Readers Writers

```
readcount = 0
sem_init(mutex, 1)
sem_init(writer_or_readers, 1)
sem_init(service, 1)
```

```
void writer () {
  while(1){
    sem_wait(service)
    sem_wait(writer_or_readers)
    sem_signal(service)
    write(file, data)
    sem_signal(writer_or_readers)
  }
}
```

```
void reader () {
 while(1){
   sem_wait(service)
   sem_wait(mutex)
   readcount += 1;
   if (readcount == 1)
     sem_wait(writer_or_readers)
   sem_signal(service)
   sem_signal(mutex)
   data:=read(file)
   sem_wait(mutex)
   readcount -= 1;
   if (readcount == 0)
     sem_signal(writer_or_readers)
   sem_signal(mutex)
```
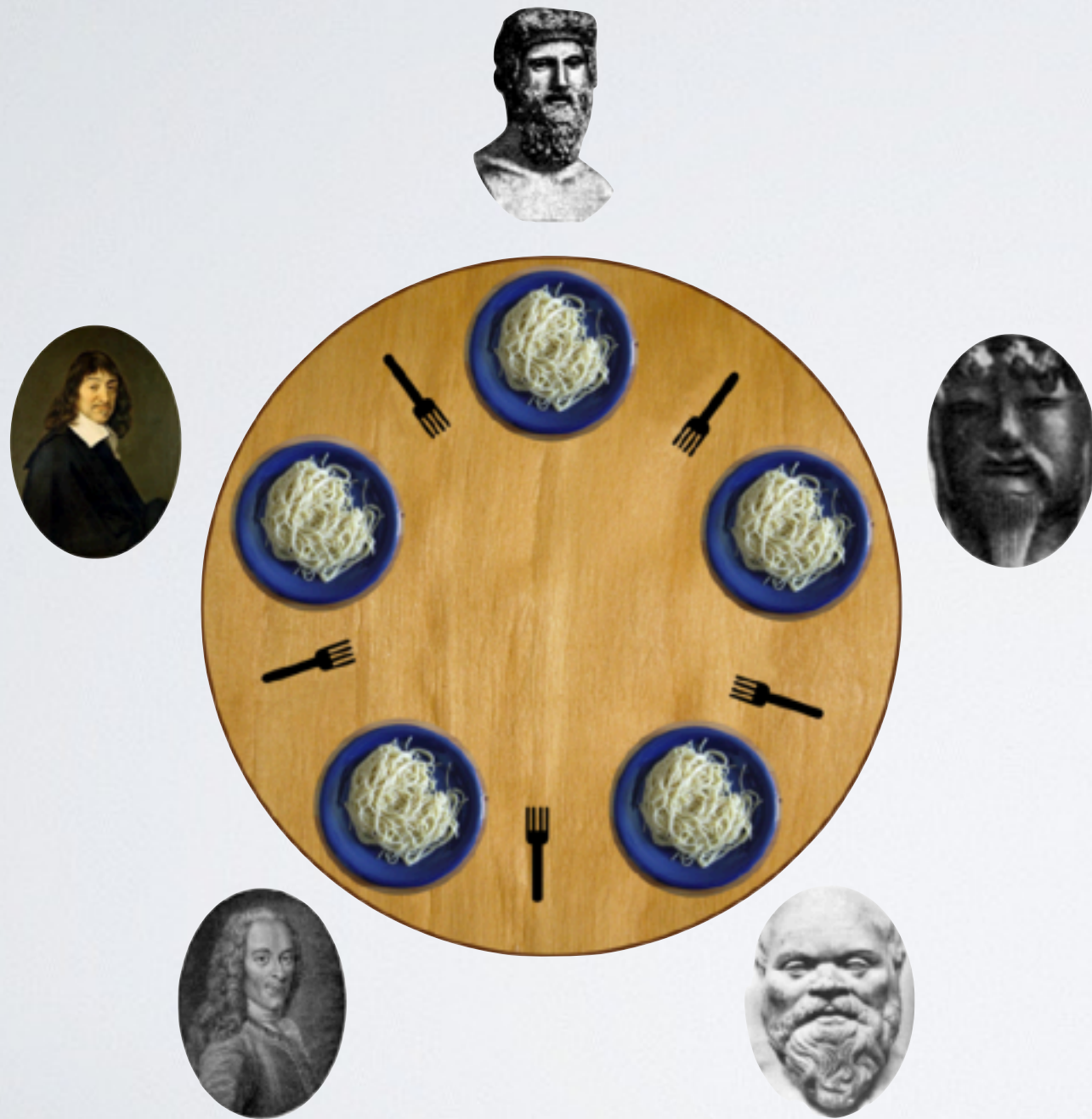
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