Responsive Principles
Unknowns
"There are known knowns; there are things we know we know.

We also know there are known unknowns; that is to say we know there are some things we do not know.

But there are also unknown unknowns – the ones we don't know we don't know... it is the latter category that tend to be the difficult ones.

Donald Rumsfeld

[en.wikipedia.org/wiki/There_are_known_knowns](en.wikipedia.org/wiki/There_are_known_knowns)
Thames Barrier

gov.uk/the-thames-barrier
Software, like all technologies, is inherently political... code inevitably reflects the choices, biases, and desires of its creators.

Jamais Cascio

wfs.org/node/840
Sustainability
People before devices
Less screens, not more
“The primary design principle underlying the Web’s usefulness and growth is universality... it should be accessible from any kind of hardware that connect to the Internet: stationary or mobile, small screen or large.

Tim Berners-Lee: Long Live the Web
scientificamerican.com/article/long-live-the-web/
Fluid grid
+ Flexible images
+ Media queries
= Responsive web design

alistapart.com/article/responsive-web-design
World Wide Web

The WorldWideWeb (W3) is a wide-area hypermedia information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an executive summary of the project, Mailing lists, Policy, November's W3 news, Frequently Asked Questions.

What's out there?
- Pointers to the world's online information, subjects, W3 servers, etc.

Help
- on the browser you are using

Software Products
- A list of W3 project components and their current state. (e.g. Line Mode, X11, Viola, NeXTStep, Servers Tools, Mail robot, Library)

Technical
- Details of protocols, formats, program internals etc

Bibliography
- Paper documentation on W3 and references.

People
- A list of some people involved in the project.

History
- A summary of the history of the project.

How can I help?
- If you would like to support the web..

Getting code
- Getting the code by anonymous FTP, etc.

info.cern.ch/hypertext/WWW/TheProject.html
Frameworks
A framework not about execution, but about philosophy and quality.

Ethan Marcotte: Laziness in the Time of Responsive Design
vimeo.com/channels/cssday/106869929
Design principles are short, insightful phrases that act as guiding lights and support the development of great product experiences. Design principles enable you to be true to your users and true to your strategy over the long term.

Kate Rutter

adaptivepath.com/ideas/newsletter/archives/120209/
Principles that address the universal nature of the web, the desires of its users and the needs of those that build for it, us.
FIRST PRINCIPLE

Start from the point of greatest adaptability
Mobile first
Content first
Structure first
Offline first
Mobile first
Content first
Structure first
Offline first
Losing 80% of your screen space forces you to focus. There simply isn’t room for any interface debris or content of questionable value. You need to know what matters most.

Luke Wroblewski: Mobile First Helps with Big Issues
lukew.com/ff/entry.asp?1117
Mobile first
Content first
Structure first
Offline first
Mobile first
Content first
Structure first
Offline first
Mobile first
Content first
Structure first
Offline first
What does ‘mobile’ mean?
Watch first?
There’s only one type of content that can be viewed on virtually any web-enabled device, and that is plain text, or rather, plain text that’s been structured with HTML.
Far From The Madding Crowd, film review: Carey Mulligan's Bathsheba would fit in better in The Hunger Games

★★★☆☆

Thomas Vinterberg’s take on Thomas Hardy’s novel is vivid when Mulligan is onscreen.

Far From The Madding Crowd may be set in late 1860s “Wessex” but one of the fascinations of Thomas Vinterberg’s new adaptation of the Thomas Hardy novel is the light it casts on our own preoccupations. The publicity hasn’t been slow to remind us that the story’s protagonist, Bathsheba Everdene, inspired the Hunger Games’ author Suzanne Collins to make her.
<div class="rating">
    <img src="star_whole.png" alt="Star number 1"/>
    <img src="star_whole.png" alt="Star number 2"/>
    <img src="star_whole.png" alt="Star number 3"/>
    <img src="star_empty.png" alt="Star number 4"/>
    <img src="star_empty.png" alt="Star number 5"/>
</div>
“How is this movie rated?”

<div class="rating">
  <p>This movie is rated 3 out of 5 stars.</p>
</div>
“How is this movie rated?”

<html>
  <div class="rating rating--3">
    <p>This movie is rated 3 out of 5 stars.</p>
  </div>
</html>
First principle:

Start from a position that makes few assumptions about context and interface, and instead focus on the information users wish to acquire and the tasks they wish to accomplish.
SECOND PRINCIPLE

Reflect the diversity of users within our practice
Universal Design

oxo.com/UniversalDesign.aspx
OXO Good Grip Vegetable Peeler

smartdesignworldwide.com/work/oxo-good-grips/
When all users’ needs are taken into consideration in the initial design process, the result is a product that can be used by the broadest spectrum of users. In the case of OXO, it means designing products for young and old, male and female, left- and right-handed and many with special needs.

OXO: Universal Design
oxo.com/UniversalDesign.aspx
Collaborative practice
The best way to understand the audiences we design for is to know those audiences. And the best way to know people is to have them, with all their differences of perspective and background – and, yes, age and gender and race and language, too – right alongside us.

Sara Wachter-Boettcher: Universal Design IRL
alistapart.com/article/universal-design-irl
Example

Universal Personas

Olivia

- 33 years old
- Lives in a her newly–purchased one–bedroom apartment in Woolwich
- Works in finance on a comfortable salary (70k) in Canary Wharf
- In a relationship but not currently cohabiting
- Technology: Proudly Apple. Owns a Macbook Air and an iPhone 6 that she purchased for personal use.
Peter
...recently had a skiing accident, and broke his wrist

Reduced motor ability

Olivia
...often uses her phone when walking to work

Poor eyesight

Sanjita
...has two children who play musical instruments

Hearing loss

flickr.com/photos/mikelo/3139837006  flickr.com/photos/ktoine/6263683606  actiononhearingloss.org.uk
Second principle:

The web is accessed by users with individual needs and desires (partially expressed by the devices they use). Multi-disciplinary and inclusive teams working together have a better chance of reflecting this diversity.
THIRD PRINCIPLE

Build using systems that can be reasoned with
Automation

flickr.com/photos/spenceyc/7481166880/
Complexity

flickr.com/photos/dominik99/384027019
Empathy is just as much about our interactions with each other while we build our sites, as it is about how we treat our users.

Susan Robertson: Practicing Empathy With Teams
alistapart.com/blog/post/practicing-empathy-with-teams
Styleguides for Lonely Planet and Yelp

styleguides.io/examples.html
Object-Oriented CSS

flickr.com/photos/13403905@N03/2080281038
Pragmatic, not dogmatic
It’s worth remembering why we’re aiming for maintainability in what we write. **It’s not for any technical reason. It’s for people**... if the priority for those people is to have simple HTML, then more complex CSS may be an acceptable price.

Jeremy Keith: Code refactoring for America
adactio.com/journal/7276
It depends
Example
Interface or content?
3 May 2015

HTTPS + Compression Considered Harmful?

BRIGHTON, ENGLAND  /  As I get closer to launching my redesigned website (this side of Christmas would be nice), I wanted to ensure pages were served over HTTPS. This reflects a broader community effort to make the web more secure and trustworthy, a move encouraged by the W3C.

Enabling HTTPS wasn’t too difficult, largely thanks to Josh’s excellent how-to guide. He recommends getting a free certificate from StartSSL, but as I have sub-domains for different staging and image resizing servers, I bought a wildcard certificate from NameCheap instead. The launch of Let’s Encrypt later this year should hopefully make this exercise easier and better yet, free.

An unexpected consequence of enabling HTTPS

With my certificates installed and HTTPS enabled, I visited my site and smiled broadly as I saw a little lock icon next to my domain. Ah, such simple pleasures.
<nav class="nav clearfix" role="navigation">
  <ul class="nav-list list">
    <li class="nav-list__item list__item">
      <a class="nav-list__label" href="#">Journal</a>
    </li>
    <li class="nav-list__item list__item">
      <a class="nav-list__label" href="#">Projects</a>
    </li>
    <li class="nav-list__item list__item">
      <a class="nav-list__label" href="#">Photos</a>
    </li>
    <li class="nav-list__item list__item">
      <a class="nav-list__label" href="#">Contact</a>
    </li>
  </ul>
</nav>
<div class="prose">
<h1>HTTPS + Compression Considered Harmful?</h1>
<p>As I get closer to launching my redesigned website (this side...)</p>
<p>Enabling HTTPS wasn’t too difficult, largely thanks to Josh’s...</p>
<h2>An unexpected consequence of enabling HTTPS</h2>
<p>More precisely, a site is vulnerable to this attack when pages:</p>
<ul>
<li>Are served from a server that uses HTTP-level compression</li>
<li>Reflect user-input in HTTP response bodies</li>
<li>Reflect a secret in HTTP response bodies</li>
</ul>
</div>
/* Clear floats */
.clearfix { }

/* Interface lists */
.list { }
.list__item { }

/* Navigation component */
.nav { }

/* Navigation list component */
.nav-list { }
.nav-list__item { }
.nav-list__label { }

/* HTML within prose */
.prose h1 { }
.prose h2 { }
.prose p + h2 { }
.prose ul > li { }
How do you know which approach to use, when?
A namespace will tell us exactly how classes behave in a more global sense. A namespace tells us exactly what a class (or suite of classes) does in non-relative terms.

Harry Roberts: More Transparent UI Code with Namespaces
csswizardry.com/2015/03/more-transparent-ui-code-with-namespaces/
Object
Reusable object that provides a structural repeated aspect of UI
.o-media
.o-list

Component
A concrete, implementation-specific piece of UI
.c-primary-nav
.c-footer

Utility
Class that has a very specific role, and often a single responsibility
.u-clearfix
.u-hidden

Scope
Component containing HTML styled using elements selectors
.s-from-content-api
.s-prose

#RWDPrinciples
<nav class="c-nav u-clearfix" role="navigation">
  <ul class="c-nav-list o-list">
    <li class="c-nav-list__item o-list__item">
      <a class="c-nav-list__label" href="#">Journal</a>
    </li>
    <li class="c-nav-list__item o-list__item">
      <a class="c-nav-list__label" href="#">Projects</a>
    </li>
    <li class="c-nav-list__item o-list__item">
      <a class="c-nav-list__label" href="#">Photos</a>
    </li>
    <li class="c-nav-list__item o-list__item">
      <a class="c-nav-list__label" href="#">Contact</a>
    </li>
  </ul>
</nav>
<div class="s-prose">
  <h1>HTTPS + Compression Considered Harmful?</h1>
  <p>As I get closer to launching my redesigned website (this side...)</p>
  <p>Enabling HTTPS wasn’t too difficult, largely thanks to Josh’s...</p>
  <h2>An unexpected consequence of enabling HTTPS</h2>
  <p>More precisely, a site is vulnerable to this attack when pages:</p>
  <ul>
    <li>Are served from a server that uses HTTP-level compression</li>
    <li>Reflect user-input in HTTP response bodies</li>
    <li>Reflect a secret in HTTP response bodies</li>
  </ul>
</div>
/* Utility: Clear floats */
.u-clearfix { }

/* Object: Interface lists */
.o-list { }
.o-list__item { }

/* Component: Navigation */
.c-nav { }

/* Component: Navigation list */
.c-nav-list { }
.c-nav-list__item { }
.c-nav-list__label { }

/* Scope: HTML within prose */
.s-prose h1 { }
.s-prose h2 { }
.s-prose p + h2 { }
.s-prose ul > li { }
Example

Image types
# RWD Principles

**Interface**
Icon supplementing or replacing a text label

```html
<svg/>
<i data-icon="?"/>
```

**Content**
Critical content, with descriptive alt text

```html
<img srcset="#"/>
<picture/>
```

**Decoration**
Visual embellishment, difficult to provide meaningful alt text

```html
<div data-img="#"/>
CSS background
```

**Unnecessary**
Nobody should see this
The Jobcentre Plus brand

Our brand encompasses the nature of our relationship with customers. It is expressed throughout our communications, the attitude of our staff, and is symbolised by our identity.

Within the offices, the expression of the brand identity is delivered through branded signs, graphic communications, and a range of component elements that are synonymous with Jobcentre Plus. These are set against a backdrop of colours, finishes and materials of the brand environment. The consistent application of the Jobcentre Plus identity and the look and feel of the environment is achieved through the use of a set of component elements that are synonymous with Jobcentre Plus.

UK unemployment total falls to 2.5m

UK unemployment fell in the three months to December, while the number in work also jumped to a new record, official figures show.

The jobless total fell by 14,000 between October and December to 2.5 million, the Office for National Statistics (ONS) said.

The number in work rose by 154,000 to 29.7 million. More than 580,000 more people are employed than a year ago.

The number of people claiming Jobseeker’s Allowance in January fell by 12,500 to 1.54 million.

Overall, the ONS said there were 29.73 million people in employment.
Third principle:

Given the complexity of the technology we use to build the web, aim to keep things simple. Build modular systems, made up of discrete, self-documented components that can be adapted and improved over time.
1. Start from the point of greatest adaptability
2. Respect the diversity of users within our practice
3. Build using systems that can be reasoned with
Strong opinions, loosely held
github.com/paulrobertlloyd/responsive-principles

#RWDPrinciples
Thank-you

paulrobertlloyd.com / @paulrobertlloyd

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