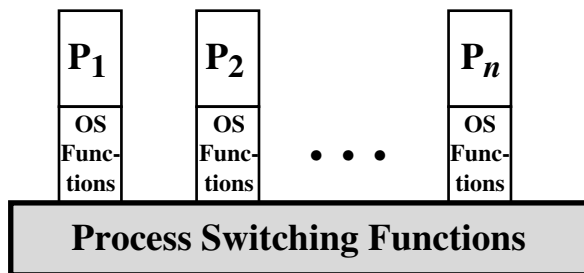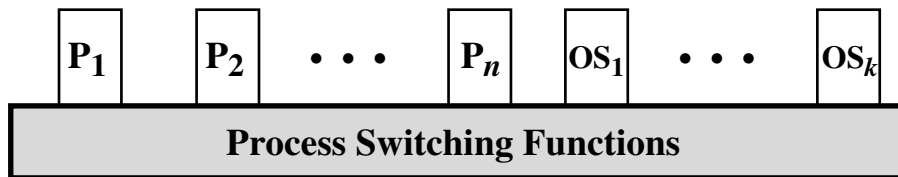**(a) Separate kernel**



**(b) OS functions execute within user processes**



**(c) OS functions execute as separate processes**

**Figure 3.14  Relationship Between Operating
System and User Processes**