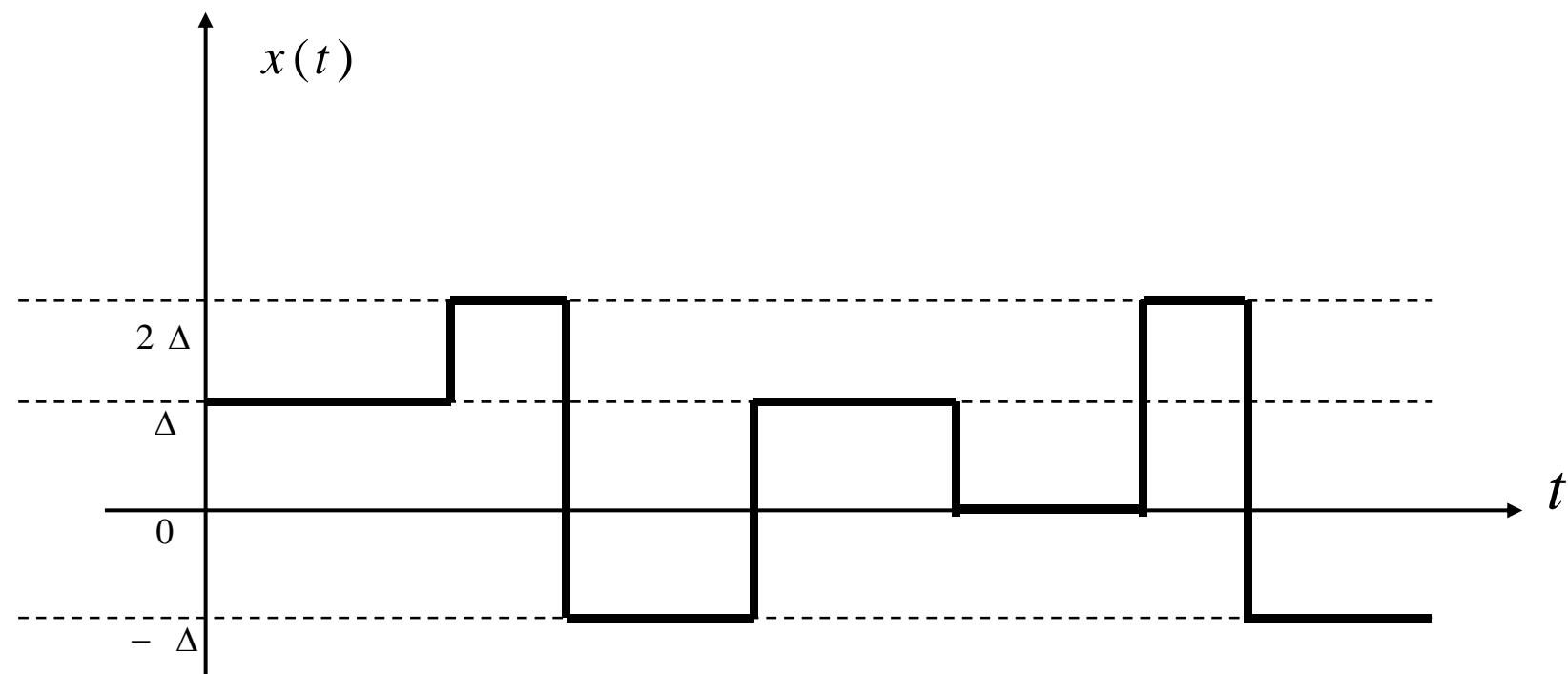" sample function "

$x_1(t) = X(\omega_1, t)$

t_1 t_2 t_3

0 t : exp #1

$x_2(t) = X(\omega_2, t)$

t_1 t_2 t_3

0 t : exp #2

ω_1
ω_2

ω_N

$x_N(t) = X(\omega_N, t)$
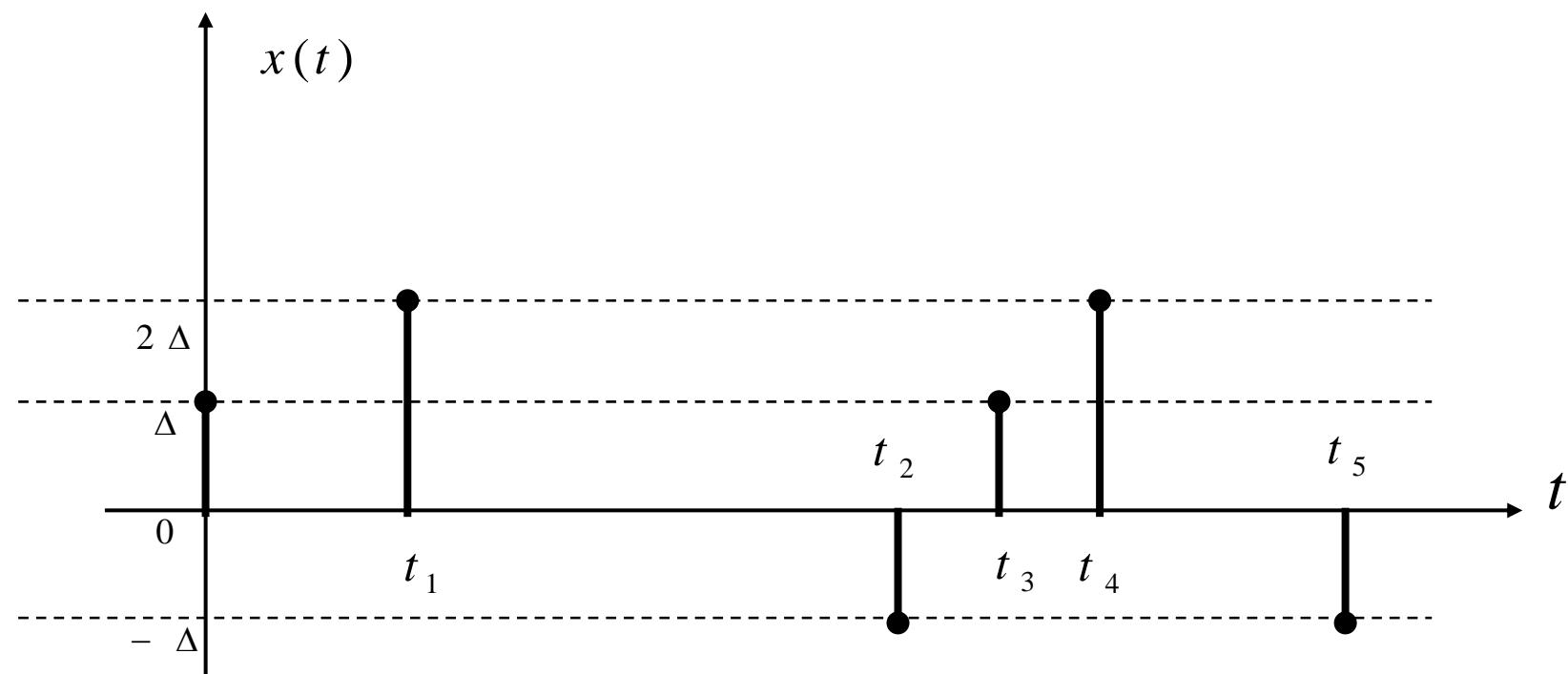
t_1 t_2 t_3
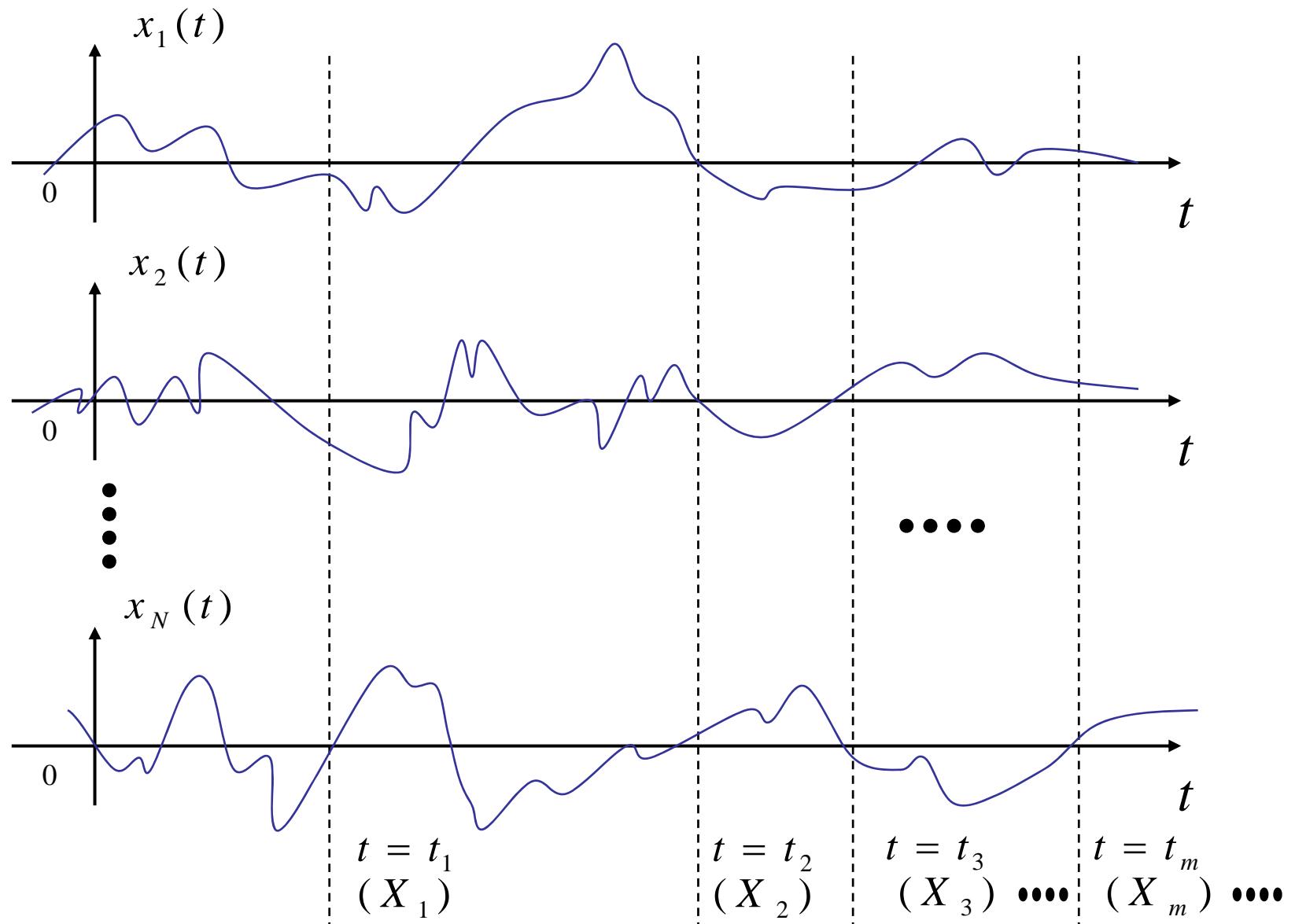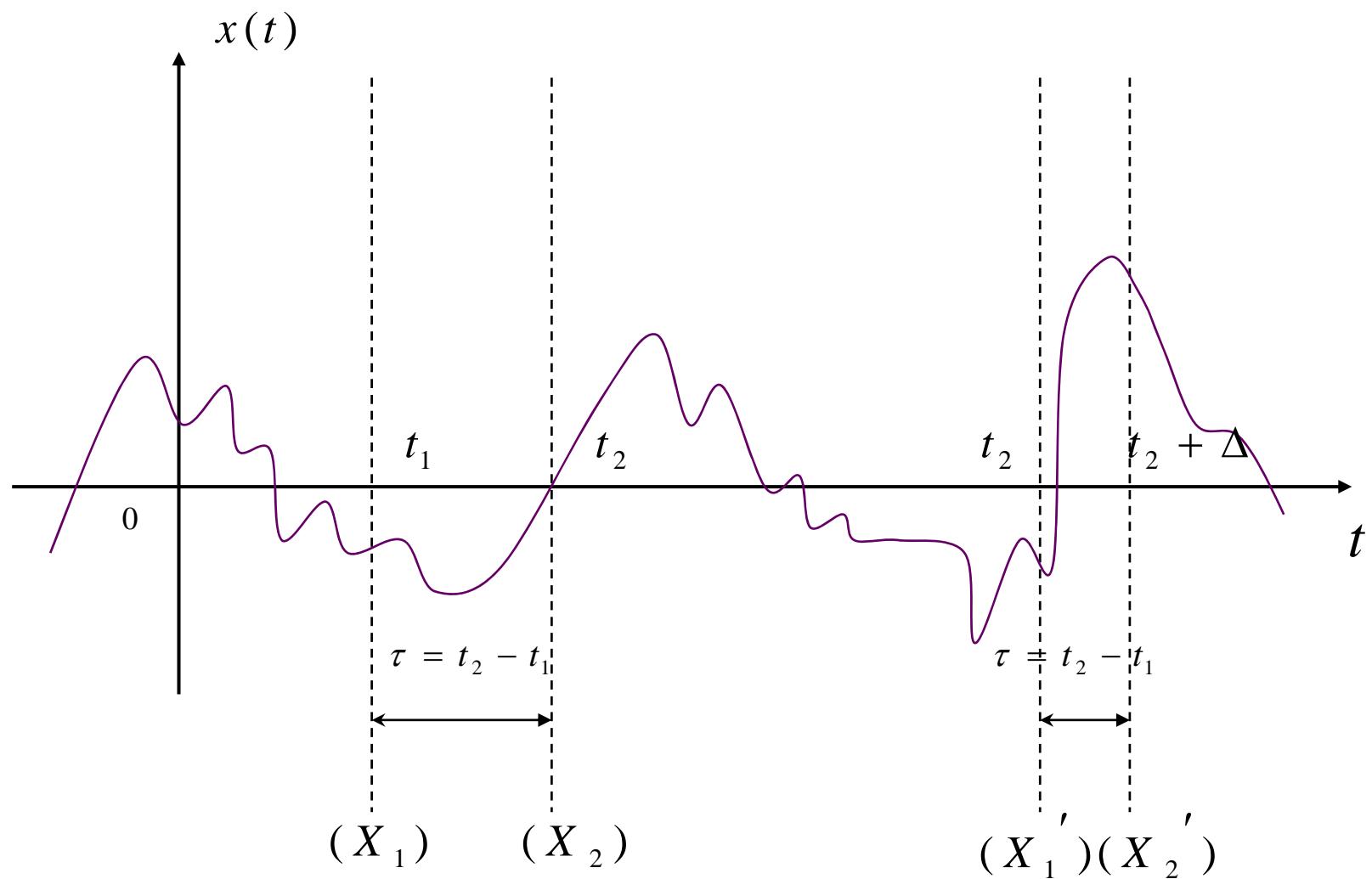
0 t : exp #3
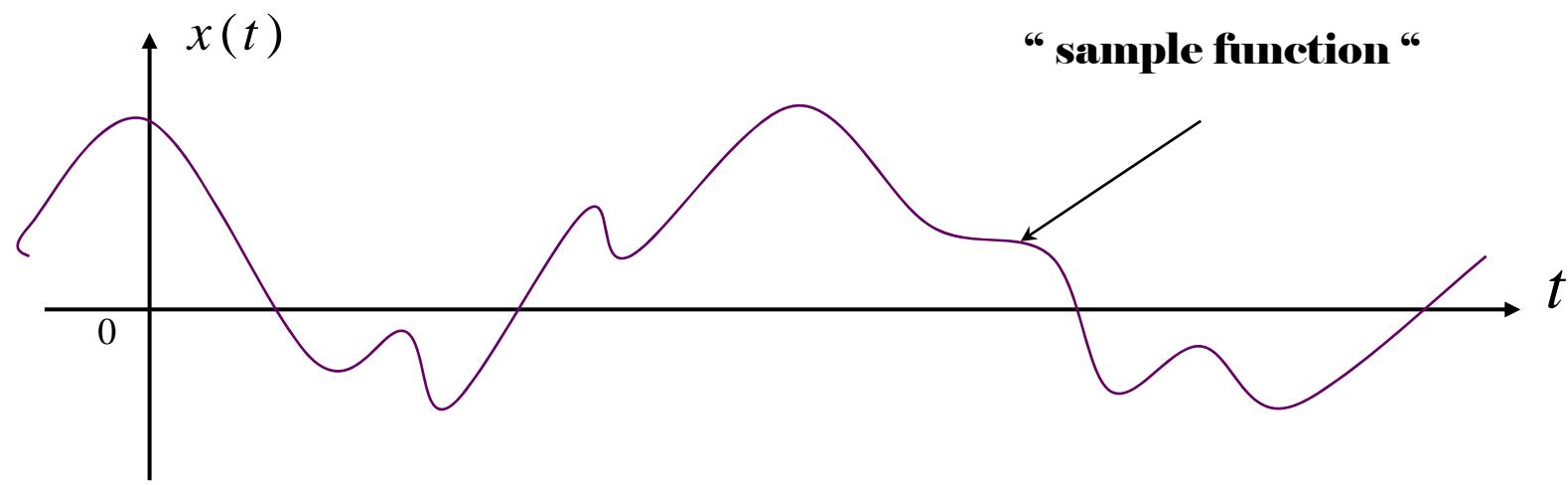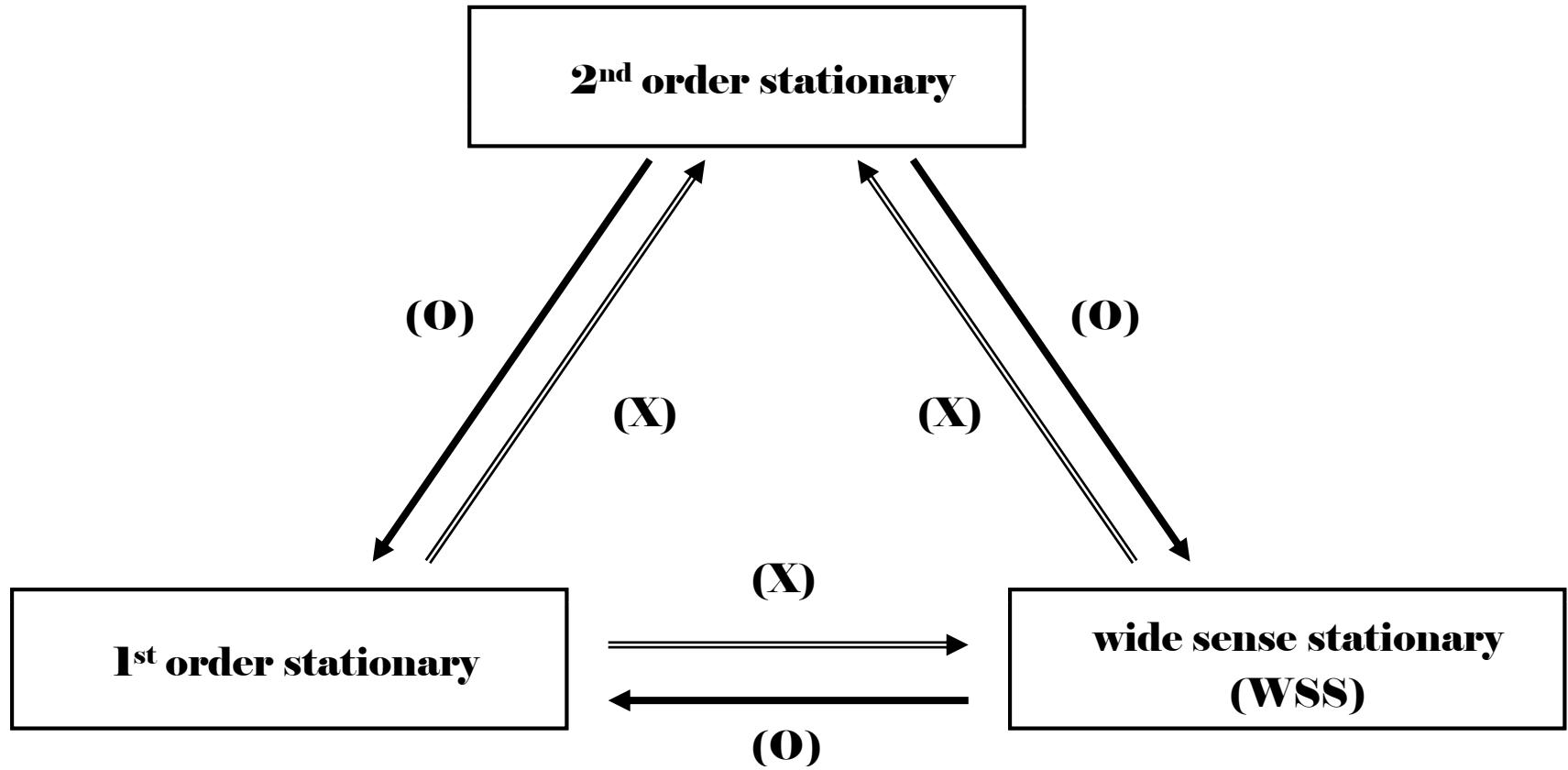
Figure 7.3

Figure 7.4

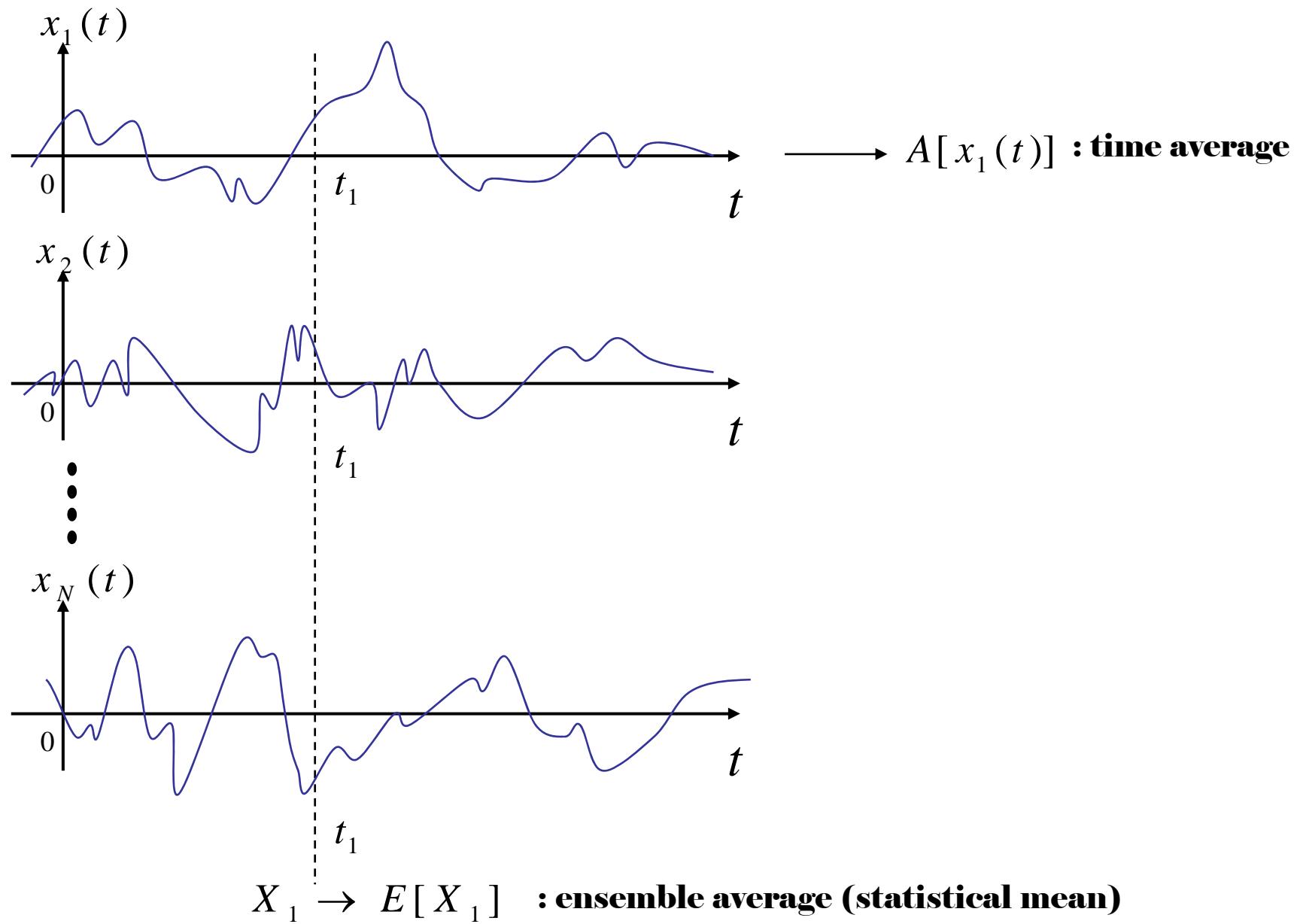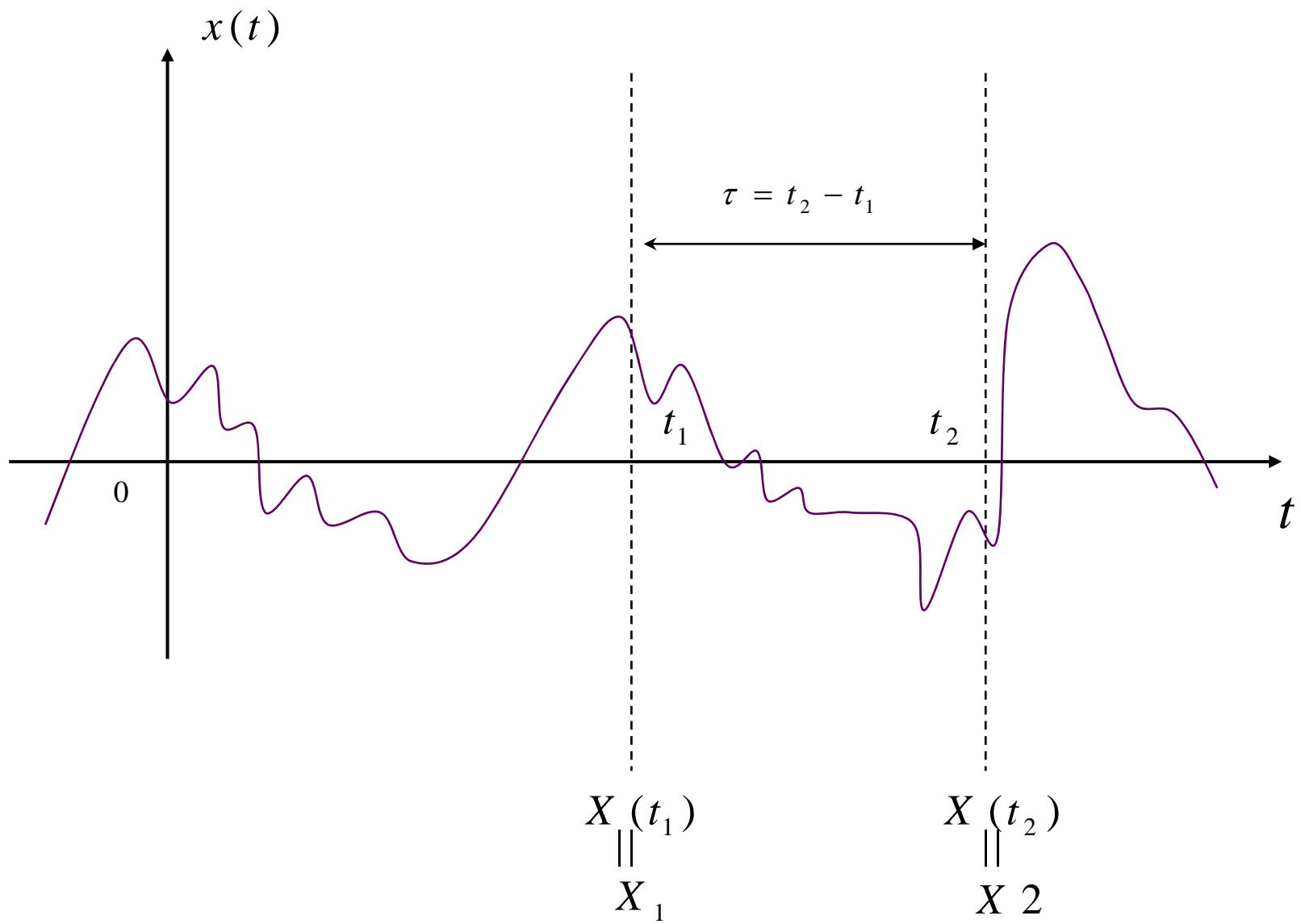**Figure** 7.5

Figure 7.6
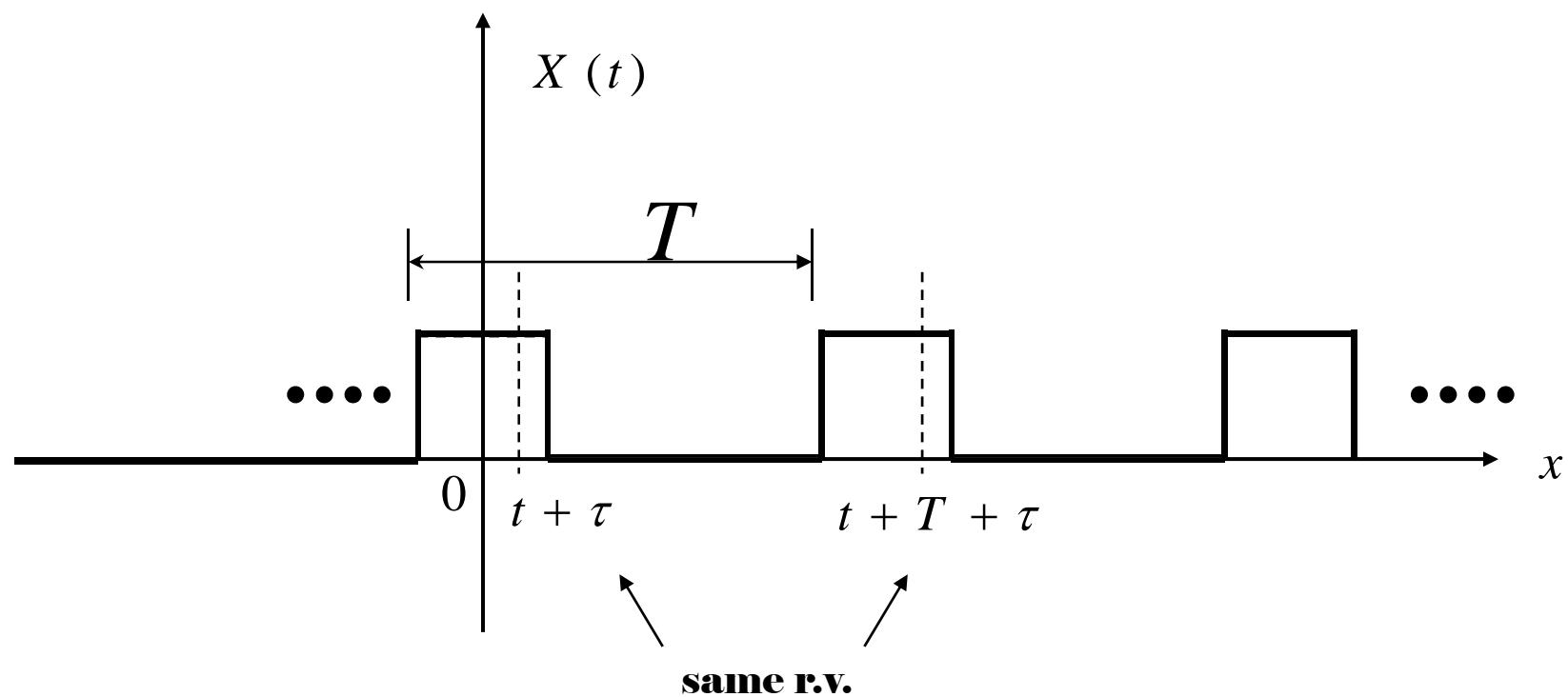
Figure 7.7

Figure 7.8

Figure 7.8

Figure 7.10

$x_1(t)$

0 t_1 t

$\longrightarrow$ $A[\,x_1(t)\,]$: **time average**

$x_2(t)$

0 t_1 t

$x_N(t)$

0 t_1 t

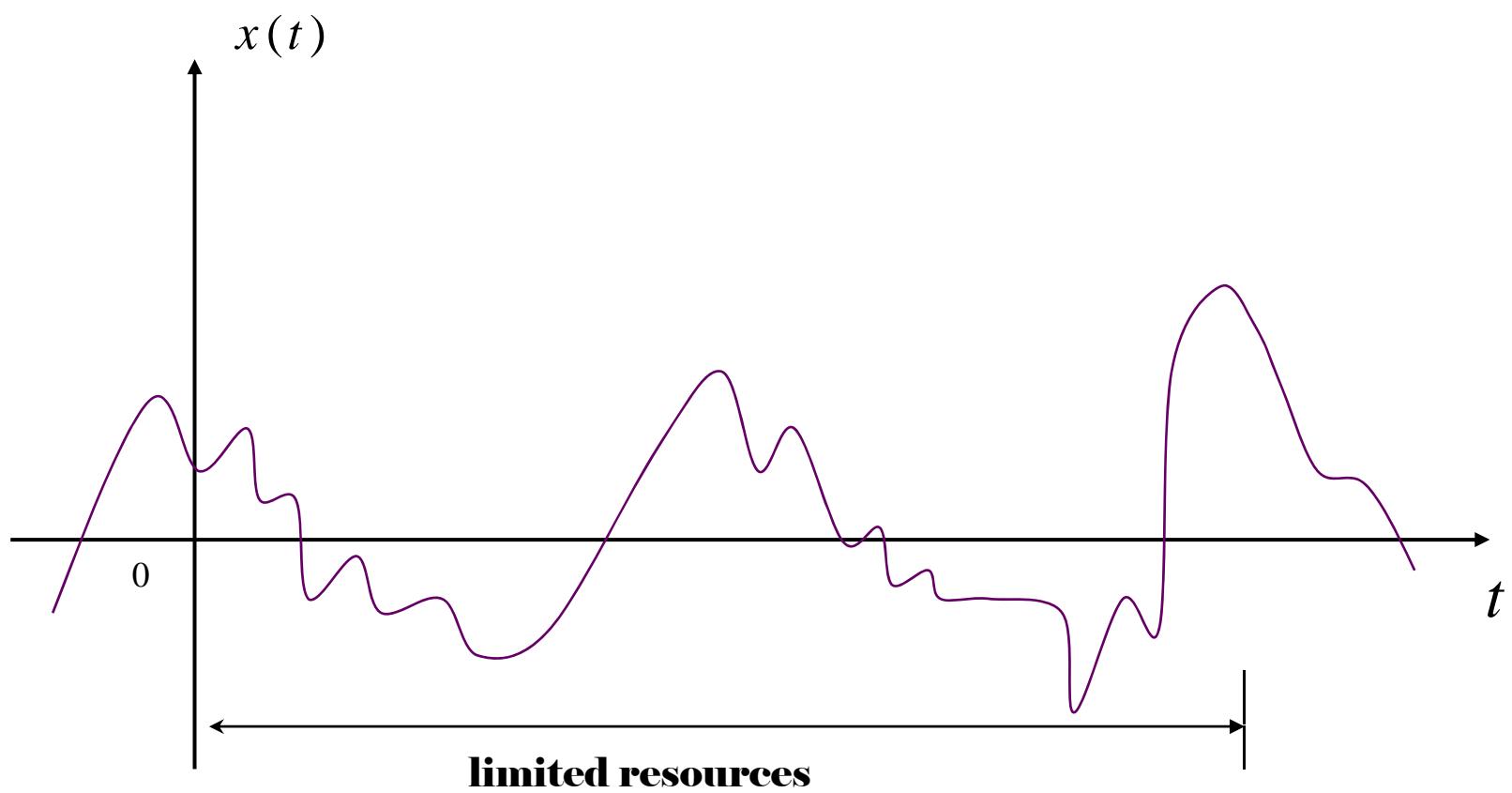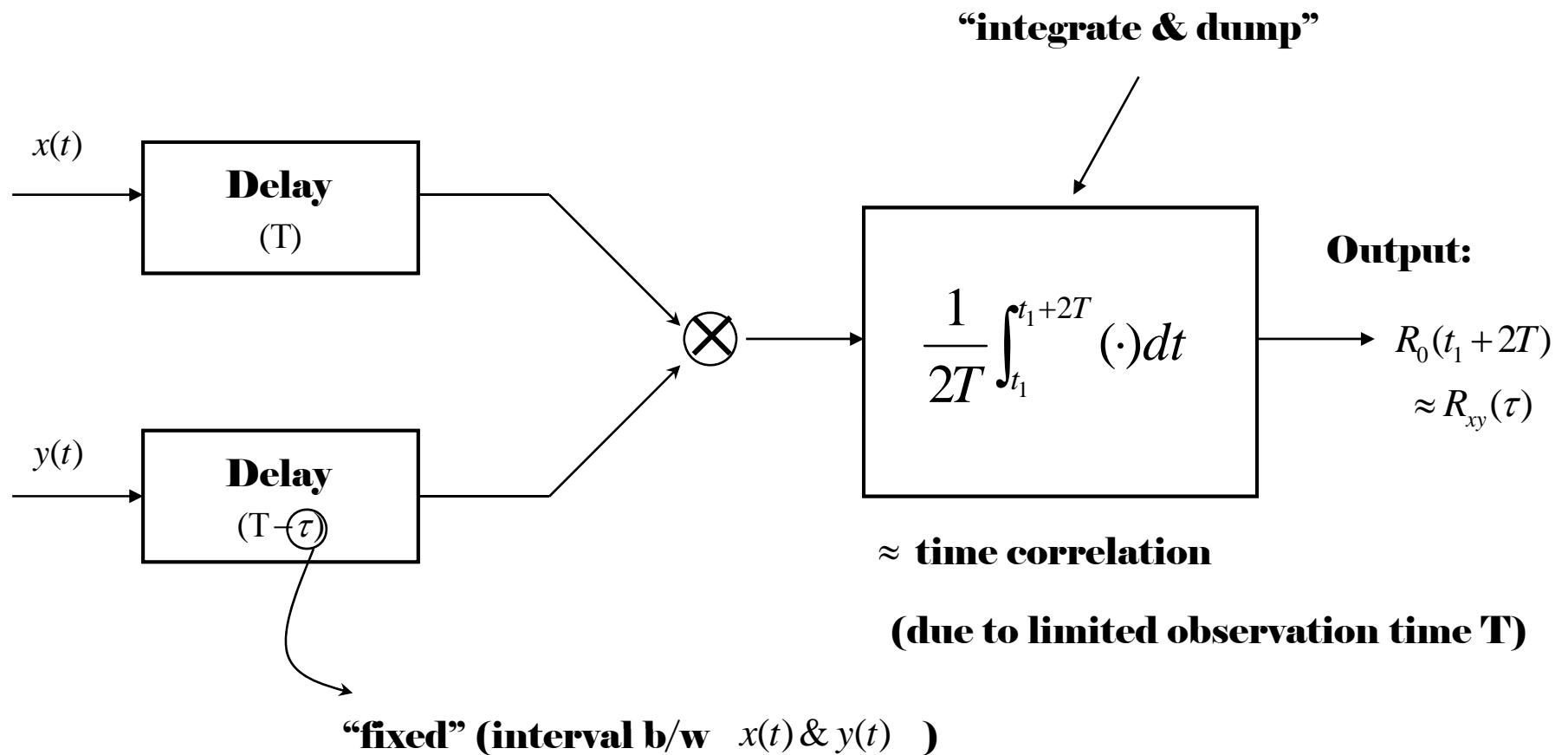$X_1 \rightarrow E[\,X_1\,]$: **ensemble average (statistical mean)**

Figure 7.11

Figure 7.12

Figure 7.13

Figure 7.14

Figure 7.15