



We write code



Isn't it more about reading?

Written **once** - read **many**
times



*„(...) when you program,
you have to **think about**
how someone **will read**
your code, not just how a
computer will interpret it.“*
Kent Beck



**Not about
Architecture**

Methods & Code

iron

iron

L. May

"The duke
Shakspeare's
grandee or gre
versity.

mag-ni-fi-er

nifies; a mag
lenses.

mag-ni-fi



Extra effort



Save time



Your code base?



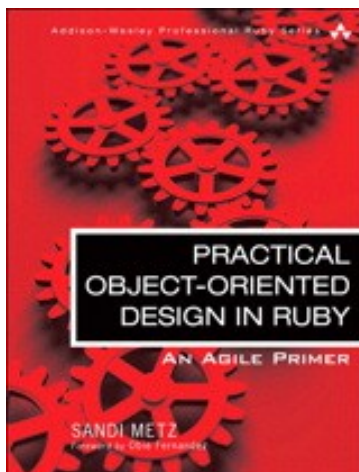
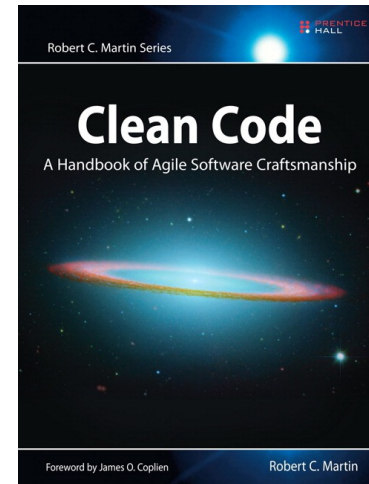
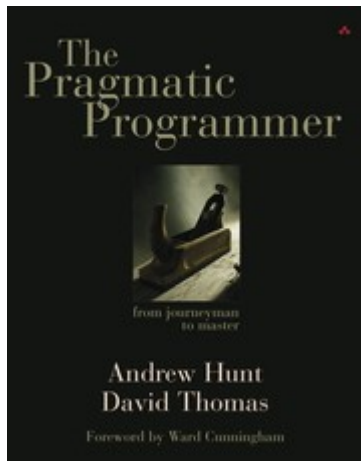


It's about joy!

Code is read many more times
than written

Tobias Pfeiffer
[@PragTob](#)
pragtob.info

Sources





Crazy?

Are comments a **smell**?

Outdated comments are the
worst

The **why** not the **what**

Comments are an **excuse** of
the code that it could not be
clearer.

do one thing

...

...

...

do another thing

...

...

...

do something more

...

...

Extract Methods

do_one_thing
do_another_thing
do_something_more

```
# context, outlet, times, time per  
step, state, data  
def pattern(c, o, t, l, s, d)  
  # ...  
end
```

Explanatory and meaningful
names

```
def pattern(context, outlet, time,  
time_per_step, state, data)  
  # ...  
end
```

Try to keep it to 2 parameters

Short Methods (≤ 8 LOC)

```
# allowed to drink?
if customer.age > 18
  say 'Okay'
  prepare_drink requested_drink
  say 'here you go'
  hand_drink_over drink, customer
else
  say 'I am sorry you are not legally
      allowed rather to drink here'
  say "Would you rather have a
      #{NON_ALCOHOLIC_DRINKS.sample}?"
end
```

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if customer.age > 18
  say 'Okay'
  prepare_drink requested_drink
  say 'here you go'
  hand_drink_over drink, customer
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  say 'I am sorry you are not legally
    allowed rather to drink here'
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    allowed rather to drink here'
  say "Would you rather have a
    #{NON_ALCOHOLIC_DRINKS.sample}?"
end
```

```
if allowed_to_drink_alcohol?(customer)
  serve_drink requested_drink,
              customer
else
  propose_non_alcoholic_drink
end
```

Nice code formatting

@left			=	0
@top			=	0
@width			=	1.0
@height			=	0

```
double character: 'something weird',  
stateMask: CTRL | modifier,  
KeyCode: character.downcase.ord
```



```

key_event_spec.rb
  builtin_methods.rb
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  expert-irb-adjusted.rb
  line_spec.rb
  line.rb
  image_spec.rb
  key_listener.rb
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69 end
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72   is_this_modifier_key?(event, ::SwT::SWT::CTRL)
73 end
74

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line.rb
app.rb
logger.rb
scrolling.rb
p.rb
point.rb
move.rb
dsl.rb
key_event.rb
key_listener_spec.rb

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122 it ':alt_Z' do
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```

80 character
Width limit



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def initialize(blk)
  @block = blk
end

# implemented by subclasses
def key_pressed(event)
end

def key_released(event)
end

private

def handle_key_event(event)
  modifiers = modifier_keys(event)
  character = character_key(event)
  key_string = modifiers + character
  key_string = key_string.to_sym if should_be_symbol?(event, modifiers)
  eval_block key_string unless character.empty?
end

def eval_block(key_string)
  @block.call key_string
end

def modifier_keys(event)
  modifier_keys = ''
  modifier_keys += 'control_' if control?(event)
  modifier_keys += 'shift_' if shift?(event) && special_key?(event)
  modifier_keys += 'alt_' if alt?(event)
end

def alt?(event)
  is_this_modifier_key?(event, ::SwT::SWT::ALT)
end

# NOTE: state_mask and key_code error for me so the java version is used
def is_this_modifier_key?(event, key)
  (event.stateMask & key) == key
end

def shift?(event)
  is_this_modifier_key?(event, ::SwT::SWT::SHIFT)
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def control?(event)
  is_this_modifier_key?(event, ::SwT::SWT::CTRL)
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move.rb
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key_listener_spec.rb

it 'alt /' do
  test_alt_character_press '/'
end

it 'works with what Macs seem to produce for opt + / (should be alt_/)' do
  block.should_receive(:call).with(:'alt_/')
  event = double character: '÷'.ord,
                 stateMask: ALT,
                 keyCode: '/'ord
  subject.key_pressed(event)
end

describe 'works with the ctrl key pressed such as' do
  def test_ctrl_character_press(character, modifier = 0)
    result_char = ('control_' + character).to_sym
    block.should_receive(:call).with(result_char)
    event = double character: 'something weird like \x00',
                 stateMask: CTRL | modifier,
                 keyCode: character.downcase.ord
    subject.key_pressed(event)
  end

  it ':ctrl_a' do
    test_ctrl_character_press 'a'
  end

  it 'ctrl_z' do
    test_ctrl_character_press 'z'
  end

  describe 'and it works with the shift key' do
    it ':ctrl_A' do
      test_ctrl_character_press 'A', SHIFT
    end

    it ':ctrl_Z' do
      test_ctrl_character_press 'Z', SHIFT
    end
  end

  describe 'works with shift combined with alt yielding capital letters' do
    def test_alt_shift_character_press(character)
      test_alt_character_press(character, SHIFT)
    end

    it ':alt_A' do
      test_alt_shift_character_press 'A'
    end

    it ':alt_Z' do
      test_alt_shift_character_press 'Z'
    end
  end
end

```

**80 character
Width limit**



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80 character
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```

**80 character
Width limit**

Code bases deteriorate



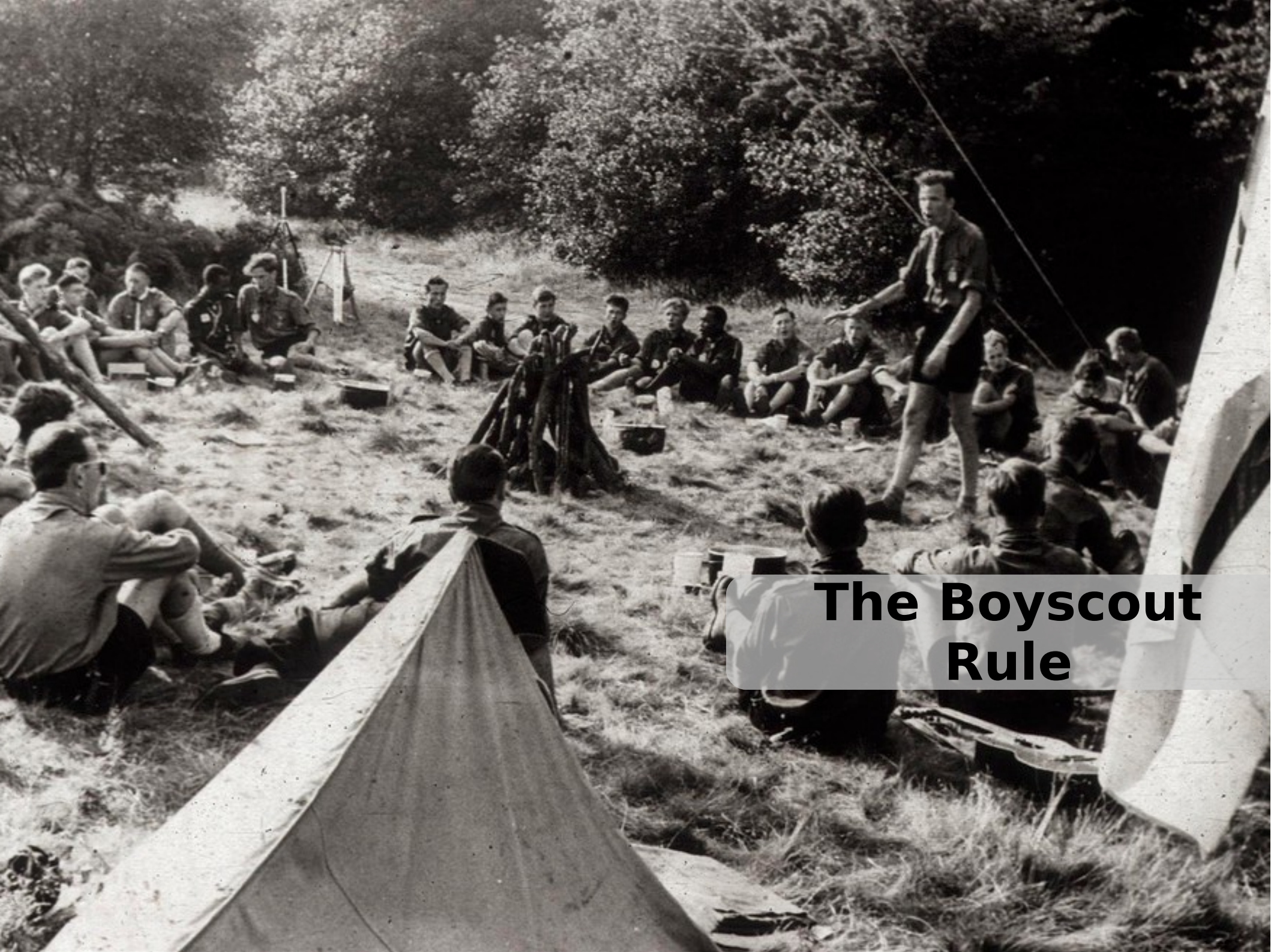
No broken windows







Magical time?



**The Boy Scout
Rule**

REFACTOR



ALL THE THINGS

quickmeme.com

TDD



**Know when to
break the rules**

*If you still like your code from
two years ago,
then you are not **learning** fast
enough.*

Enjoy Coding!

Tobias Pfeiffer
[@PragTob](#)
pragtob.info

Sources

- The Pragmatic Programmer
- Smalltalk Best Practice Patterns
- Clean Code
- Practical Object Oriented Design in Ruby

Photo Credit

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- http://coding-in.net/blog/wp-content/uploads/clean_code.jpg
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- <http://mendicantuniversity.org/images/logo.png>