

```
1 std::atomic<int> seqlock;
2 int protected_data;
3
4 int reader() {
5     while (true) {
6         int s1 = seqlock;
7         int ret = protected_data; // ERROR
8         int s2 = seqlock;
9         if (s1 == s2 && is_even(s1))
10             return ret;
11     }
12 }
13 void writer(int newval) {
14     while (true) {
15         unsigned s = seqlock;
16         if (is_even(s) && seqlock.compare_exchange_strong(s, s+1) {
17             protected_data = newval;
18             seqlock = s + 2;
19             return;
20         }
21     }
22 }
```

FIGURE 20.1 Incorrect use of a sequence lock: The lock release is not guaranteed to be ordered after the data access.