

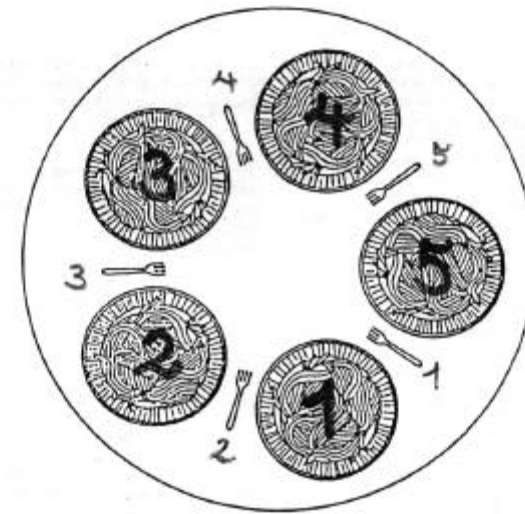
Semaphor-Implementation (symbolisch)

```
public class Semaphore {
    protected int count;
    protected Queue queue;

    public void P() {
        count--;
        if (count < 0) {
            /* aufrufenden Prozess in queue eintragen
            und blockieren */
        }
    }

    public void V() {
        count++;
        if (count <= 0) {
            /* 1. Prozess aus queue ausketten
            und freisetzen */
        }
    }

    public Semaphore (int start_count) {
        count = start_count;
        /* queue initialisieren */
    }
}
```



```
void philosopher(int i)
{ while (1)
  { think();

    take_fork(i);
    take_fork((i+1)%5);

    eat();

    put_fork((i+1)%5);
    put_fork(i);
  }
}
```