# When does it smell too?

Lucerne, 14. February 2021 Mehdi Foudhaili

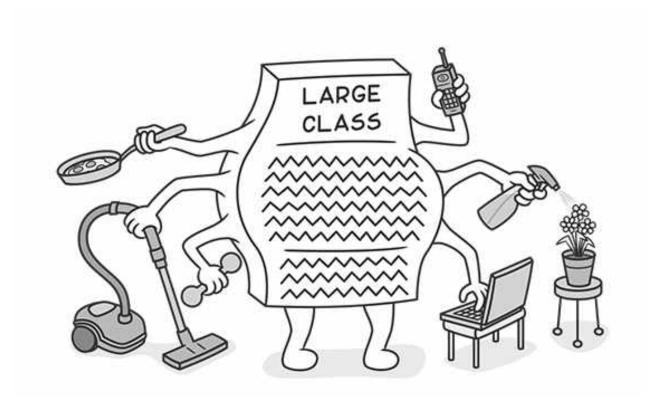
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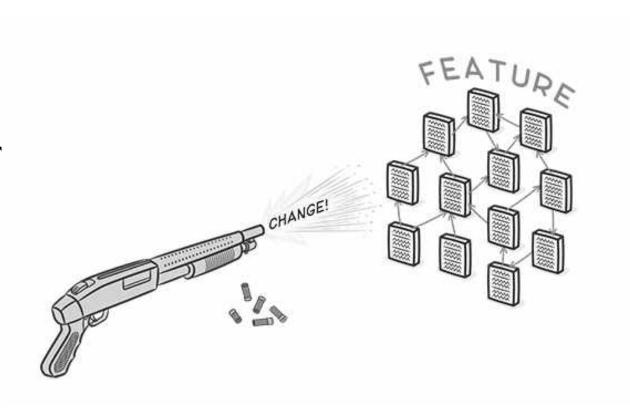
### Content

- What we have already learned
- Further Code Smells
- The Oddball Solution

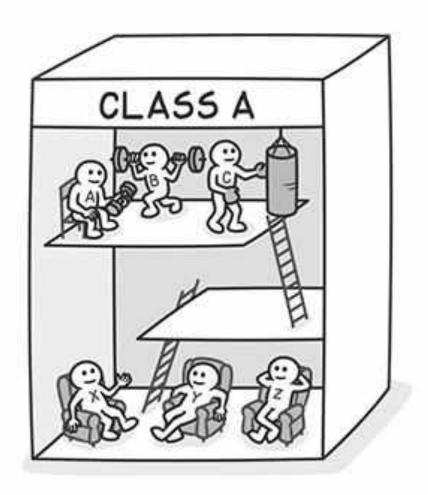
- Bloaters
  - Long Method
  - Large Class
  - Primitive Obsession
  - Long Parameter List
  - Data Clumps



- Change Preventers
  - Divergent Change
  - Shortgun Surgery
  - Parallel Inheritance Hierarch

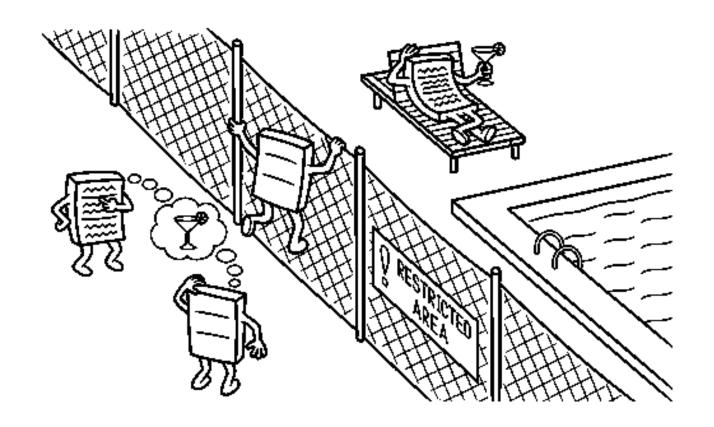


- OO Abusers
  - Switch Statements
  - Temporary Field
  - Refused Bequest
  - Alternative Classes with Different Interfaces



#### Couplers

- Feature Envy
- Inappropriate Intimacy
- Message Chains
- Middle Man

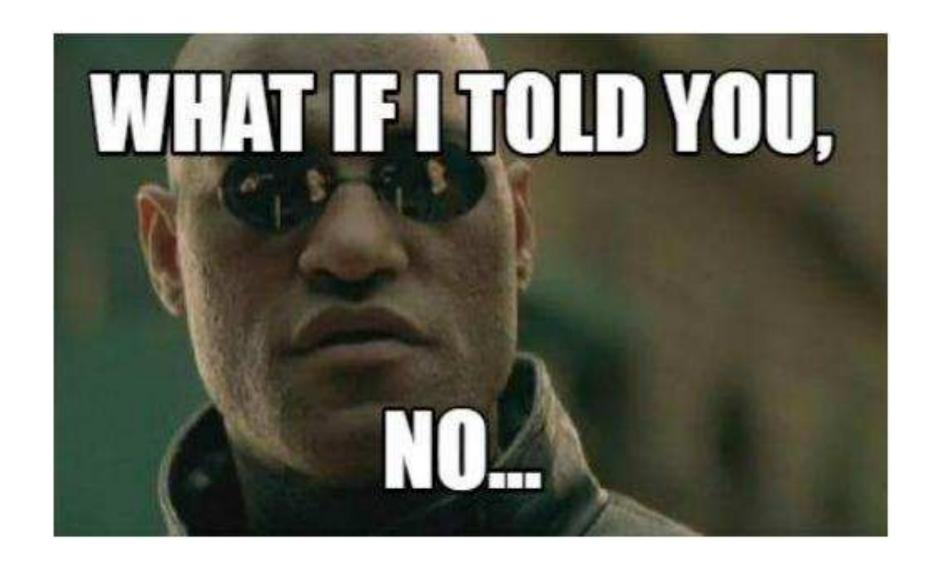


#### Dispensables

- Lazy Class
- Data Class
- Speculative Generality
- Comments
- Dead Code
- Duplicated Code



# Is that all???



### Further Code Smells ...

- Bloaters
  - Oddball Solution
  - Combinatorial Explosion

- OO Abusers
  - Class Depends on Subclass
  - Inappropriate Static

- Couplers
  - Artificail Coupling
  - Hidden Temporal Coupling
  - Hidden Dependencies
- Even Tests could smell!!!
  - https://deviq.com/antipatterns/co de-smells#test-smells

### Dispensables – Oddball Solution

- When a problem is solved in different way throughout a system.
- There should be only one way to solve the problem!



### Dispensables - Oddball Solution

```
public class LoadUserProfileAction extends Action...
    public String process() throws Exception {
      return process("ViewAction");
 public class UploadAction extends Action_
    public String process() throws Exception {
       return process("ViewAction");
public class ShowLoginAction extends Action...
   public String process() throws Exception {
       return viewAction();
```

#### **Dispensables – Oddball Solution**

- The presence of this code smell usually indicates:
  - Ignorance of the system
  - Programmers with different programming style and no existing standards
  - Similar Classes with Different Interfaces!
  - Duplicated Code!
- To get rid of this smell:
  - Just remove one of the solutions(generally the less used one)
  - Use the Adapter Pattern



### References & Links

- https://sourcemaking.com/refactoring/smells
- https://pragmaticways.com/31-code-smells-you-must-know/#6\_Oddball\_Solution
- https://pt.slideshare.net/nagarjay/code-smell-refactoring
- https://www.slideshare.net/MrinalBhattacaharya/code-smells-52370759
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- https://deviq.com/antipatterns/code-smells
- https://refactoringguru.cn/smells/