

Declarative Design

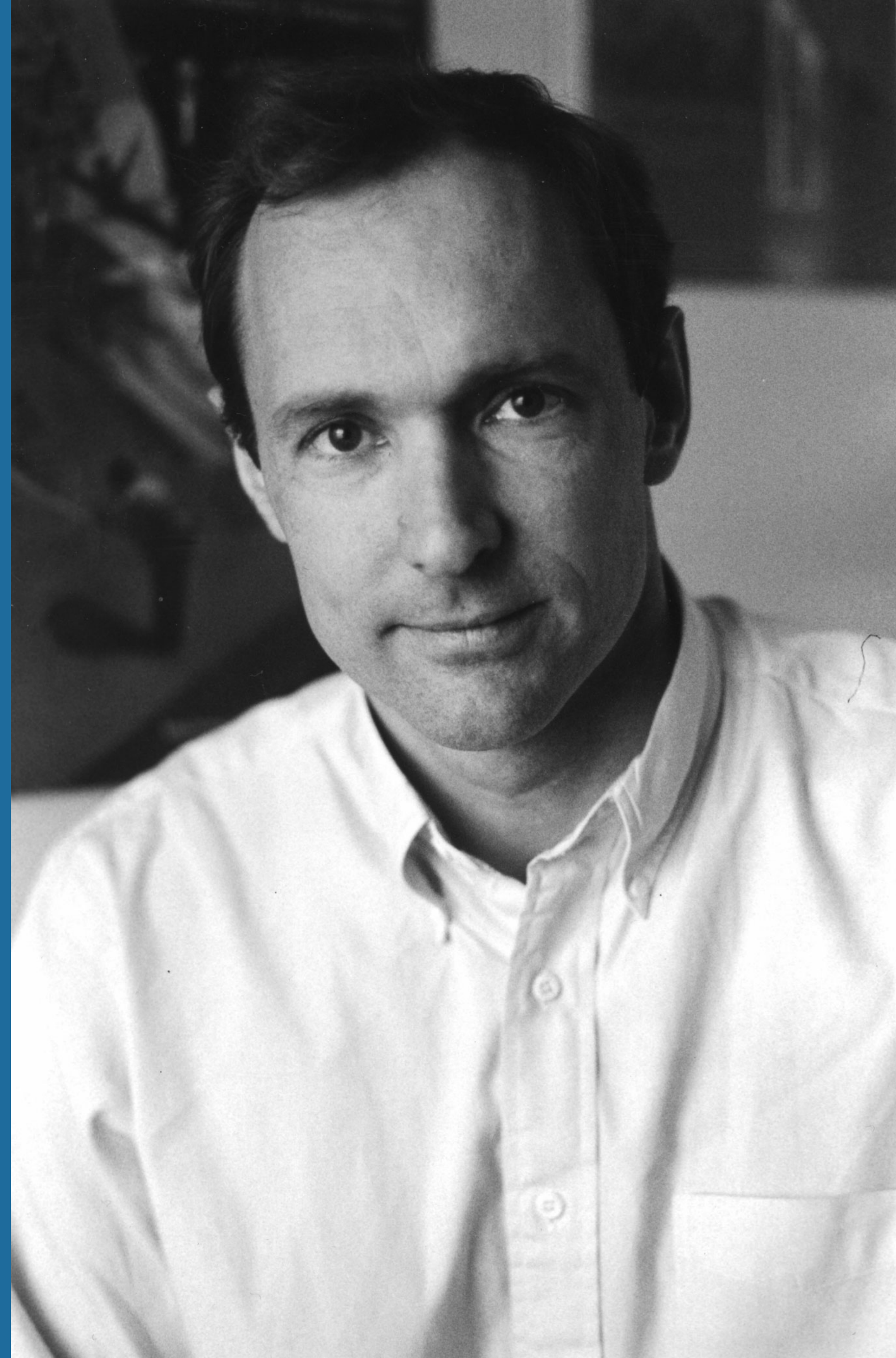
imperative

programming

declarative

**World
Wide
Web**

World Wide Web



CERN DD/OC

Tim Berners-Lee, CERN/DD

Information Management: A Proposal

March 1989

Information Management: A Proposal

Abstract

This proposal concerns the management of general information about accelerators and experiments at CERN. It discusses the problems of loss of information about complex evolving systems and derives a solution based on a distributed hypertext system.

Keywords: Hypertext, Computer conferencing, Document retrieval, Information management, Project

The principle of least power

*“Choose the least powerful language
suitable for a given purpose.”*

The principle of least power

HTML

CSS


```
h1.font.size = 24pt 100%  
h2.font.size = 20pt 40%
```


influence

user stylesheets

@prefers-...

JavaScript

JavaScript

CSS

HTML

XML

JavaScript

CSS

HTML

imperative

programming

declarative

imperative

mindset

declarative

button

```
<div
  tabIndex={0}
  onClick={onClickButtonHandler}
  onKeyDown={onKeyDownHandler}
  onKeyUp={onKeyUpHandler}
  role="button"
>
  example
</div>
```

```
function isDisabled(eventTarget) {
  const ariaDisabled = eventTarget.getAttribute("aria-disabled");
  const isDisabled = ariaDisabled === "" || ariaDisabled === "true";

  return isDisabled;
}
```

```
function onKeyDownHandler(event) {
  if (event.key === " ") {
    // We have to disable default space behavior which is scrolling page down.
    event.preventDefault();
  }
  if (event.key === "Enter" && !isDisabled(event.target)) {
    onClickButtonHandler();
  }
}
```

```
function onKeyUpHandler(event) {
  if (event.key === " " && !isDisabled(event.target)) {
    onClickButtonHandler();
  }
}
```

```
<div
  tabIndex={0}
  onClick={onClickButtonHandler}
  onKeyDown={onKeyDownHandler}
  onKeyUp={onKeyUpHandler}
  role="button"
>
  example
</div>
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  }
}
```

```
function onKeyUpHandler(event) {
  if (event.key === " " && !isDisabled(event.target)) {
    onClickButtonHandler();
  }
}
```

```
<button>
  example
</button>
```


*“JavaScript should only do what
only JavaScript can do.”*

```
<div
  tabindex={0}
  onClick={onClickButtonHandler}
  onKeyDown={onKeyDownHandler}
  onKeyUp={onKeyUpHandler}
  role="button"
>
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  if (event.key === "Enter" && !isDisabled(event.target)) {
    onClickButtonHandler();
  }
}
```

```
function onKeyUpHandler(event) {
  if (event.key === " " && !isDisabled(event.target)) {
    onClickButtonHandler();
  }
}
```

button

control

imperative

control

imperative

control

declarative

<button>

example

</button>

```
button {  
  font-size: 16px;  
  padding-left: 16px;  
}
```



```
button {  
  font-size: 1rem;  
  padding-left: 1rem;  
}
```



```
button {  
  font-size: 1rem;  
  padding-inline-start: 1rem;  
}
```

```
button {  
  font-size: calc(0.5rem + 0.666vw);  
  padding-inline-start: 1em;  
}
```

```
button {  
  font-size: clamp(  
    1rem,  
    0.5rem + 0.666vw,  
    1.5rem  
  );  
  padding-inline-start: 1em;  
}
```



```
body {  
  font-size: clamp(  
    1rem,  
    0.5rem + 0.666vw,  
    1.5rem  
  );  
}
```




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Supporting logical properties

September 30th, 2022

I wrote recently about [making the switch to logical properties](#) over on [The Session](#).

Initially I tried ripping the band-aid off and swapping out all the directional properties for logical properties. After all, [support for logical properties is green across the board](#).

But then I got some reports of people seeing formatting issues. These people were using Safari on devices that could no longer update their operating system. Because [versions of Safari are tied to versions of the operating system](#), there was nothing they could do other than switch to using a different browser.

I've said it before and I'll say it again, but as long as this situation continues, [Safari is not an evergreen browser](#). (I also understand that problem lies with the OS architecture—it must be incredibly frustrating for the folks working on WebKit and/or Safari.)

So I needed to add fallbacks for [older browsers that don't support logical properties](#). Or, to put it another way, I needed to add logical properties as a progressive enhancement.

"No problem!" I thought. "The way that CSS works, I can just put the logical version right after the directional version."

```
element {  
  margin-left: 1em;  
  margin-inline-start: 1em;  
}
```

But that's not true in this case. I'm not over-riding a *value*, I'm setting two different properties.

About this site

[Adactio](#) is the online home of [Jeremy Keith](#), a web developer and author living and working in Brighton, England.

[Get in touch](#)

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This is the plain vanilla look.

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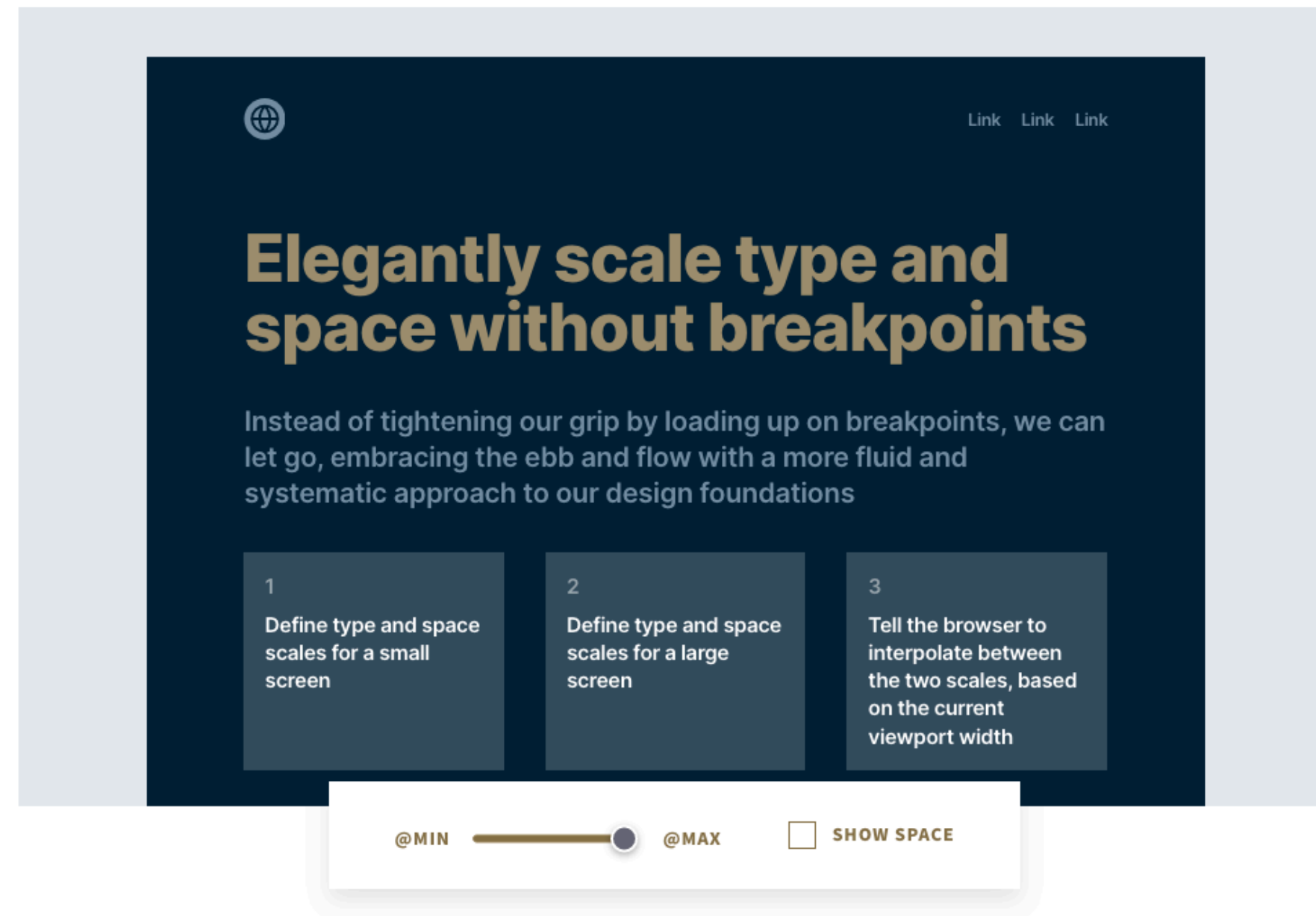
Hand-picked highlights from the archive.

- [Split](#)

utopia.fyi

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FLUID RESPONSIVE DESIGN

[Type calculator](#) [Space calculator](#) [Blog](#) [Showcase](#)



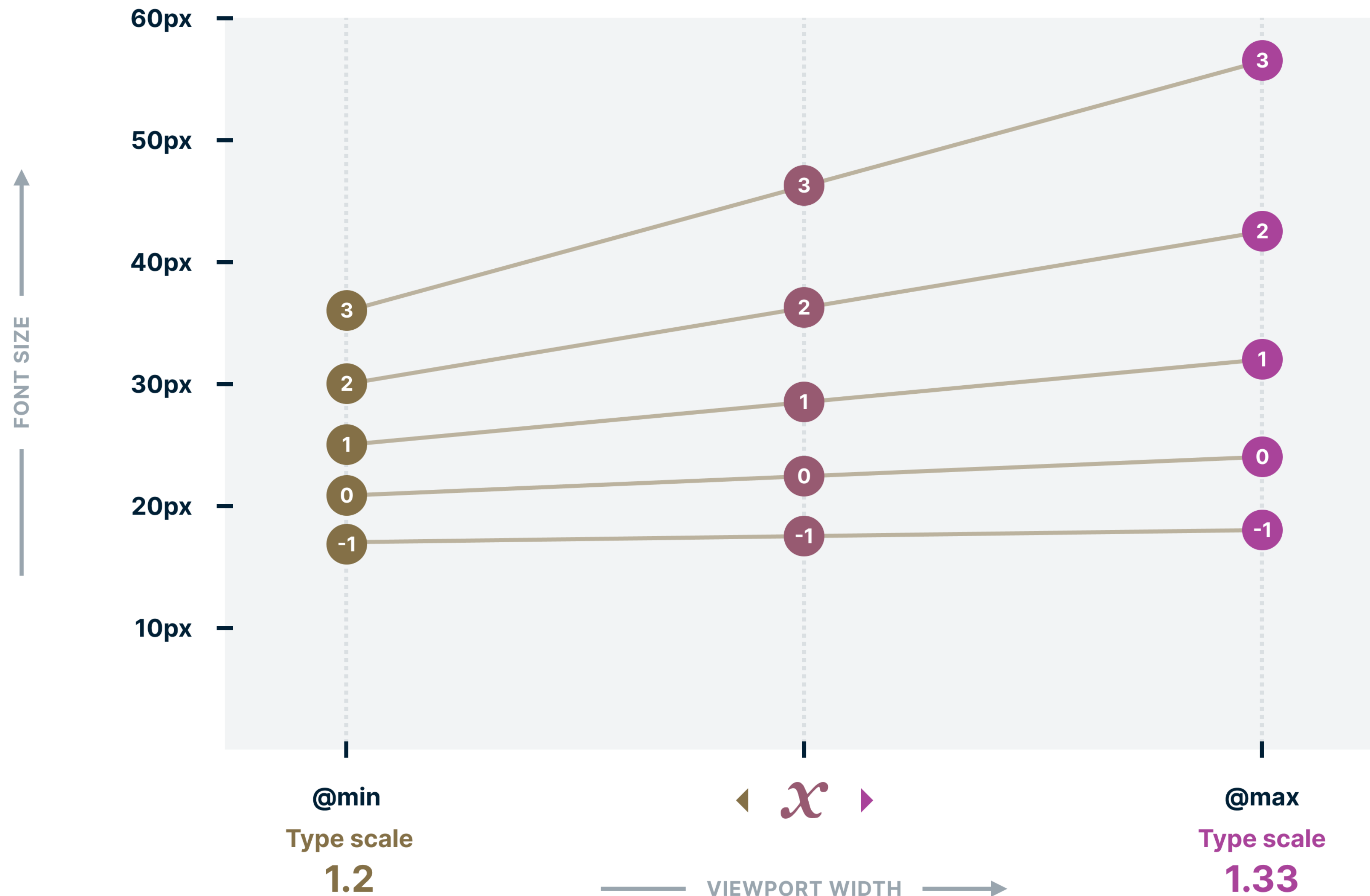
Utopia emerges when designers and developers share a systematic approach to fluidity in responsive design. Instead of designing for ∞ number of arbitrary breakpoints, we can design a system within which elements scale proportionally and fluidly. This can help you to:

- Design and code minimally and elegantly
- Streamline collaboration between design and development roles
- Ensure visual harmony and consistency

Utopia is not a product, a plugin, or a framework. It's a memorable/pretentious word we use to refer to a way of thinking about fluid responsive design. There's no program or dependency to install, although we are developing some free tools to support your next Utopian project:



Fluid interpolation between two typographic scales by viewport width



I design these

This is a large heading lorem ipsum dolor

This text is one step up the scale from body size. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore.

This is body copy lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

This is an inline heading with top and bottom spacing

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@min

Type scale
1.2

This is a large heading lorem ipsum dolor

This text is one step up the scale from body size. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore.

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This is an inline heading with top and bottom spacing

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x

Type scale



This is a large heading lorem ipsum dolor

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@max

Type scale
1.33

maths designs this

calc()

clamp()

min() and max()

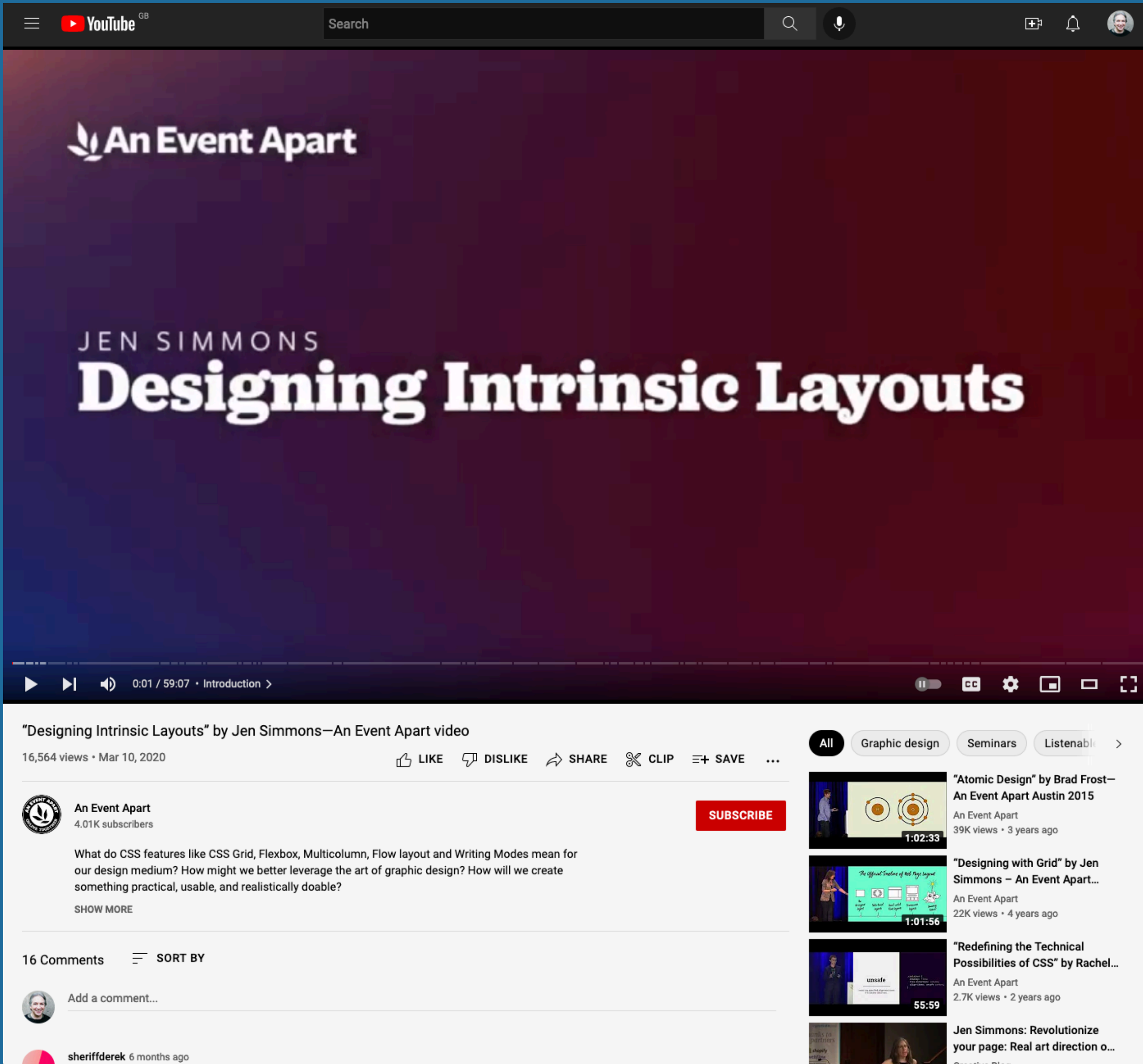
fit-content

min-content and max-content

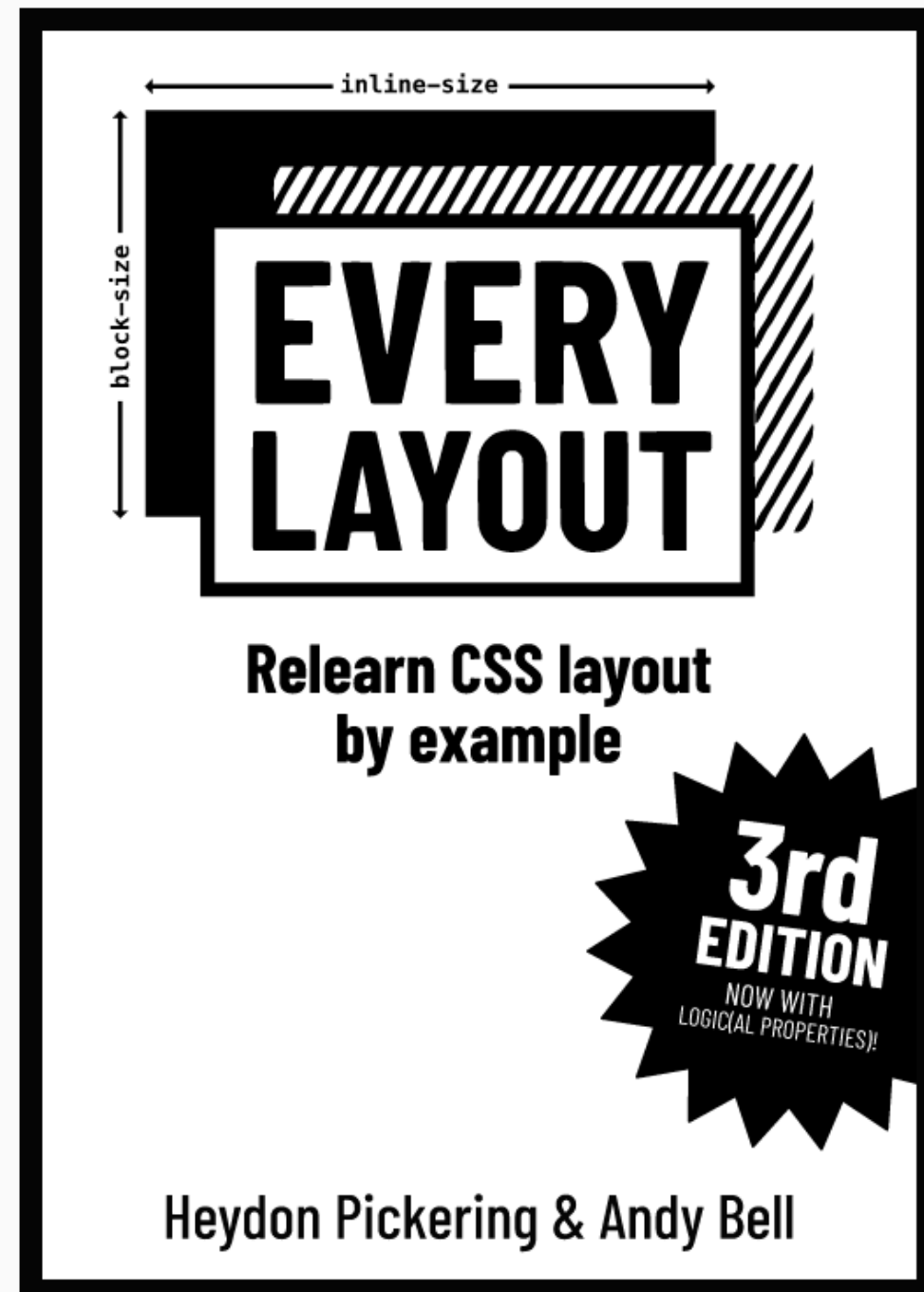
repeat()

minmax()

youtube.com/layoutland



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Be the browser's mentor, not its micromanager.

Give the browser some solid rules and hints, then let it make the right decisions for the people that visit it, based on their device, connection quality and capabilities. This is how they will get a genuinely great user experience, rather than a fragmented, broken one.

Key Foundations & Principles

Modern CSS with Methodologies

Instead of brute-forcing your designs together with a CSS framework, consider opting for a CSS methodology like CUBE CSS, SMACSS or BEM that empowers you to write flexible, portable CSS, rather than rigid,

Fluid type & Space

Creating type scales that respond to the viewport, rather than setting explicit values for typography and space allows you to set rules once and forget about them, knowing that whatever device, regardless of its available size will be presented with appropriate sizes



declarative design

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Elegantly scale type and space without breakpoints

Instead of tightening our grip by loading up on breakpoints, we can let go, embracing the ebb and flow with a more fluid and systematic approach to our design foundations

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An Event Apart

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Relearn CSS layout
by example

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declarative > imperative?

declarative > imperative?

it depends

culture

management

imperative

management

imperative

management

declarative

culture

design systems

imperative

design systems

declarative

thinking

**analytic
thinking**

**systems
thinking**

design systems

<button>

example

</button>

A brown rectangular button with rounded corners and a slight gradient.

BUTTON

A red rectangular button with rounded corners and a slight gradient.

BUTTON

A yellow rectangular button with rounded corners and a slight gradient.

BUTTON

#B45B39

#912D0E

#571D0B

#421709

#CD262F

#A60003

#6B0002

#520001

#CEA32E

#AB7906

#866004

#523C02

*“The border should be 10% lighter
than the background color.”*

declarative > imperative?

design systems

it depends

the medium

print
native apps
os-specific

**World
Wide
Web**

640px

World

800px

Wide

1024px

Web

control



“The more you tighten your grip, the more the World Wide Web slips through your fingers.”

a dao of web design

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A LIST APART

A Dao of Web Design

by [John Allsopp](#) · April 07, 2000

Published in [Accessibility](#), [CSS](#), [Layout & Grids](#), [Typography & Web Fonts](#)

What Zen was to the 70's (most famously with motorcycle maintenance), the *Tao Te Ching* was to the 90's. From Piglet and Pooh to Physics and back, many have sought sense in applying the *Tao Te Ching* to something (the *Tao of Physics*), or something to the *Tao Te Ching* (the *Tao of Pooh*). It can be a cheap trick, but lately it has struck me that there is more than a little to be understood about web design by looking through the prism of the Tao.

Daoism is a philosophy, like Buddhism, a way of living, of being in the world, which stems from a text of great antiquity, the *Tao Te Ching*, whose 81 “chapters” enigmatically sweep across human experience, but with a strong common theme, that of harmony.

For the last couple of years, for better or worse, my life has revolved more than a little around style sheets. I write software, tutorials, and guides for them; I've answered too many questions to count about them on newsgroups and via email; I've fought for their adoption with [The Web Standards Project](#). And slowly I've come to understand web design entirely differently because of them, and to see a strong association between design and the Tao.

What I sense is a real tension between the web *as we know it*, and the web *as it would be*. It's the tension between an existing medium, the printed page, and its child, the web. And it's time to really understand the relationship between the parent and the child, and to let the child go its own way in the world.

no comments yet

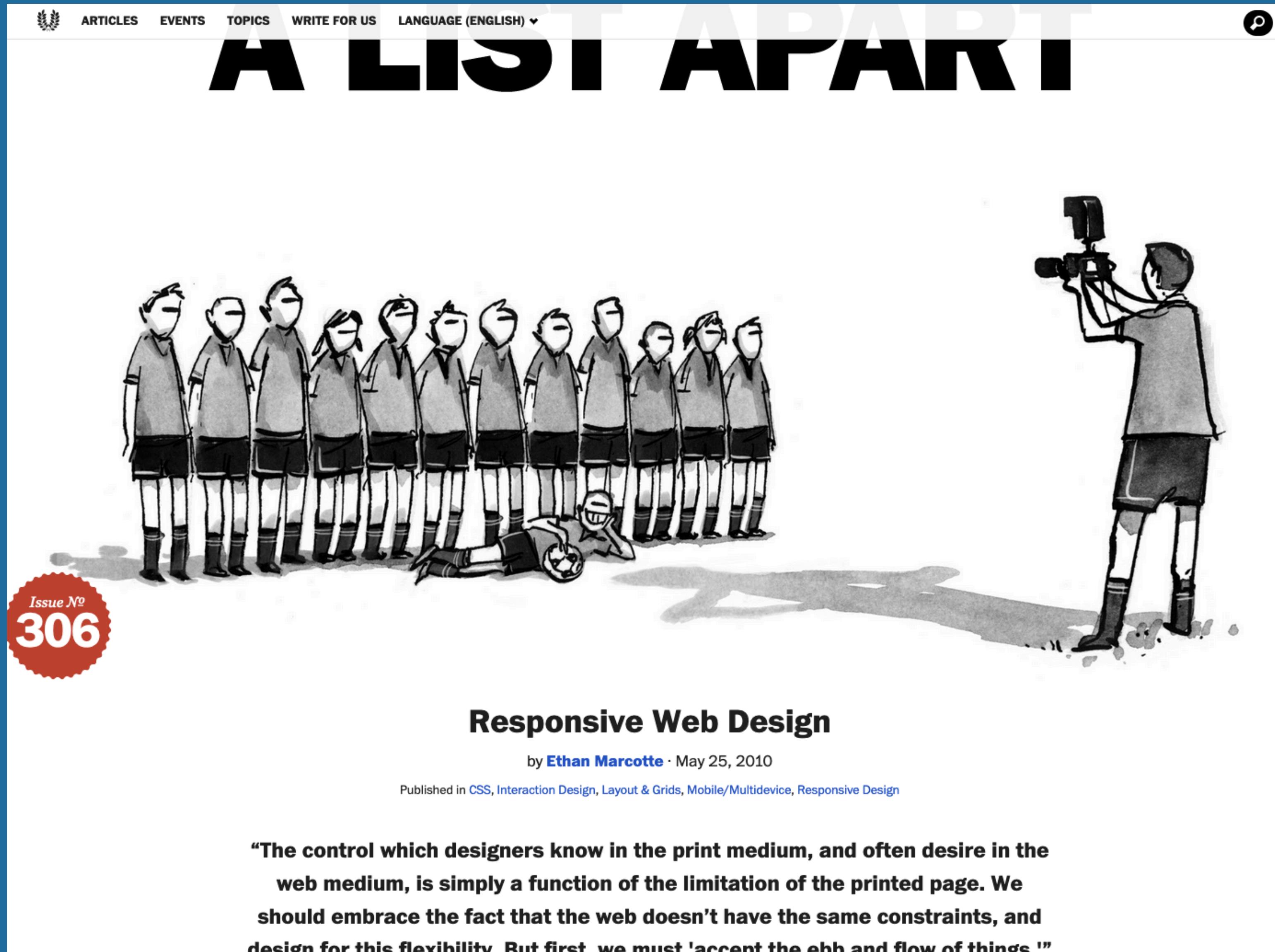
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Translations

[Russian](#)

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responsive web design



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