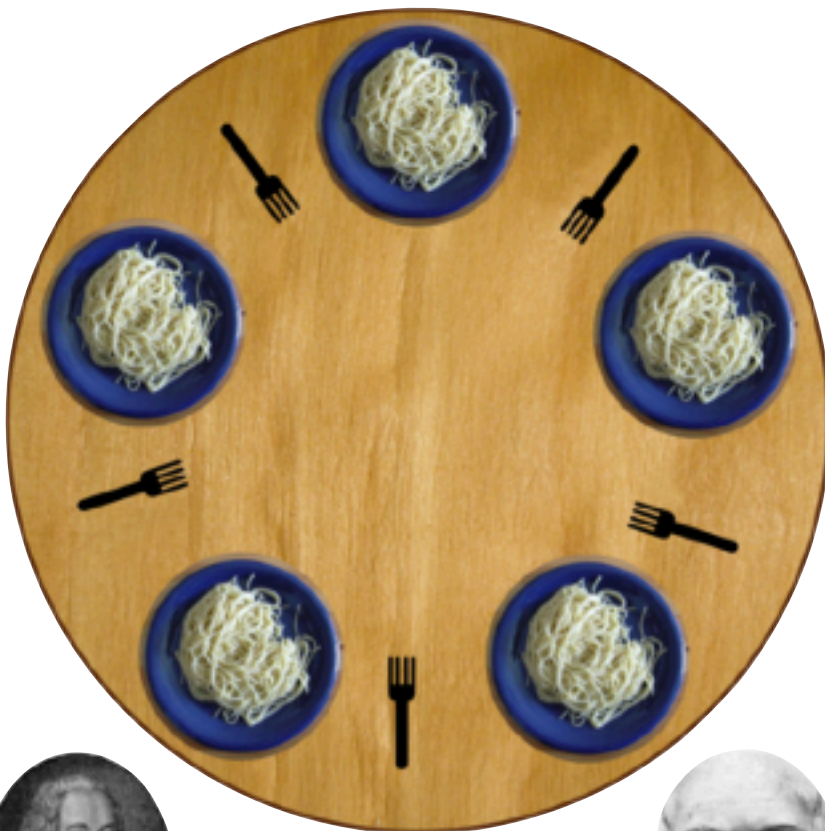




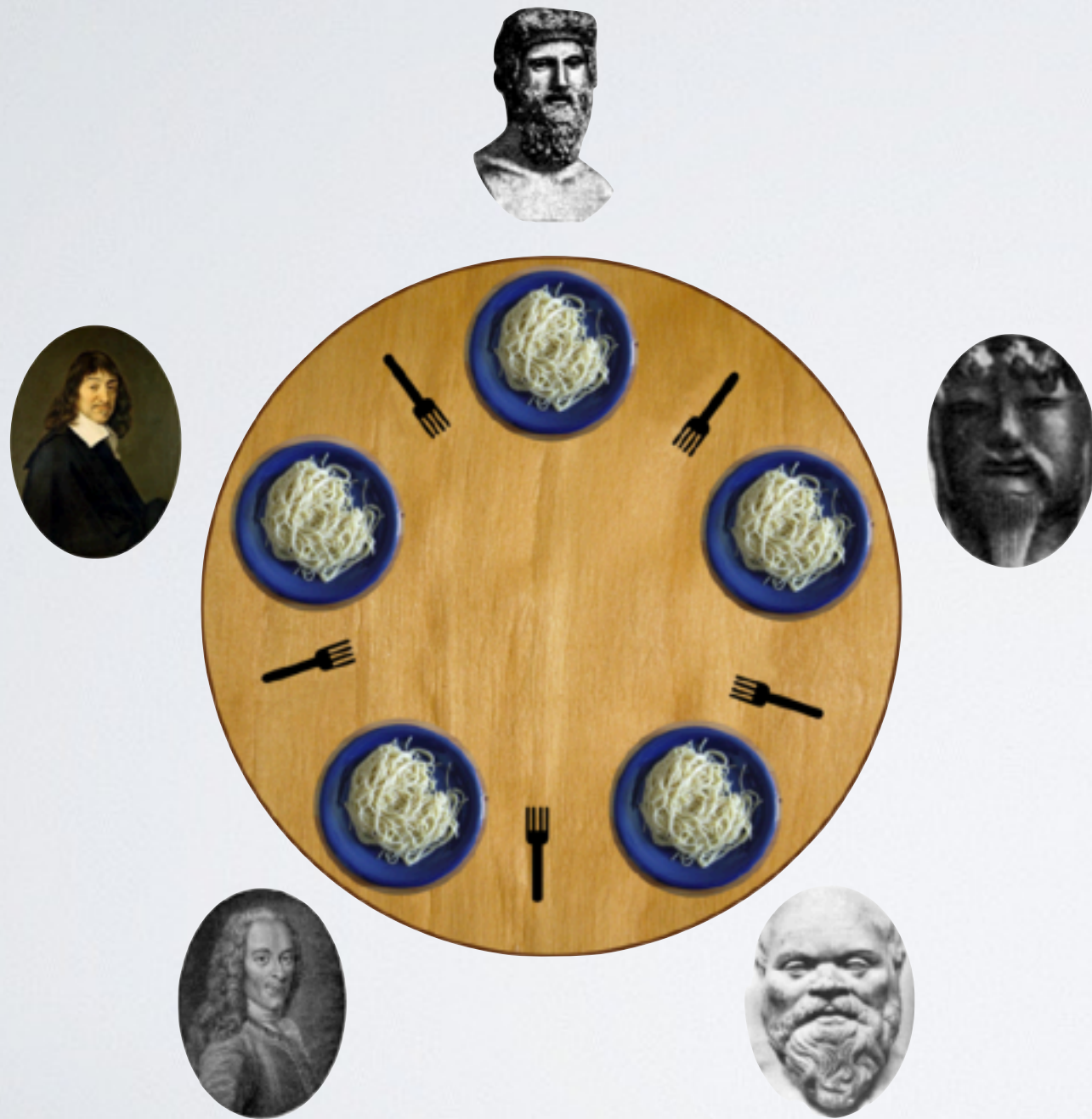
Dining Philosophers





```
void philosopher (i, n) {  
    while(1) {  
        grab_fork(i)  
        grab_fork((i + 1) % n)  
        eat & think  
        drop_fork(i)  
        drop_fork((i + 1) % n)  
    }  
}
```

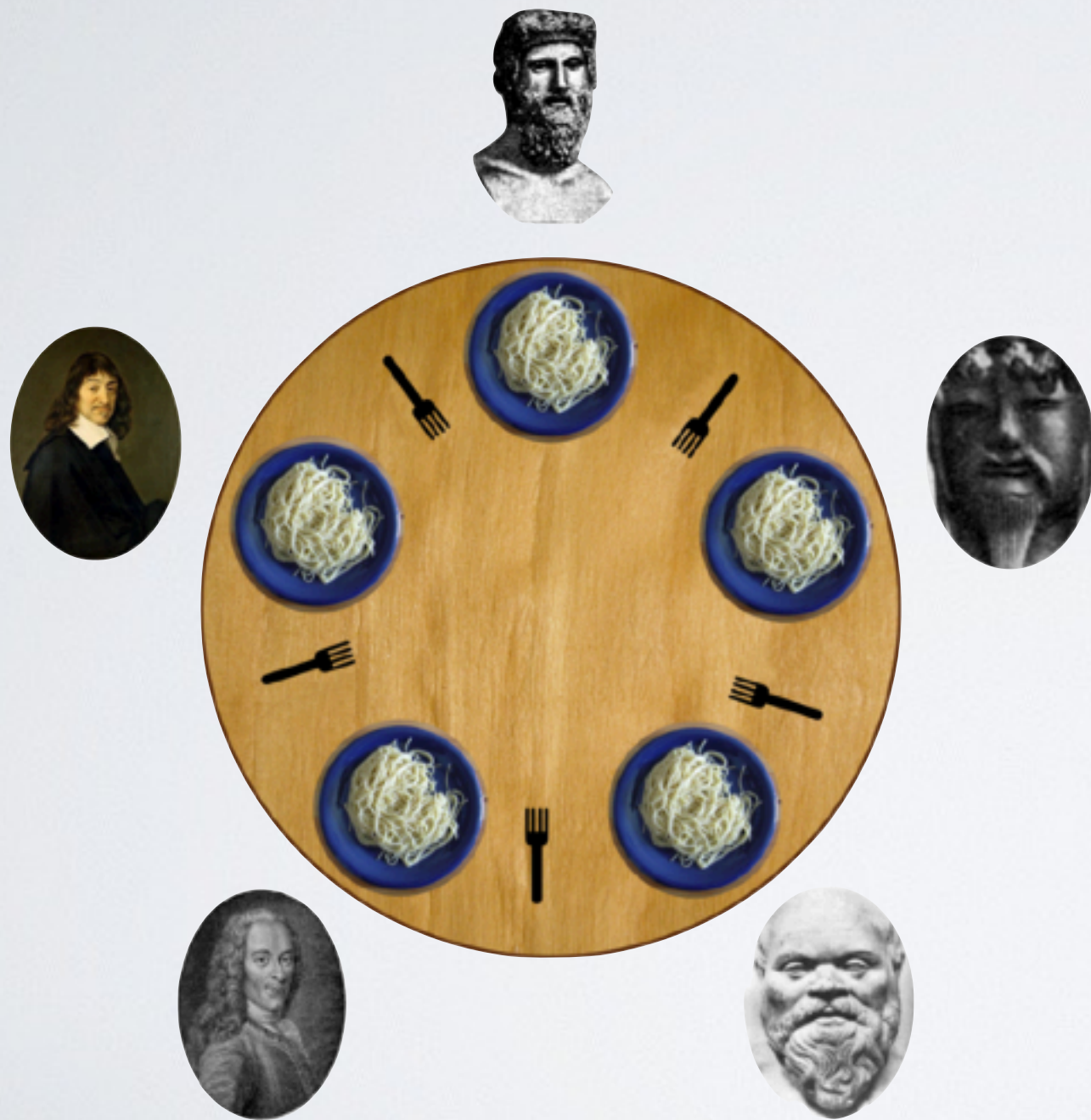
# Dining Philosophers



```
void philosopher (i, n) {  
    while(1) {  
        grab_fork(i)  
        grab_fork((i + 1) % n)  
        eat & think  
        drop_fork(i)  
        drop_fork((i + 1) % n)  
    }  
}
```



# (Bad) Dining Philosophers



```
for(i=0, i<n, i++){  
    sem_init(&fork[i], 1)  
}
```

```
void philosopher (i, n) {  
    while(1) {  
        sem_wait(&fork[i])  
        sem_wait(&fork[(i + 1) % n])  
        eat & think  
        sem_signal(&fork[i])  
        sem_signal(&fork[(i + 1) % n])  
    }  
}
```