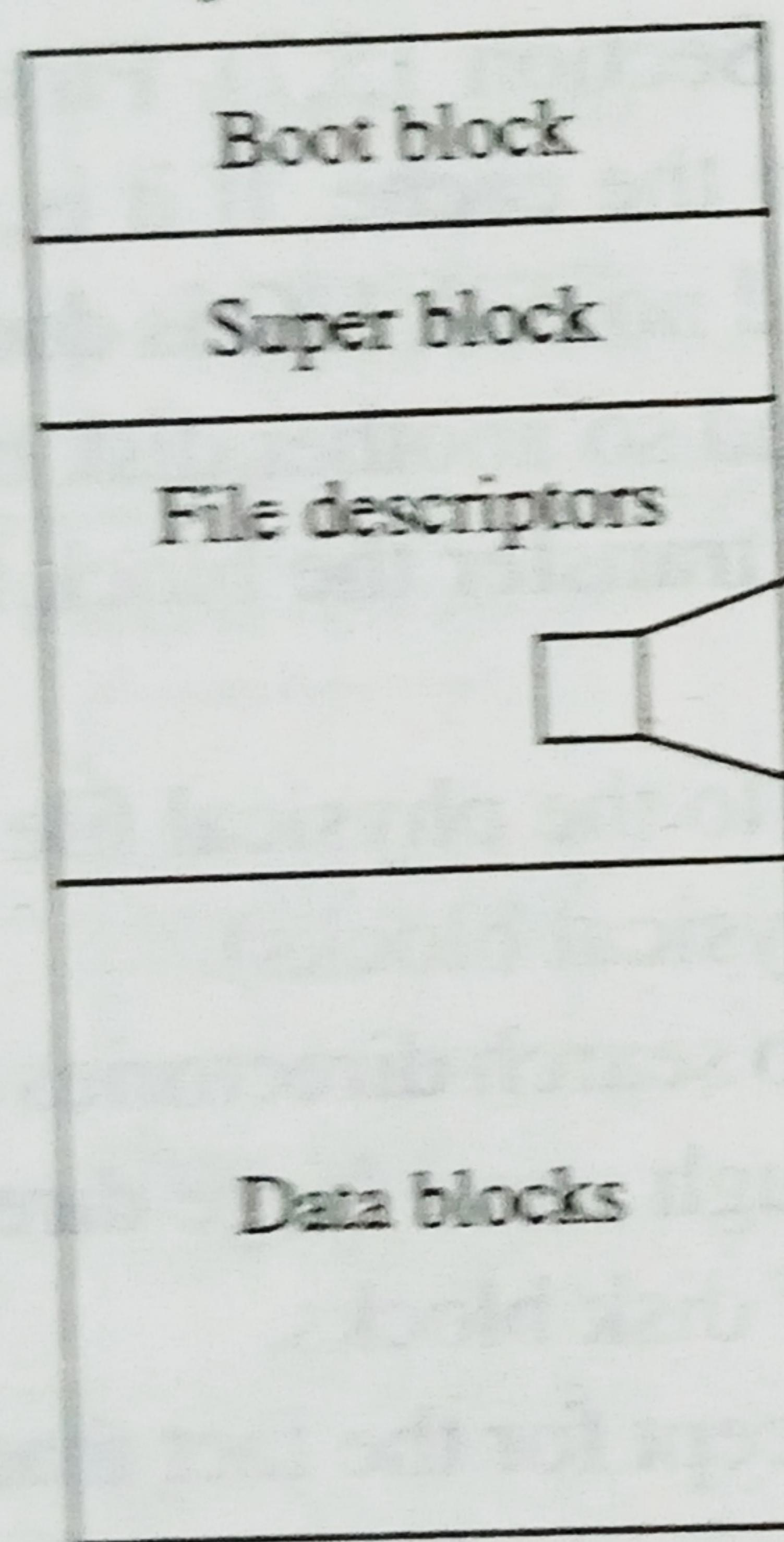


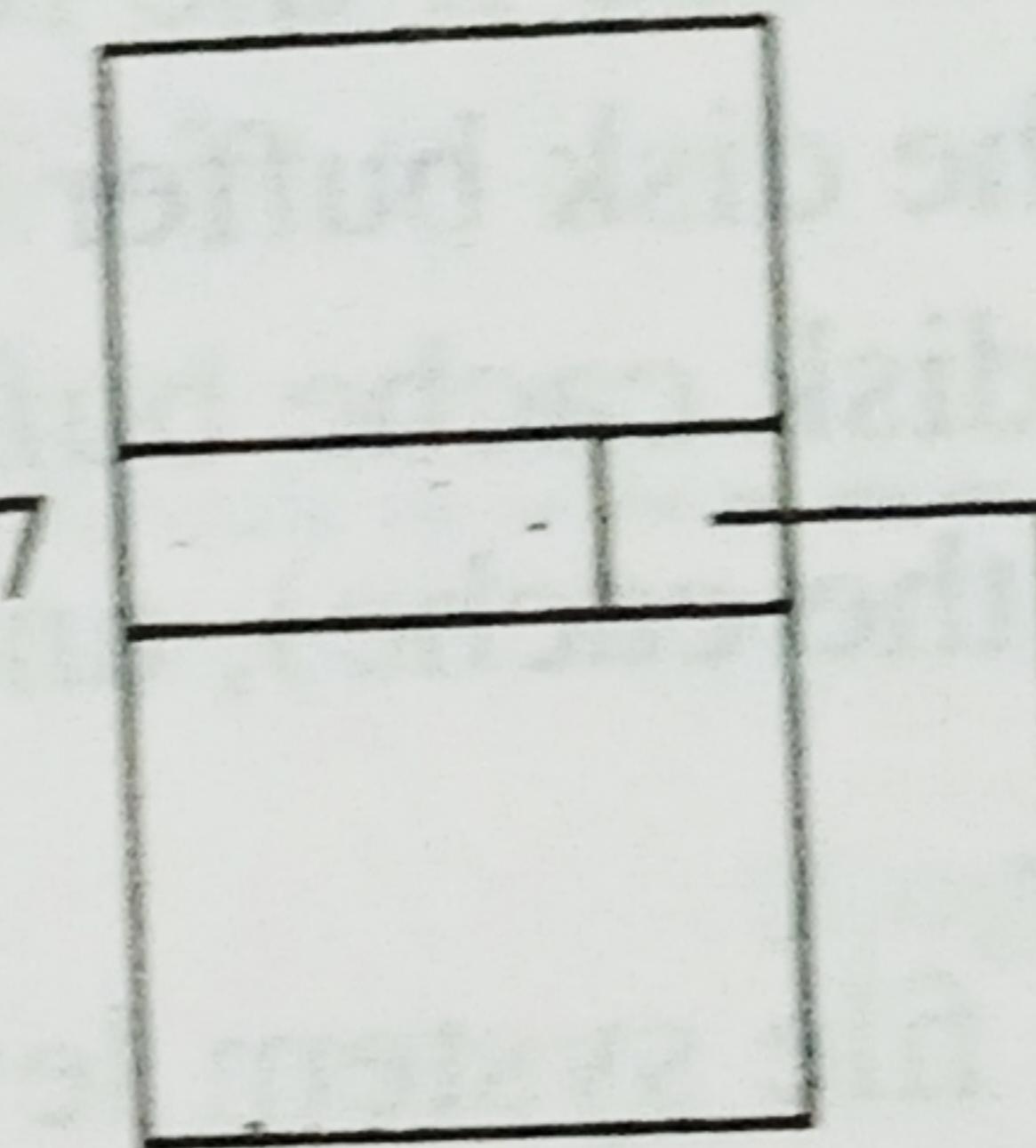
File system



File
descriptor

17

Device switch



Device
driver

17

Figure 16.14

Connecting files and devices through the device switch

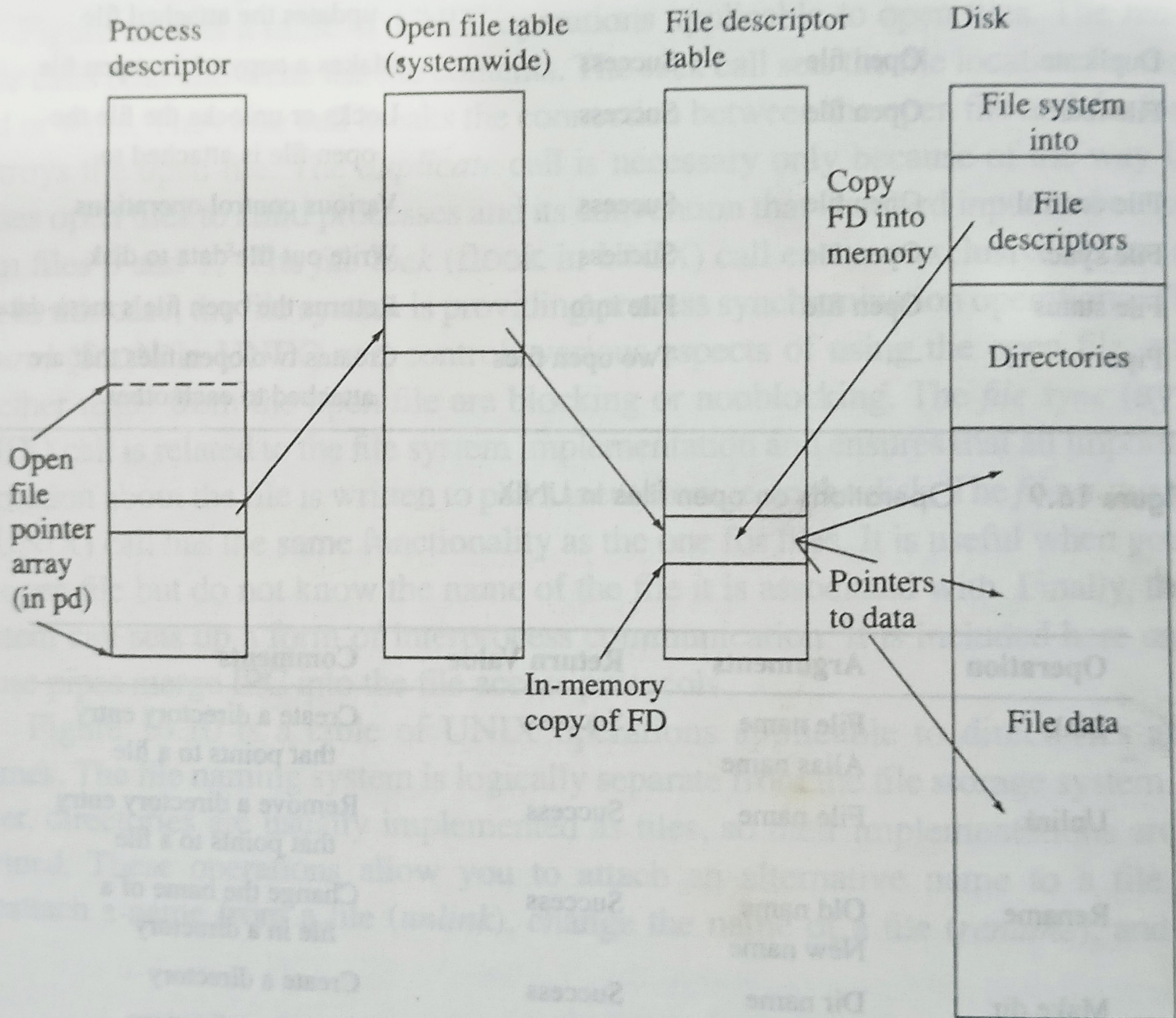
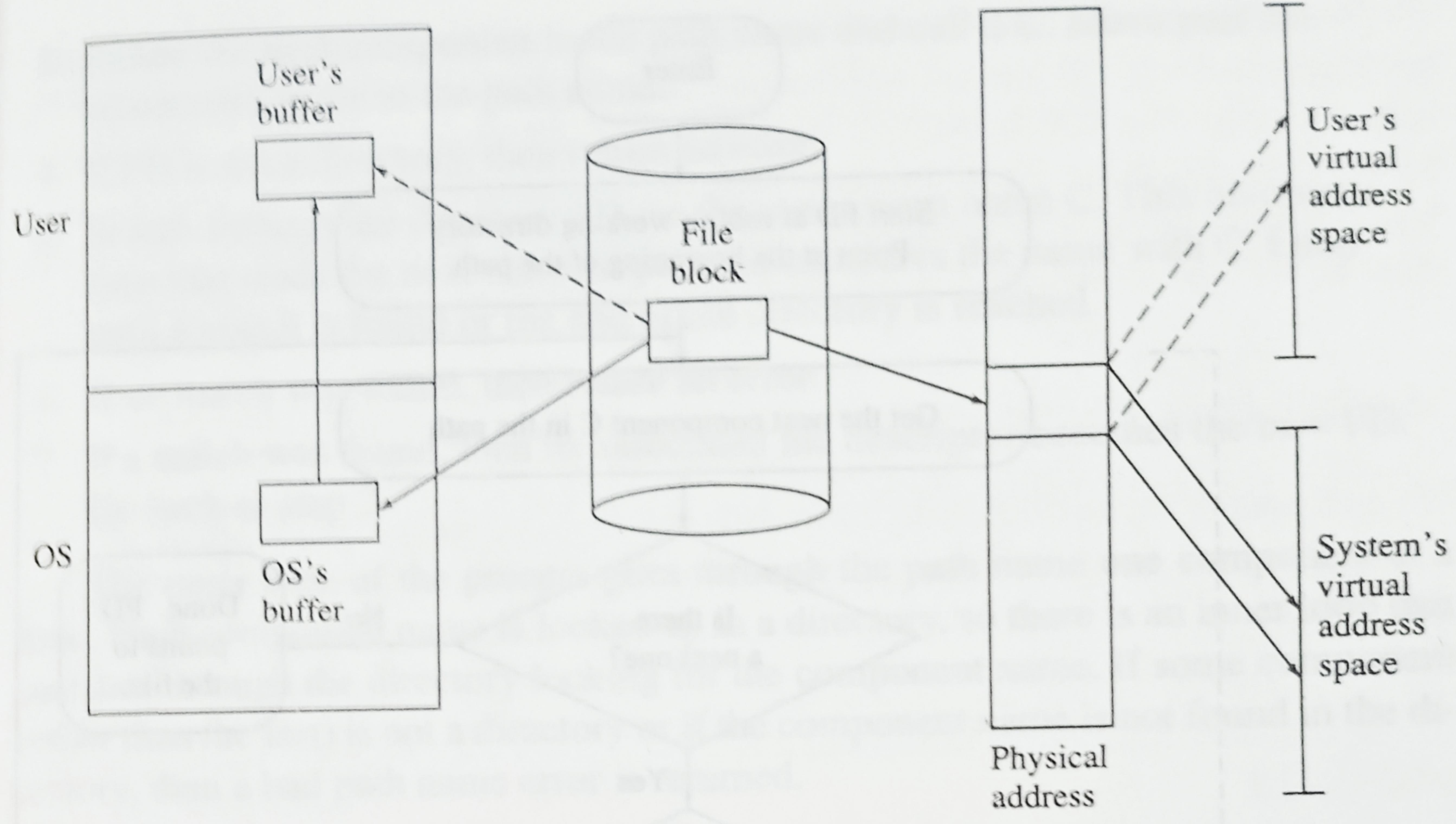


Figure 16.11 File system data structures



Read into a system buffer
and then copy to the user's
buffer, or read directly into
the user's buffer.

Copy into a page in the
system's virtual address space
and then map it into the user's
virtual address space.

Figure 16.19 Avoiding copying of I/O data

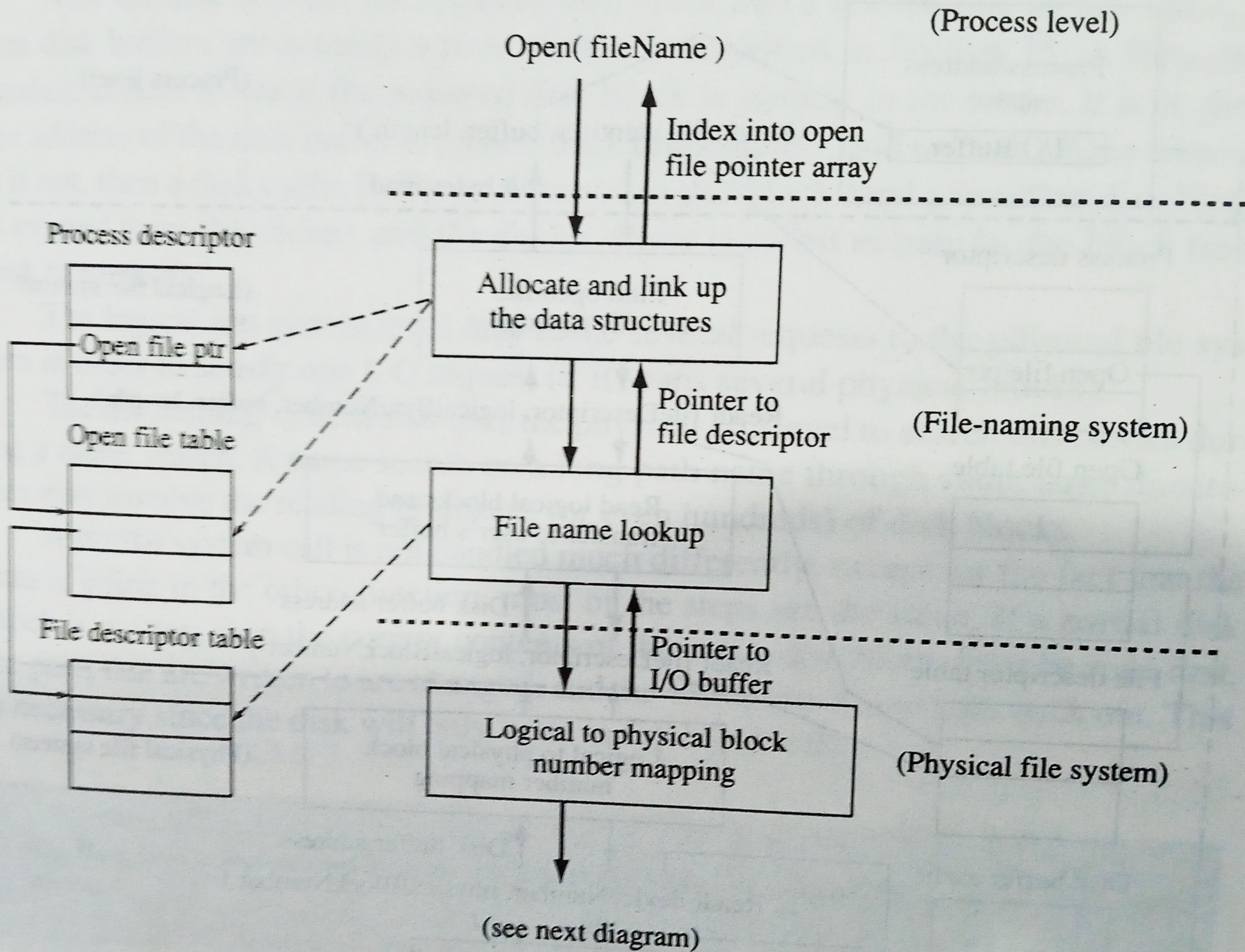


Figure 16.12




Figure 16.20

Algorithm for a path name lookup

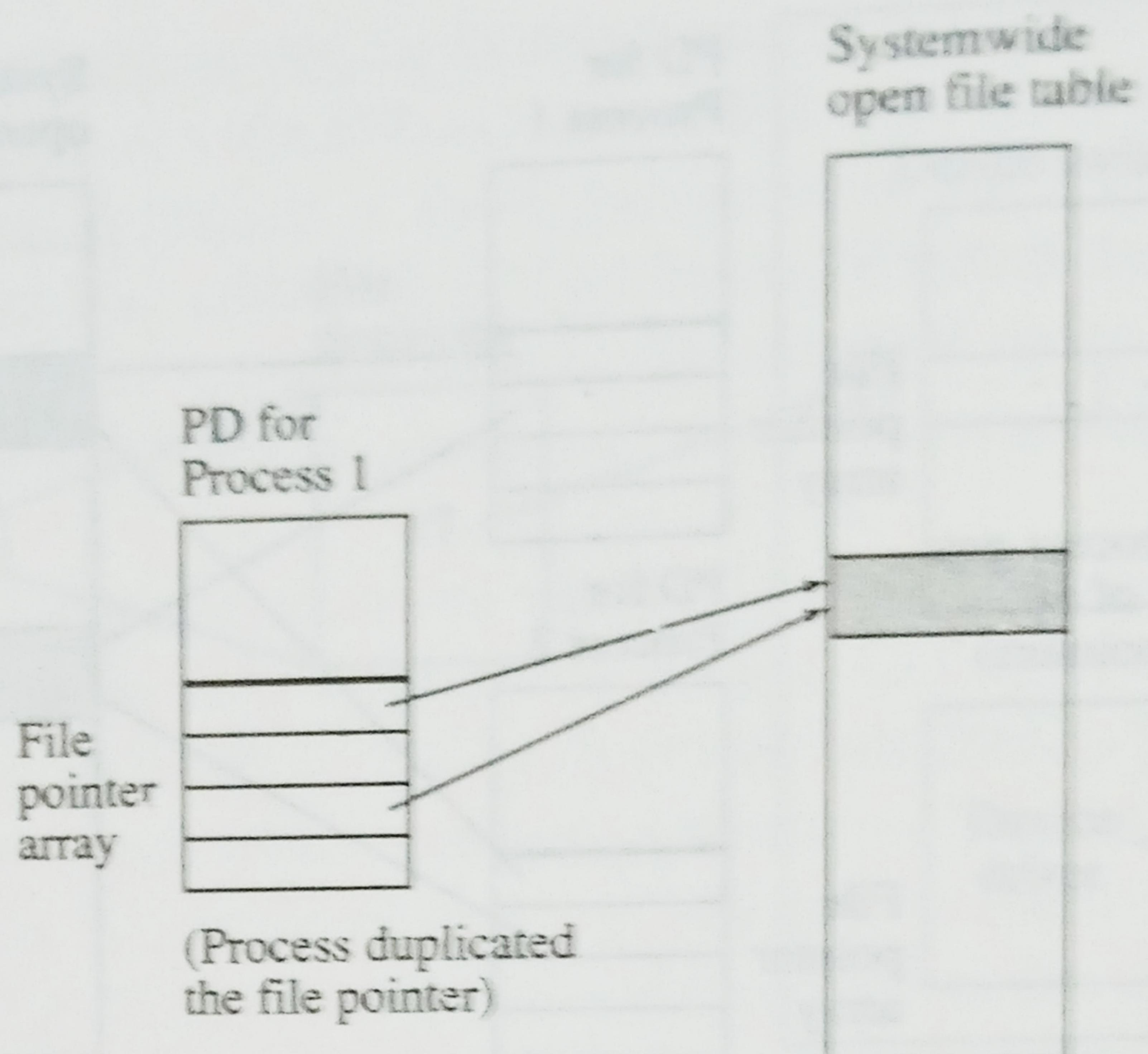


Figure 16.17 Effect of the **duplicate** system call on the file system data structures

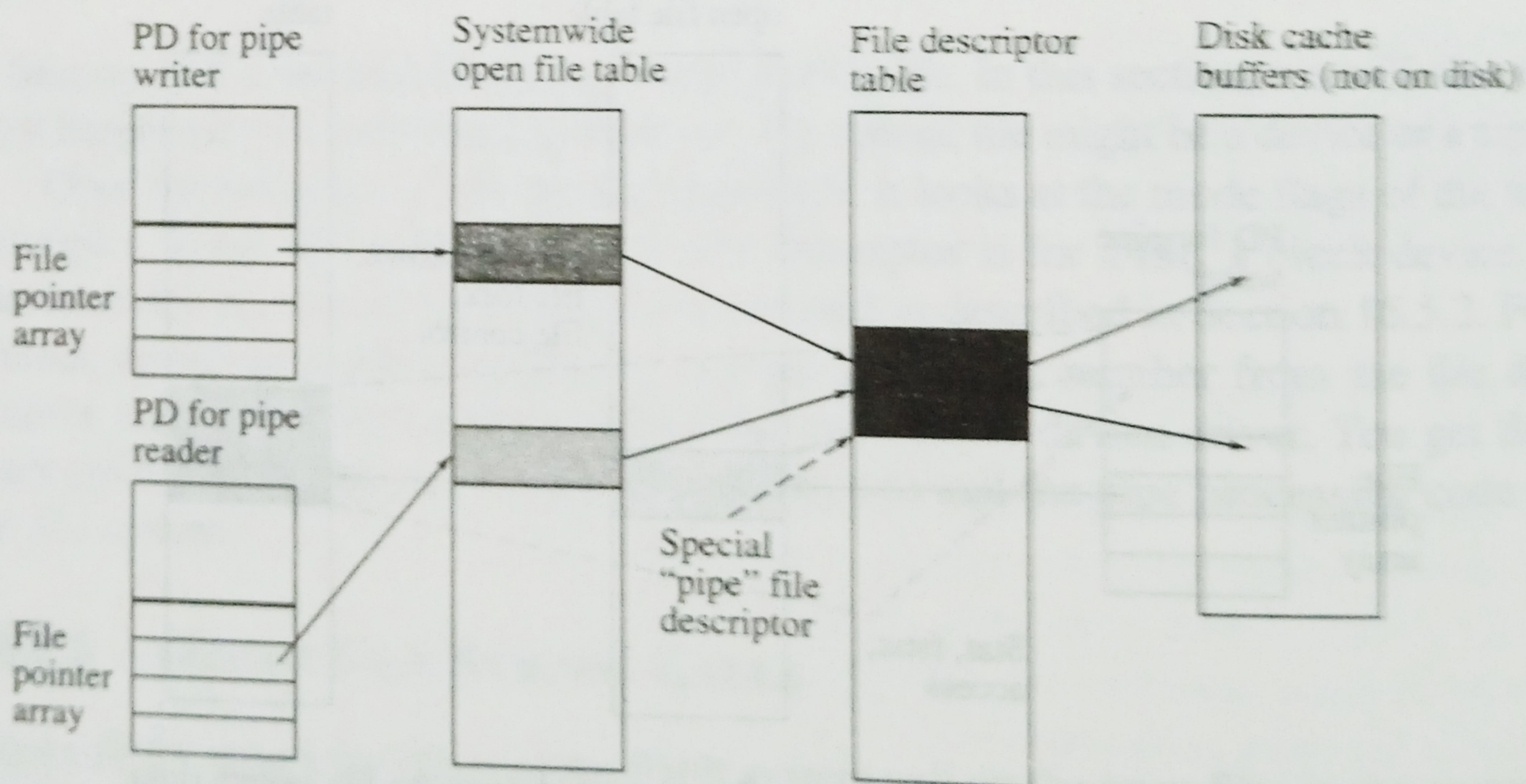


Figure 16.18 Effect of the **pipe** system call on the file system data structures

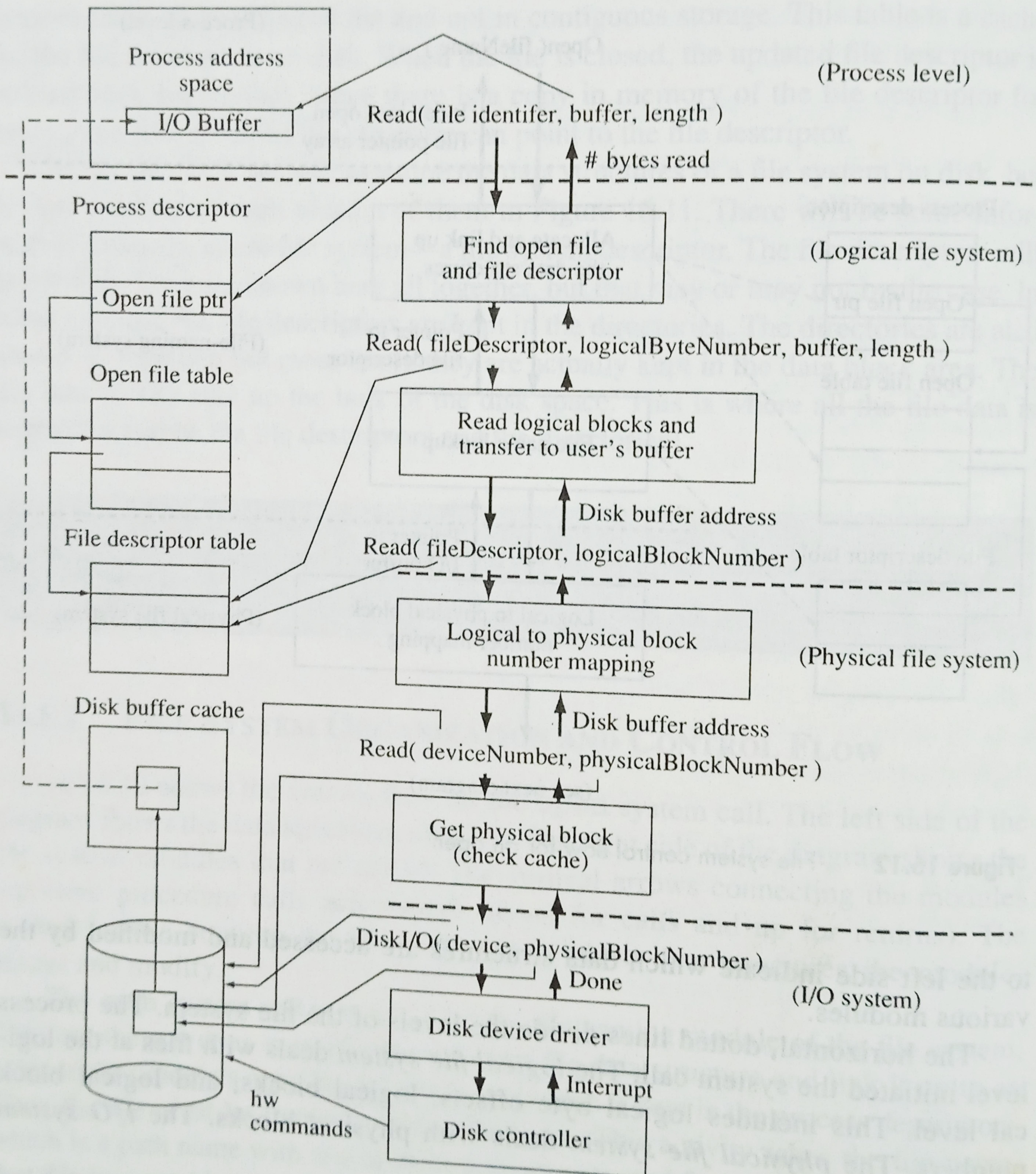


Figure 16.13 File system control flow for a read

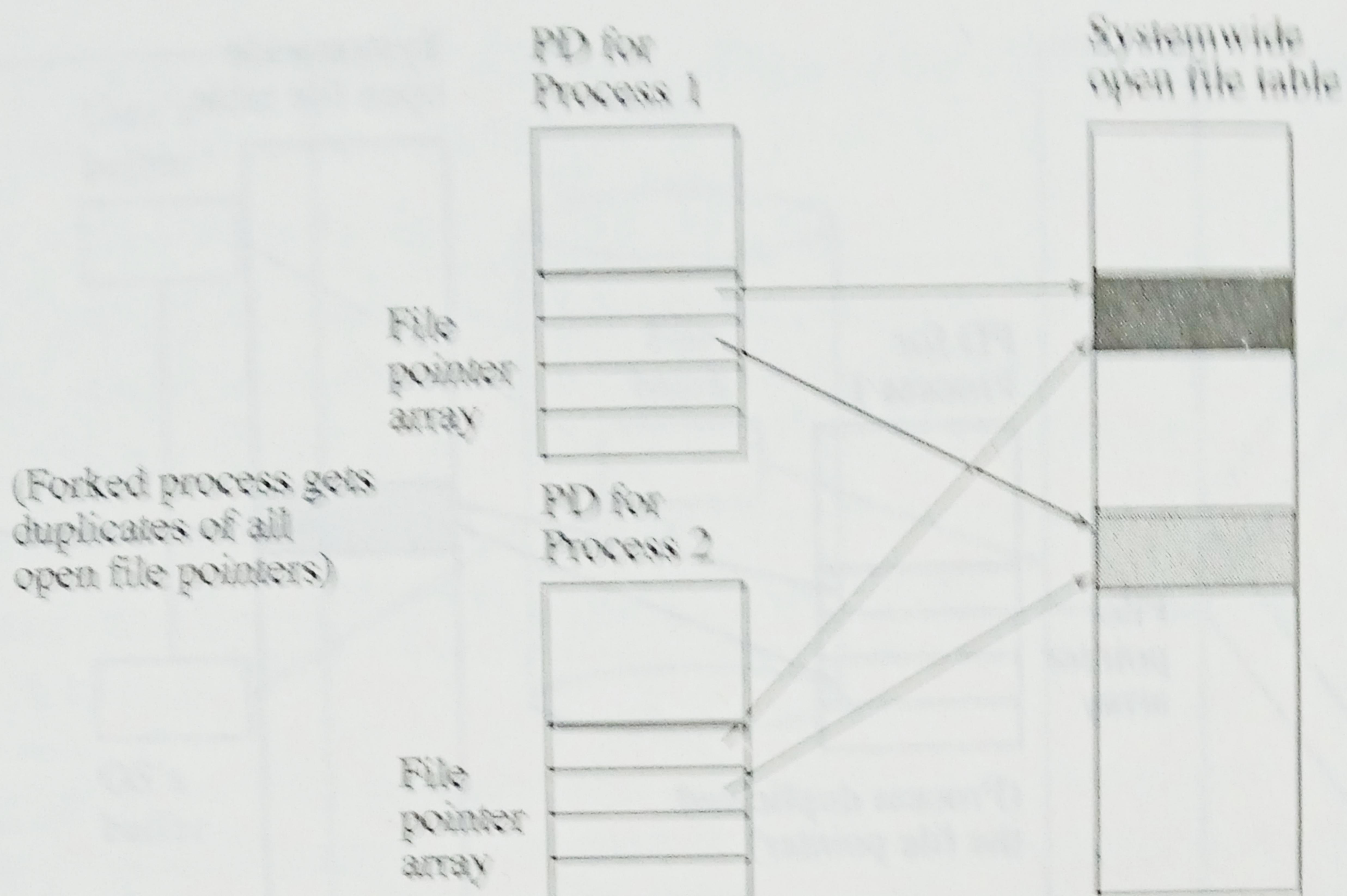


Figure 16.15 The effect of a fork on the file system data structures

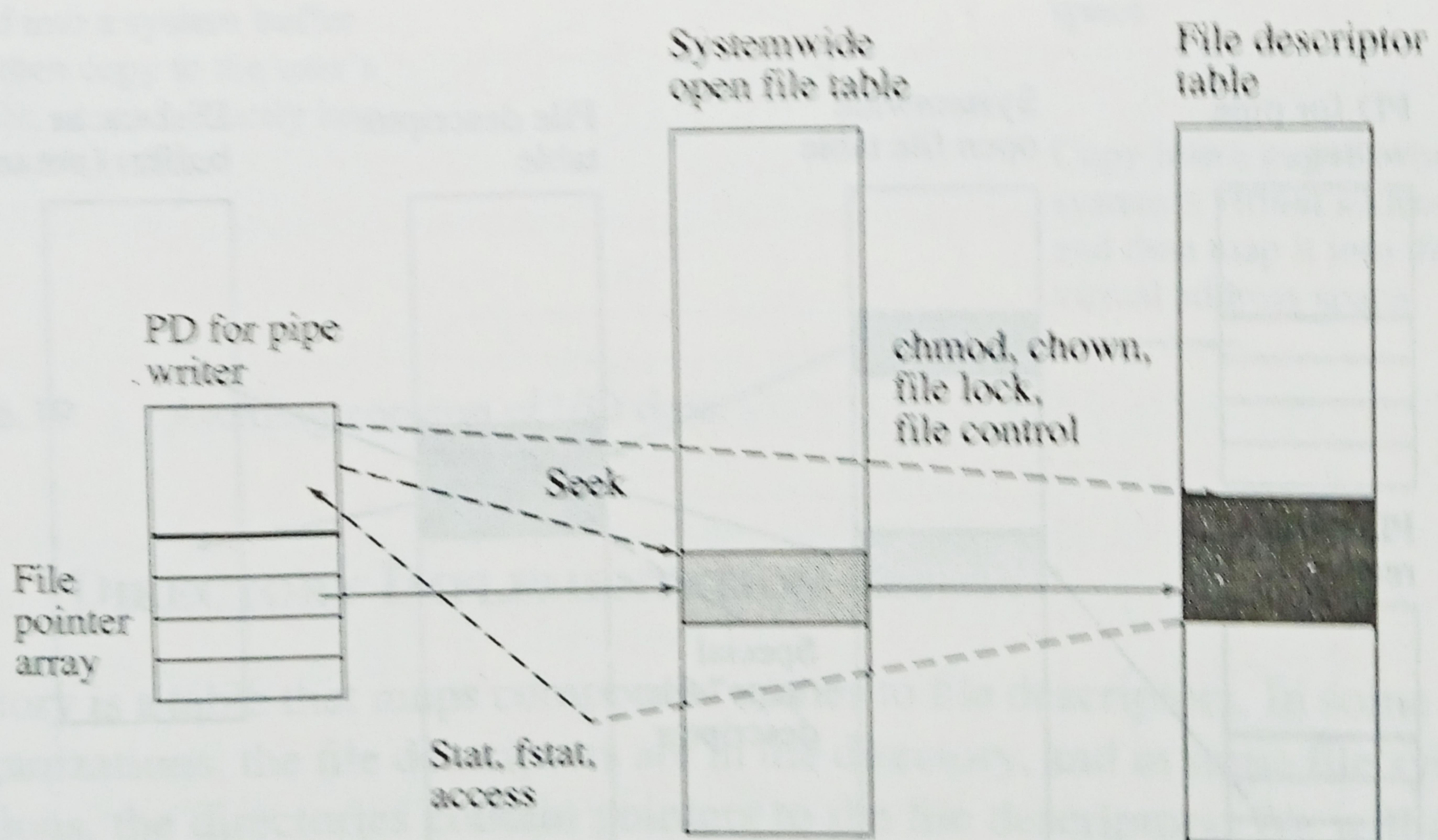


Figure 16.16 How some system calls use and change the file system data structures