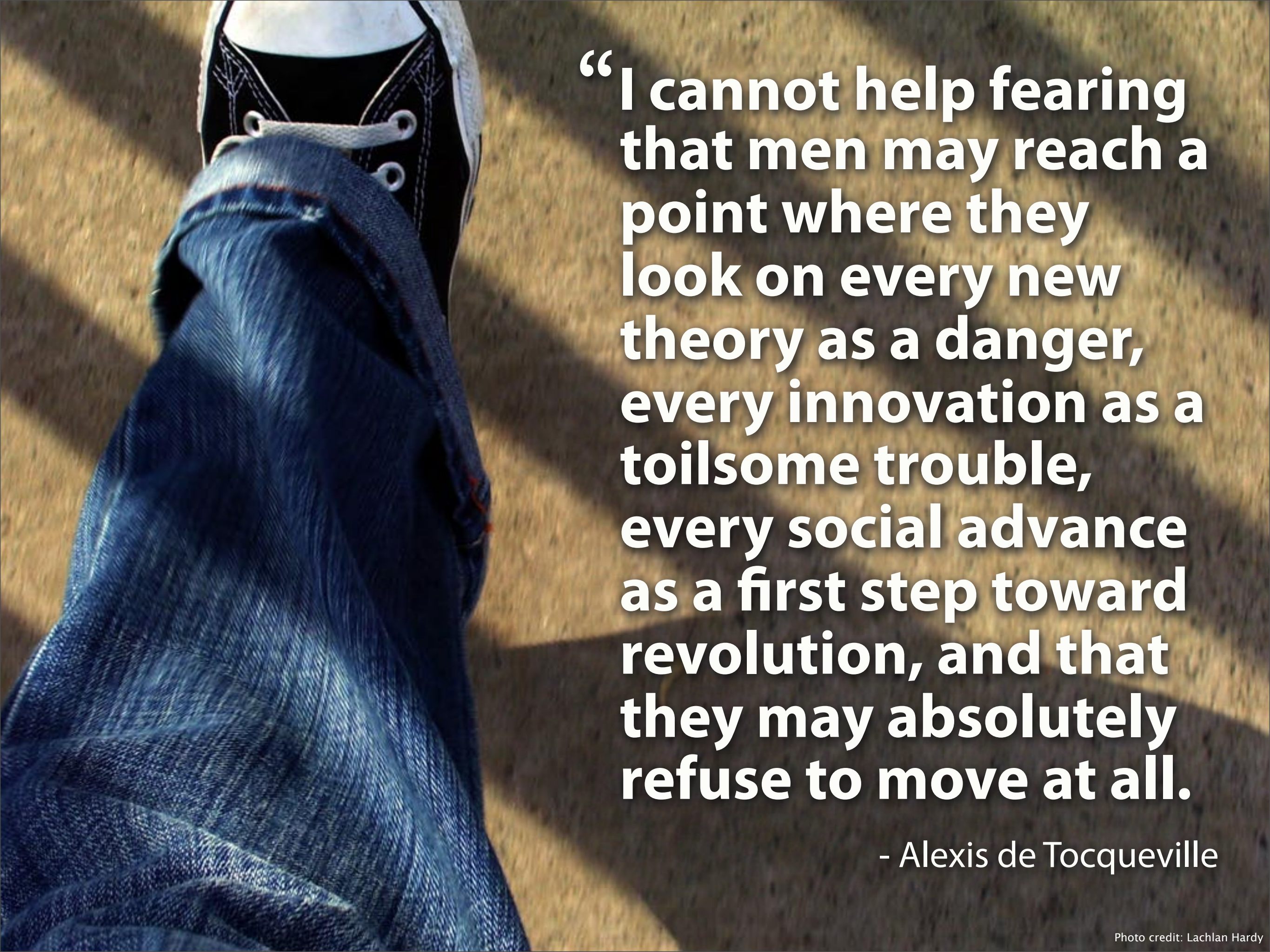


Web Standards: Fueling Innovation

Aaron Gustafson



A first-person perspective shot of someone walking on a dirt path. The person is wearing blue denim jeans and black sneakers with white laces. The path is made of dry, brownish soil and is flanked by tall, dry grass. The lighting suggests it's daytime, with shadows cast on the path. On the right side of the image, a large white quote is overlaid.

“I cannot help fearing that men may reach a point where they look on every new theory as a danger, every innovation as a toilsome trouble, every social advance as a first step toward revolution, and that they may absolutely refuse to move at all.

- Alexis de Tocqueville



HTML = Foundation

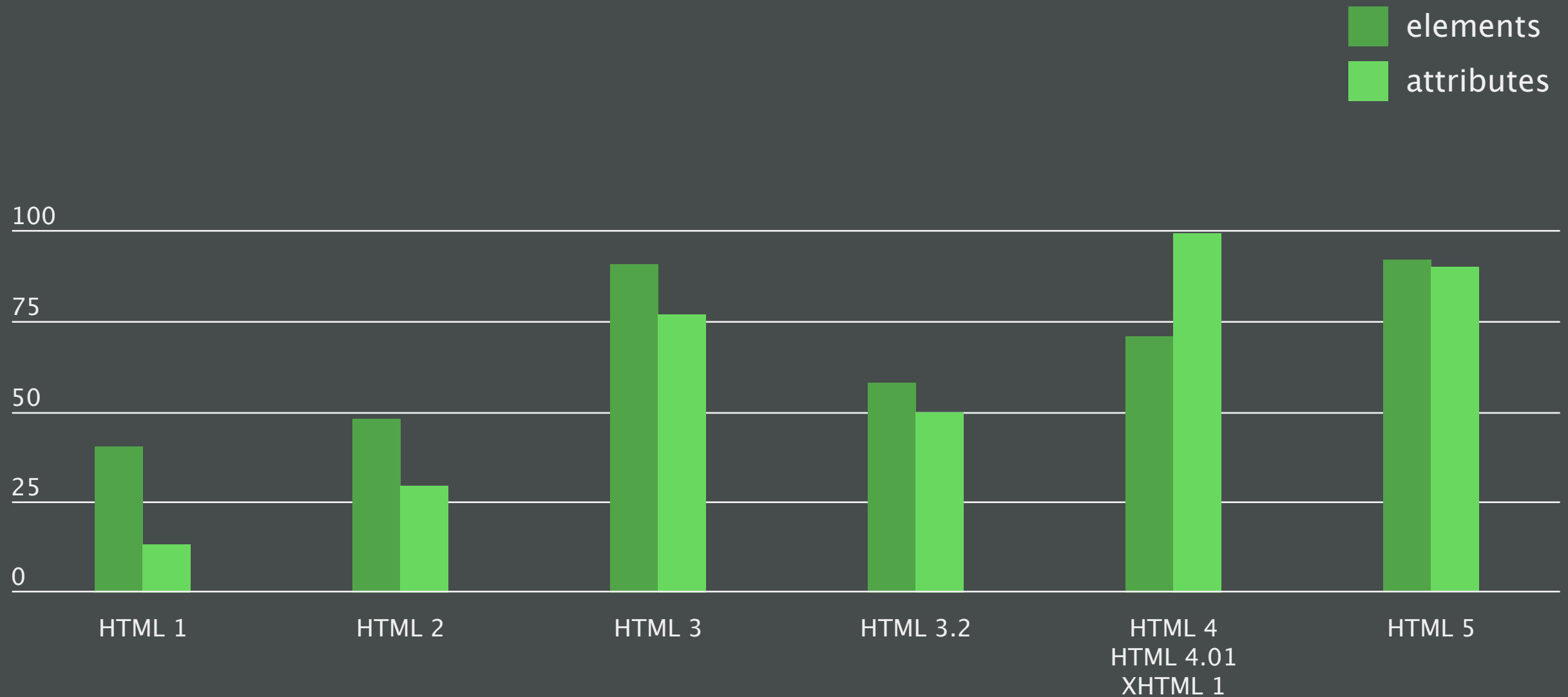
**“Art is good when it springs from necessity.
This kind of origin is the guarantee of its
value; there is no other.**

- Angela Carter



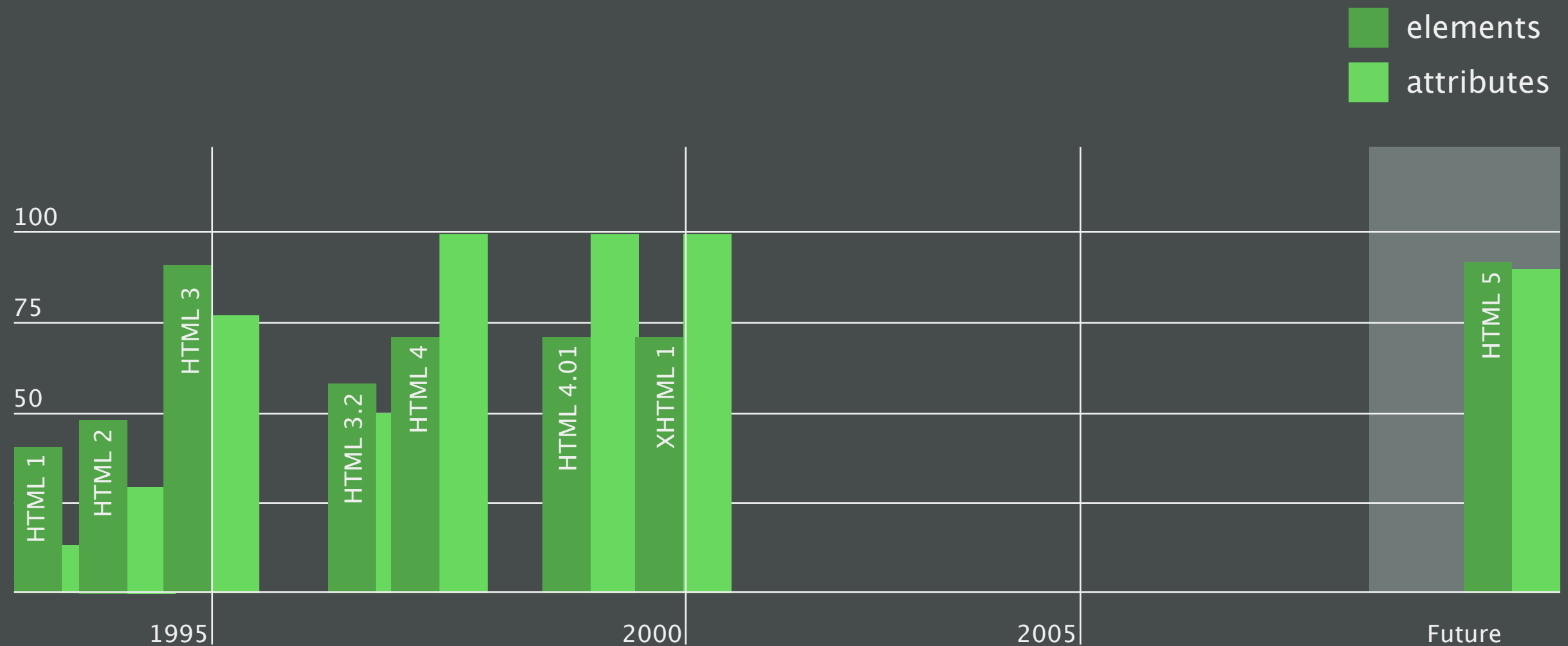


Progress



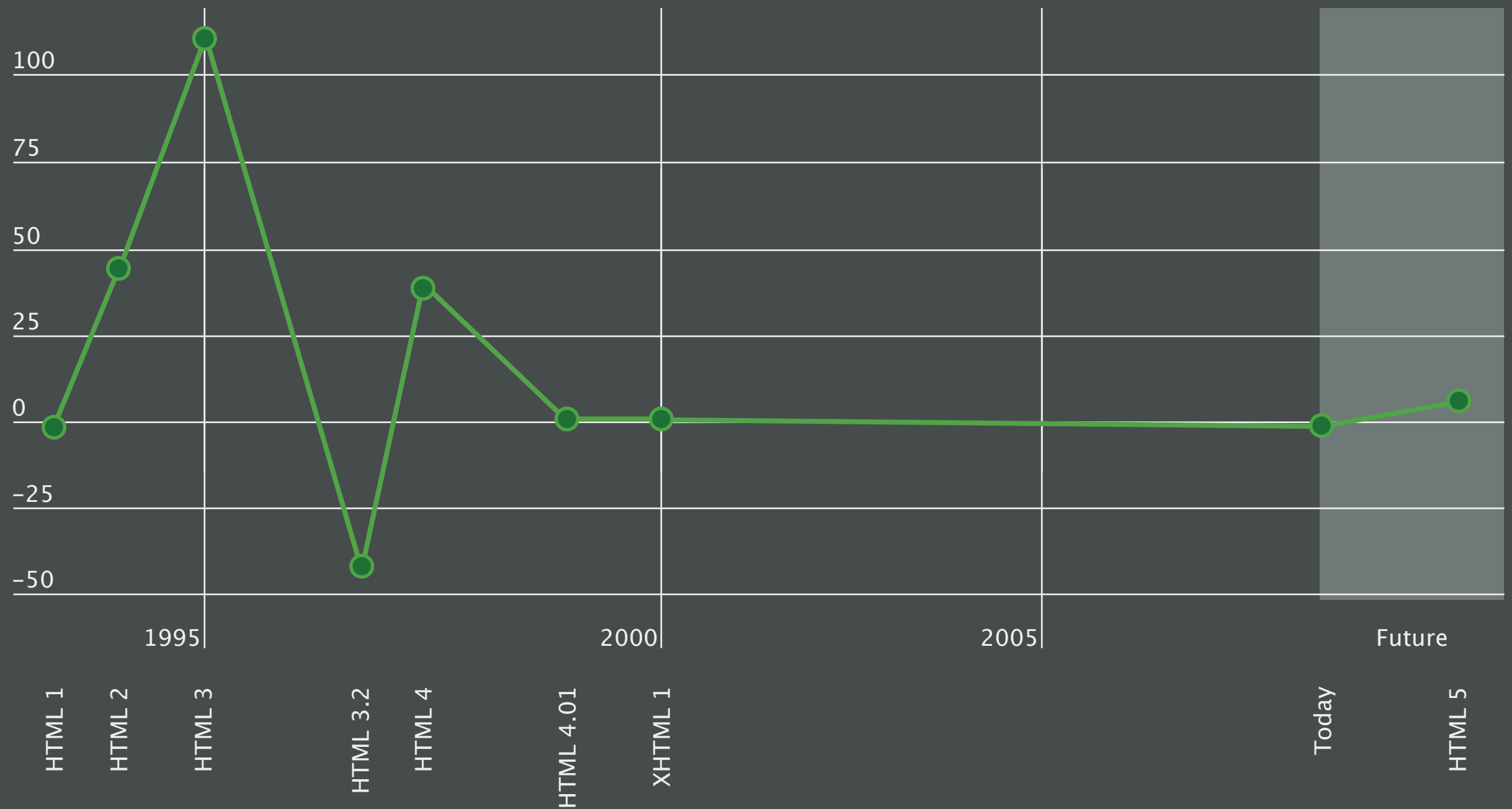


Progress?





Progress?



What's wrong with this picture?



“The arrogance of success is to think that what you did yesterday will be sufficient for tomorrow.

- William Pollard

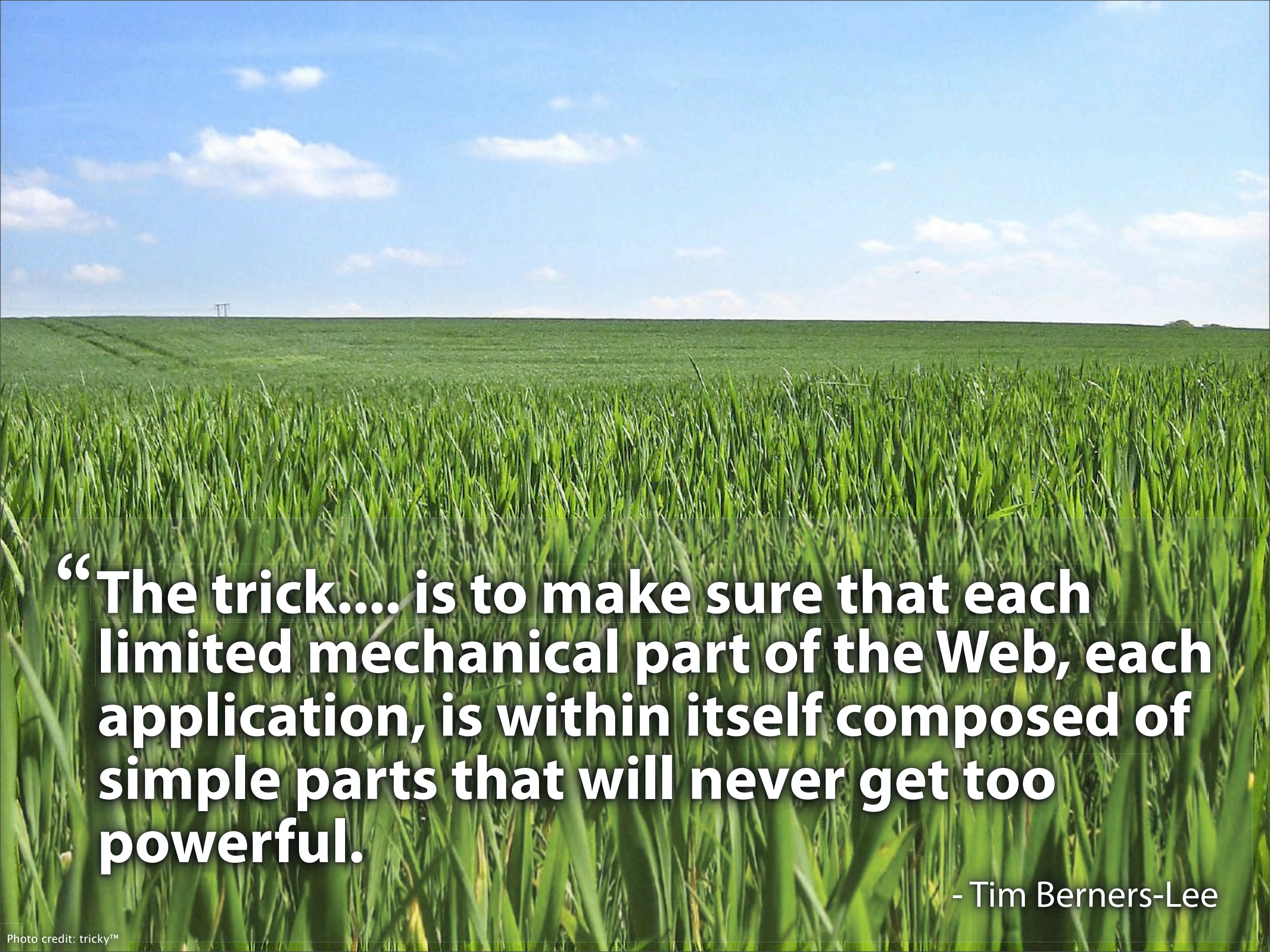


Innovation is within reach





components



“The trick.... is to make sure that each limited mechanical part of the Web, each application, is within itself composed of simple parts that will never get too powerful.

- Tim Berners-Lee




XFN:



`Kelly McCarthy`

XFN:



`Aaron`

XFN:



`Veerle Pieters`

XFN:



`Geert Leyseele`



rel-tag:

```
<a href="http://en.wikipedia.org/wiki/Rudbeckia_hirta"  
rel="tag">Black-eyed Susan</a>
```




rel-license:

```
<a href="http://creativecommons.org/licenses/by-sa/2.0/deed.en" rel="license">Creative Commons Attribution-Share Alike 2.0</a>
```




classification

Scalability

As time goes by, people's expectations change, and more will be demanded of HTML. One manifestation of this is the pressure to add yet more tags. HTML 3.0 introduces a means for subclassing elements in an open-ended way.

...

This ability to make fresh distinctions can be exploited to impart distinct rendering styles or to support richer search mechanisms, without further complicating the HTML document format itself.

- HTML 3.0 Draft

CLASS

This a space separated list of SGML NAME tokens and is used to subclass tag names.

...

The CLASS attribute is most commonly used to attach a different style to some element, but it is recommended that where practical class names should be picked on the basis of the element's semantics, as this will permit other uses, such as restricting search through documents by matching on element class names.

- HTML 3.0 Draft

“Microformats are carefully designed (X)HTML class names that extend the semantics of (X)HTML and enable authors to publish higher semantic fidelity content such as people, events, reviews, etc.

- Tantek Çelik



HTML 3:

```
<person>Joe Blow</person>
```



HTML 3:

```
<person>Joe Blow</person>
```

microformats:

```
<div class="vcard">  
  <span class="fn">  
    Joe Blow  
  </span>  
</div>
```



HTML 3:

```
<person>Joe Blow</person>
```

microformats:

```
<div class="vcard">  
  <span class="fn">  
    Joe Blow</span>  
  <a class="org url"  
    href="http://web.com">  
    Company</a>  
  <div class="tel">  
    <span class="type">  
      Work</span>  
      +1-650-289-4040  
    </div>  
  </div>
```



HTML 3:

```
<fig src="photo.jpg">  
<caption><em>Figure 1:</em>  
The "Faces of the Fallen"  
exhibit at Arlington  
National Cemetery  
</caption>  
<credit>Aaron Gustafson  
</credit>  
</fig>
```



Photo by Aaron Gustafson

Figure 1: The "Faces of the Fallen" exhibit at Arlington National Cemetery

microformats:

```
<div class="figure">

<p class="credit vcard">
  <abbr class="type"
  title="Photograph">Photo
  </abbr> by <cite
  class="fn">Aaron Gustafson
  </cite></p>
<p class="caption"><em
  class="legend">Figure 1</em>
  The <span class="subject">
  “Faces of the Fallen”
  exhibit</span> at Arlington
  National Cemetery.</p>
</div>
```



Photo by Aaron Gustafson

Figure 1: The “Faces of the Fallen” exhibit at Arlington National Cemetery

HTML 5:

<figure>

<legend>Figure 1</legend>

<p>Photo by <cite>Aaron Gustafson</cite></p>

<p>The “Faces of the Fallen” exhibit at Arlington National Cemetery.</p>

</figure>



Photo by Aaron Gustafson

Figure 1: The “Faces of the Fallen” exhibit at Arlington National Cemetery



extensibility

Why the need for XHTML?

Document developers and user agent designers are constantly discovering new ways to express their ideas through new markup.

...

The XHTML family is designed to accommodate these extensions through XHTML modules

...

These modules will permit the combination of existing and new feature sets when developing content and when designing new user agents.

- XHTML 1.0 Recommendation



Customize an existing DTD

```
<!ELEMENT input EMPTY>      <!-- form control -->
<!ATTLIST input
  %attrs;
  %focus;
  type          %InputType;   "text"
  name          CDATA         #REQUIRED
  value         CDATA         #IMPLIED
  checked       (checked)     #IMPLIED
  disabled      (disabled)    #IMPLIED
  readonly      (readonly)    #IMPLIED
  required      (required)    #IMPLIED
  size          CDATA         #IMPLIED
  maxlength     %Number;      #IMPLIED
  src           %URI;         #IMPLIED
  alt           CDATA         #IMPLIED
  usemap        %URI;         #IMPLIED
  onselect      %Script;      #IMPLIED
  onchange      %Script;      #IMPLIED
  accept        %ContentTypes; #IMPLIED
>
```




Complex custom attributes

```
<!ENTITY % VSchema
  "(email | phone | address | postcode |
   name | title |
   alpha | numeric | alphanumeric |
   date | range)"
>
<!--
  Implementation of ValidateFor
  To be used on text inputs, range takes the type of schema (VScema, above)
  validation should be performed against:
  validatefor="name"
-->
<!ELEMENT input EMPTY>      <!-- form control -->
<!ATTLIST input
  ...
  usemap          %URI;          #IMPLIED
  validatefor %VSchema;          #IMPLIED
  onselect        %Script;        #IMPLIED
  onchange        %Script;        #IMPLIED
  accept          %ContentTypes;  #IMPLIED
>
```




Or get Modular

```
<!ATTLIST %input.qname;  
  %FormValidation.pfx;limit      CDATA      #IMPLIED  
  %FormValidation.pfx;range      CDATA      #IMPLIED  
  %FormValidation.pfx;required   (required) #IMPLIED  
  %FormValidation.pfx;match      IDREF      #IMPLIED  
  %FormValidation.pfx;maxlength  %Number;   #IMPLIED  
  %FormValidation.pfx;validatefor %VSchema;  #IMPLIED  
>
```

Tutorial on XHTML Modularization: <http://tinyurl.com/52g2xc>



Put your creation to work

```
<form action="/path/to/action" method="post">
  <ol>
    <li>
      <label for="email">Your Email</label>
      <input type="text" id="email" name="email" required="required"
        maxlength="255" validatefor="email" />
    </li>
    <li>
      <label for="pw1">Password</label>
      <input type="password" id="pw1" name="pw1" required="required"
        maxlength="20" validatefor="alphanumeric" match="pw2" />
    </li>
    <li>
      <label for="pw2">Confirm Password</label>
      <input type="password" id="pw2" name="pw2" required="required"
        maxlength="20" validatefor="alphanumeric" match="pw1" />
    </li>
    <li><button type="submit">Register</button></li>
  </ol>
</form>
```


4.1.2.1 Vendor-specific extensions

In CSS, identifiers may begin with '-' (dash) or '_' (underscore). Keywords and property names beginning with '-' or '_' are reserved for vendor-specific extensions.

- CSS 2.1 Specification



Currently used by browsers

```
div {  
  -moz-border-radius: 10px;  
  -webkit-border-radius: 10px;  
  background: #444;  
  border: 3px solid #222;  
  color: #fff;  
  opacity: .9;  
  padding: 6px;  
}
```

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exercitation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iriure dolor in hendrerit in vulputate.



**be your own
vendor**



Presentation where it belongs

```
div#focal img {  
  -easy-frame: polaroid;  
}
```



An open IKEA instruction manual is shown, featuring various line drawings of assembly steps and parts lists. The left page includes a diagram of a person using tools (screwdriver, hammer), a crossed-out diagram of a person using a saw, and a diagram of two people holding a long board. The right page lists parts: 8x screws (110214), 36x screws (110216), 4x screws (110216), 11x screws (110216), and 18x screws (110216). A warning symbol is also visible at the bottom right of the right page.

putting it together

Progressive Enhancement



sweet & simple

Classification for interface control

Pumpkin Pie

OVERVIEW

INGREDIENTS

DIRECTIONS

NUTRITION

Whether you're hosting a festive party or a casual get-together with friends, our Pumpkin Pie will make entertaining easy!

Original recipe yield: 1 × 9-inch deep dish pie

Prep Time: 10min

Cook Time: 1hr

Ready In: 1hr 10min





Crufty

```
<h1>Pumpkin Pie</h1>

<div class="container">
  <div class="section">
    <h2>Overview</h2>
    
    <p>Whether you're hosting a festive party or a casual get-together with
    friends, our Pumpkin Pie will make entertaining easy!</p>
    ...
  </div>
  ...
  <ul class="tabs">
    <li><a href="#">Overview</a></li>
    <li><a href="#">Ingredients</a></li>
    <li><a href="#">Directions</a></li>
    <li><a href="#">Nutrition</a></li>
  </ul>
</div>
```




Classy

```
<h1>Pumpkin Pie</h1>

<div class="tabbed">
  <h2>Overview</h2>
  
  <p>Whether you're hosting a festive party or a casual get-together with
  friends, our Pumpkin Pie will make entertaining easy!</p>
  ...

  <h2>Ingredients</h2>
  <ul>
    <li>1 (9<abbr title="inch">in</abbr>) unbaked deep dish pie crust</li>
    <li>½ cup white sugar</li>
    <li>1 <abbr title="teaspoon">tsp</abbr> ground cinnamon</li>
    ...
  </ul>

  <h2>Directions</h2>
  ...
</div>
```



Classy

Using Prototype:

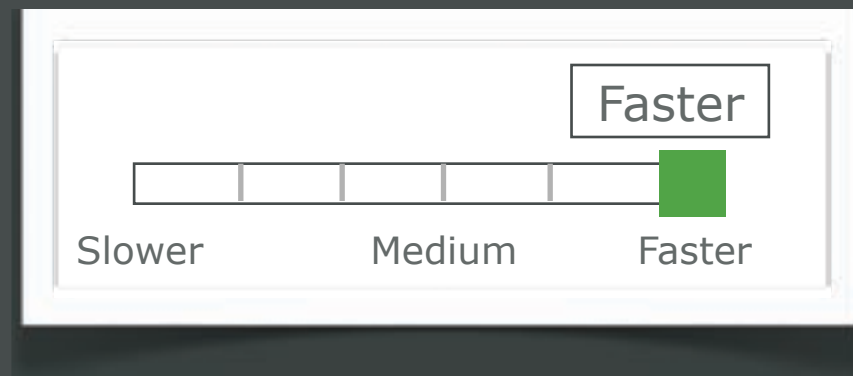
```
document.observe("dom:loaded", function(){
  var cabinet = [];
  $$('.tabbed').each( function( item, i ){
    cabinet.push( new TabInterface( item, i ) );
  });
});
```

TabInterface: <http://tinyurl.com/3paywu>

**JavaScript:
good at
looking for
things to do**



Classification for better form controls





Classy

```
<label for="speed">Select a Speed:</label>
<select name="speed" class="slider">
  <option value="Slower">Slower</option>
  <option value="Slow">Slow</option>
  <option value="Medium" selected="selected">Medium</option>
  <option value="Fast">Fast</option>
  <option value="Faster">Faster</option>
</select>
```

accessibleUISlider: <http://tinyurl.com/4kstyj>



Classy

```
<label for="speed">Select a Speed:</label>
<select name="speed" class="slider">
  <option value="Slower">Slower</option>
  <option value="Slow">Slow</option>
  <option value="Medium" selected="selected">Medium</option>
  <option value="Fast">Fast</option>
  <option value="Faster">Faster</option>
</select>
```

Using jQuery:

```
$('#select.slider').accessibleUISlider();
```

accessibleUISlider: <http://tinyurl.com/4kstyj>



Classy

```
<label for="speed">Select a Speed:</label>
<select name="speed" class="slider">
  <option value="Slower">Slower</option>
  <option value="Slow">Slow</option>
  <option value="Medium" selected="selected">Medium</option>
  <option value="Fast">Fast</option>
  <option value="Faster">Faster</option>
</select>
```

Using jQuery:

```
$('#select.slider').accessibleUISlider();
```

A step farther?

```
select {
  -jQueryUI-control: slider;
}
```

accessibleUISlider: <http://tinyurl.com/4kstyj>

Don't be afraid to get creative



rom gFss] Lorem ipsum dolor sit amet,
etuer adipiscing elit, sed diam nonummy nibh
eismod tincidunt ut laoreet dolore magna aliquam erat
volutpat. Ut wisi enim ad minim veniam, quis nostrud
exerci tation ullamcorper suscipit lobortis nisl ut aliquip
ex ea commodo consequat. Duis autem vel eum iriure
dolor in hendrerit in vulputate velit esse molestie
consequat, vel illum dolore eu feugiat nulla facilisis at
vero eros et accumsan et iusto odio dignissim qui blandit
praesent luptatum zzril delenit augue duis dolore te
feugait nulla facilisi.



Presentational Flash

```
#sidebar:after {  
  -gfss-source: url(spiral.swf);  
  -gfss-background-color: #000;  
  -gfss-flash-version: 6;  
  -gfss-quality: high;  
  -gfss-width: 50;  
  -gfss-height: 50;  
  position: absolute;  
  top: 0;  
  left: 0;  
}
```



“Innovation is the ability to see change as an opportunity - not a threat.

- Anonymous

Web Standards: Fueling Innovation

Aaron Gustafson



Slides available at
<http://slideshare.net/AaronGustafson>

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“Simple” by tricky™
“Kelly, Aaron, Geert & Veerle” by Kelly McCarthy
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