Say no to cookie cutter web layouts

By Chen Hui Jing / @hj_chen
The Digital Revolution
The web is unlike anything we’ve seen before
The “Blog” layout
The “Holy Grail” layout
The “Panel” layout
12 columns
Rectangles
“We need to translate ideas that we find in other places, not transfer them.”
—Jen Simmons
Let’s establish a new normal
CSS Layout Toolbox (2017)

- Flexbox
- Grid
- Object-fit
- Viewport units
- calc()
- Media queries
- Writing mode
- Transforms
- Shapes
- Feature queries
- Multicolumn
- Clip-path
Flexbox and Grid

Based on the container-child relationship

Flex/Grid container

Flex/Grid item
Flexbox

Provides “simple and powerful tools for distributing space and aligning content in ways that web apps and complex web pages often need”
# Flexbox browser support

**CSS Flexible Box Layout Module**

Method of positioning elements in horizontal or vertical stacks. Support includes all properties prefixed with `flex`, as well as `display: flex`, `display: inline-flex`, `align-content`, `align-items`, `align-self`, `justify-content` and `order`.

<table>
<thead>
<tr>
<th></th>
<th>IE</th>
<th>Edge</th>
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<th>Chrome</th>
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<tbody>
<tr>
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</tr>
</tbody>
</table>

Data from caniuse.com | embed from caniuse.bitsofp.com
Flexbox basics

.flex-cont1 {
  display: flex;
}

.flex-cont1 div {
  border: 1px solid;
}

.flex-cont1 p {
  display: none;
  border: 1px solid;
}
## Flex shorthand

<table>
<thead>
<tr>
<th>Flex Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flex: initial</td>
<td><code>flex: 0 1 auto</code>, cannot grow but can shrink when there isn’t enough space</td>
</tr>
<tr>
<td>flex: auto</td>
<td><code>flex: 1 1 auto</code>, can grow and shrink to fit available space</td>
</tr>
<tr>
<td>flex: none</td>
<td><code>flex: 0 0 auto</code>, cannot grow or shrink, AKA inflexible</td>
</tr>
<tr>
<td>flex: <code>&lt;positive-number&gt;</code></td>
<td><code>flex: &lt;positive-number&gt; 1 0</code>, can grow and shrink, extent of growth depends on flex factor</td>
</tr>
</tbody>
</table>
Flexbox layouts (1/2)

```css
.flex-cont2 ul {
  display: flex;
  flex-wrap: wrap;
}

.flex-cont2 li {
  flex: 1 0 auto;
  // border: 1px solid;
}

.flex-cont2 img {
  width: 100%;
  height: 3em;
  object-fit: cover;
  margin: 0.25em 0;
}
```
Flexbox layouts (2/2)

```css
.flex-direction:
column;
height: 100%;
}
.flex-cont3 li {
  // border: 1px solid;
  flex: auto;
}
.flex-cont3 img {
  width: 5em;
  height: calc(100% - 0.5em);
  object-fit: cover;
  margin: 0.25em 0;
}
```
calc() and object-fit browser support

CSS3 object-fit/object-position
Method of specifying how an object (image or video) should fit inside its box. object-fit options include "contain" (fit according to aspect ratio), "fill" (stretches object to fill) and "cover" (overflows box but maintains ratio), where object-position allows the object to be repositioned like background-image does.

calc() as CSS unit value
Method of allowing calculated values for length units, i.e. `width: calc(100% - 3em)`.
CSS Grid

Defines a two-dimensional grid-based layout system, optimized for user interface design.
**CSS Grid browser support**

CSS Grid Layout 📊
Method of using a grid concept to lay out content, providing a mechanism for authors to divide available space for layout into columns and rows using a set of predictable sizing behaviors.

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<th>Chrome for Android</th>
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Data from caniuse.com | Embed from caniuse.bitsofcode.de

Global: 66.65% + 4.63% = 71.28%
RUDY GOT SOUL
CSS grid basics

Define your grid.
Place items in the grid.
Fixed CSS grid

.container {
  display: grid;
  grid-template-columns: repeat(5, 10em);
}
Fluid CSS grid

```css
.container {
  display: grid;
  grid-template-columns: repeat(5, 1fr);
}
```
Responsive CSS grid

```css
.container {
  display: grid;
  grid-template-columns: repeat(5, minmax(10em, 1fr));
}
```
Placing grid items

grid-row and grid-column

Grid Track

Grid Cell
But books are good only as far as a boy is really for them. He sometimes gets empty of books and then he becomes a book critic, or a book reviewer. But books are not for the book critic. They are for the boy who reads them. The boy who reads them is the reader. The reader is the book. The book is nothing but the reader.

R.W. Emerson - 1840

THE GONDOU OF LIFE

CULTURE
Whitespace

```
.grid-cont1 ul {
  display: grid;
  grid-template-columns:
  repeat(auto-fill, minmax(3em, 1fr));
  grid-template-areas: "a b . . c"
                 ".. d .."
                 "e . . . f";
}
.grid-cont1 li:nth-child(6) {
  grid-area: f;
}
```
Was Kunst häufig so harmlos macht, ist gerade ihre Selbstüber- schätzung. Der naive Glaube, alle Probleme erkennen, begreifen, subtil verfremden, interdisziplinär vernetzen und am Ende in ausstellbare Form bringen zu können, ist die eigentliche Ursache für das Krankheitsbild Irrelevanz, das viele Kunstwerke heute so schön und teuer, aber auch so weltfremd und unwissend macht. Das Projekt „Borderline“ bei FACT Zollverein unternahm deshalb den Versuch, Interdisziplinarität auf den Prüfstand zu stellen. **Wie viel weiß Kunst vom Leben draußen?** Und was
Ping

Yang
Overlap (1/2)

```css
.grid-cont2 {
    display: grid;
    grid-template-columns: repeat(9, 1.25em);
    grid-template-rows: repeat(6, 1.25em);
}

h2 {
    grid-row: 3 / 5;
    grid-column: 1 / 10;
}

.grid-cont2::before {
    grid-row: 1 / 7;
    grid-column: 1 / 7;
}

.grid-cont2::after {
    grid-row: 1 / 7;
    grid-column: 4 / 10;
}
```
Overlap (2/2)

```
main {
    display: grid;
    grid-template-columns: repeat(auto-fill, minmax(8em, 1fr));
    grid-auto-rows: 8em;
}

@media screen and (max-width: 383px) {
    main {
        grid-template-rows: 3em repeat(auto-fill, 8em);
    }
}

@media screen and (min-aspect-ratio: 1/1) {
    main {
        grid-template-columns: repeat(4, minmax(25vw, 5em));
        grid-template-rows: repeat(3, calc(100vh / 3));
        grid-template-areas: "a b c";
    }
}
```
Firefox Grid Inspector (1/2)
Firefox Grid Inspector (2/2)
Transforms

Allows us to change the shape and position of the affected content without disrupting the normal document flow
Sant Jordi a les Biblioteques 2008

22.04.08
19h
Saló de Cent de l’Ajuntament de Barcelona

Pregó de la lectura a càrrec d’Alessandro Baricco
<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>rotate(&lt;angle&gt;)</code></td>
<td>Performs a 2D rotation by the specified angle around the element’s origin</td>
</tr>
<tr>
<td><code>translate(&lt;translation-value&gt;[,&lt;translation-value&gt;])</code></td>
<td>Performs a 2D translation in the specified X and Y directions</td>
</tr>
<tr>
<td><code>skew(&lt;angle&gt;[,&lt;angle&gt;])</code></td>
<td>Performs a 2D skew by the specified angles</td>
</tr>
<tr>
<td><code>scale(&lt;number&gt;[,&lt;number&gt;])</code></td>
<td>Performs a 2D scale operation by the specified scaling vector</td>
</tr>
</tbody>
</table>
Diagonal text with rotate()
14 NOVEMBER 2012

ORAN MOR

SNARKY PUPPY
FEDERATION OF THE DISCO PIMP

WEST SIDE STORY
DIRECTED BY ROBERT WISE

NATALIE WOOD
RUSS TAMBLYN
RITA MORENO
GEORGE CHAKIRIS

www.ticketslondon.com
NEW DIRECTIONS IN PORTUGAL
Aires Mateus – Brothers of Invention

PORTUGAL’S IMPRESSIVE CULTURAL AND CREATIVE POTENTIAL WAS FIRST REVEALED TO THE WORLD OF MODERN ARCHITECTURE BY ÁLVARO SIZA, IN HIS WAKE A NEW GENERATION OF ARCHITECTS IS EMERGING THAT INCLUDES MANUEL AND FRANCISCO AIRES MATEUS. THEIR WORK IS BOTH STRONGLY INTERNATIONAL AND ROOTED IN ITS PARTICULAR PLACE.

By Deirdre Cartier, Photography by Daniel Malheiros

Manuel and Francisco Aires Mateus are brothers who, after studying architecture at the Technical University in Lisbon, while still students, rented a studio together in 1984. Their previous practice revolves two studios in the heart of Lisbon—a two-in-the-mountain shell of an apartment workshop and the other in a town house, where they worked collaboratively. With a solid reputation based on designs for homes and successful competition-winning proposals, they have established a new building in historic settings and impressive landscapes. They are proving their increasing significance in the development of new architectures in Portugal.

The thoughtful relationship of buildings to landscape and the connecting interpretation of their work is recognized by dr. Luis Ribeiro and Pedro Matos, who collaborated projects designed by the Aires Mateus brothers in the exhibition Portuguese Spanish: Bee-Tex Innovation in Architecture. Shown first in Lisbon and later in Seville in 1994, it aimed at presenting the work on the current group of artists and architects, but suggested “from collaborations and contradictions, innovation.”

OPPOSITE PAGE: For his house in Montejo (2001), a small village just outside of Lisbon, Aires Mateus combined a rational and rigorous approach to the materials and forms. This house was designed as a single house, using them as a life artwork in which the concept is the whole. The result is a unique and innovative approach to living. For the new house, the architects developed a sustainable approach.

Text continues on page 43...
Rethinking Web Design
Transforms browser support

**CSS3 2D Transforms**
Method of transforming an element including rotating, scaling, etc. Includes support for `transform` as well as `transform-origin` properties.

**CSS3 3D Transforms**
Method of transforming an element in the third dimension using the `transform` property. Includes support for the `perspective` property to set the perspective in z-space and the `backface-visibility` property to toggle display of the reverse side of a 3D-transformed element.
I'm no prude. Before I go to America to get coffee at the coffee shop, I take a rest in the bathroom, drink coffee and smoke cigarettes. I think that's good, but I have a bad habit. I just gave up smoking because I was really addicted to it. Now I'm much better. When I'm alone, I like to smoke in the quietness of my room. I think it's my own indulgence.

10:00 A.M. In England, there's no exercise element in America. I'm starting the day when I have a tea with my friend. I meet my friend at 10:00 A.M. in London, and then we go to work. We've been in London for two months, and then we move to Paris. We're leaving for New York. The past two months have been a learning curve. If my diary doesn't have any events in it, it means that people on the team will take advantage of that and I'll split apart. It's the bicultural story about how they didn't split the baby in half because they couldn't decide whose it was. I see a real life like that.

11:30 A.M. When I go to Jack's, I have coffee. I go to the store and get some coffee and bread for New York. I'll take them to the store, or when we're going to a number of different shops around the city, I get them on the back of my motorbike. 12:00 P.M. I'm a journalist, but I want to do TV again. Someone said to me that day: "Name someone you need to focus on, one thing because you can't succeed if you do it simultaneously." I won't allow people to know what I do. In the afternoon, I might go back home, do some work, and my assistant sends me a note that says, "If you're not in your office, my assistant will tell me to tell you." 2:00 P.M. I'm a fashion designer, and I love the Seed Language of Fashion. You put it in the store and it comes back with a survey of people on that day and their attributes—it's so spot on. It's a story from the Week of Style. I think it just means that I like things, I'm a collector and dark. 10:00 P.M. In London, there's a shop called the Drift Club in the East Village. If I've finished my work I'll stay there. I'll be lonely and hungry at that point, so I'll pick up a coffee and a sandwich from across the road and take it to the store. I have a couple of friends, and I'll be one of them. I know they'll be here for the time. I'm not very strict with them—I don't like drastic fashion. I'll try my best to eat at a table and half of it spent at a hotel, like a restaurant. I'm one of the people who love living in the city and are one of the people who love living in the city. If you're not in the city and are one of the people who love living in the city, you need to focus on one thing because you can't succeed if you do it simultaneously. I won't allow people to know what I do.
THE TROUBLE WITH

When the price of oil soared to the point it threatened to undermine the economic stability of major oil-producing countries, governments and businesses in the region were reportedly in panic. The Gulf states, in particular, were facing a crisis as oil prices fell, threatening to undermine their economic stability. This was especially true for the Gulf Cooperation Council (GCC) countries, which derive a large portion of their revenue from oil exports.

The high costs of oil production and transportation, coupled with falling prices, put pressure on government budgets and led to cuts in social spending. This was particularly true in the GCC countries, where the government is the main employer and a key provider of social services. Many of the GCC countries are also heavily dependent on oil revenues for their budget, which makes them vulnerable to fluctuations in oil prices.

It should be the foundation upon which diverse, sustainable economies are built, not an indispensable crutch. So why are Gulf states finding change so difficult?

By Sian Ovenden
Out of Control

Is Ukraine the Next Yugoslavia?

Who Are You Calling a Slut?

Husband's death inspires a lifesaver

Coach Kim checks in at Mayo for tests

NEXT STOP FOR LYNX: NINJA FINALS

Congrats back to belicin for shutting off horn
CSS Shapes
Defines properties to control the geometry of an element’s float area
Basic shapes

Lollipop marshmallow lemon drops jujubes muffin fruitcake bonbon. Muffin carrot cake bear claw sweet roll tiramisu chocolate jelly beans toffee sweet roll. Biscuit candy sweet sweet powder tart bear claw. Tiramisu jelly beans apple pie donut topping dessert lemon drops gummies halvah.


Gummi bears apple pie chupa chups jelly pie halvah pastry sweet. Cookie dessert sweet roll icing cheesecake macaroon wafer cheesecake. Toffee lemon drops apple pie fruitcake sweet roll chocolate cake jelly bear claw jelly. Donut tiramisu chocolate cake sesame snaps marshmallow tootsie roll candy canes cheesecake cotton candy.

Cake powder croissant lollipop cotton candy tiramisu lollipop tiramisu. Cookie candy canes gummies jujubes bonbon fruitcake ice cream gingerbread. Marzipan toffee carrot cake marshmallow danish cupcake jelly-o.

Beyoncé Giselle Knowles-Carter is an American singer, songwriter, dancer and actress. Born and raised in Houston, Texas, Beyoncé performed in various singing and dancing competitions as a child. She rose to fame in the late 1990s as lead singer of the girl group Destinys Child.
To be honest, the W3C spec is not that easy to understand, so here’s my attempt at explaining it in plain English. A prerequisite for applying CSS shapes properly is that the element must be flowable, meaning that it must be a block-level element.

In other words, how you want the text to flow around your element. In addition to that, you can also extract a shape from images with an alpha channel using CSS. The syntax for this is: `shape-outside: url(image-url);` where `image-url` is the URL of the image you want to use as a shape.

To add a shadow to the boundary of the image, you can use the `box-shadow` property. Here’s an example:

```
.box {
  box-shadow: 5px 5px 5px rgba(0,0,0,0.5);
}
```
WASH YOUR FACE

BEAUTY Tales

ENIGMA Daria

45 Moment sailing, Koreanizing, siliconized generally jangling and in somewhat Firth, Darya (Koreanizing) schooled, under glasses, in the Banshee Empire. The 1911 Kurewits, Tarcha, thankless, she seizes in the end in the end by the end in the end, and the Draftsman, as Bile der as sun shines with the Prada Campaign in Berlin 2015, as a loose Ginette in Los Angeles murder, and the Fall woven in the end, she made from a beginning in the 1911, an end, the end, she made from a beginning in the 1911, an end, she made from a beginning in the 1911, an end, she made from a beginning in the 1911, an end, she made from a beginning...
Writing-mode

Defines CSS features to support for various international writing modes
上海中國商務廣告公司

生髮香油乃開關之妙品，因其有
後具旖旎，本行特製此潤髮水
而不起腥而不顧為男女最適用

花香體以調皮草風采養血薑品
乃売る於經男女中，中藥來扼要時
解汗而且香潤護理長髮上

之功用其滴漬本中亦其解清

佐為此香油且速速之也

修造名品中之價值

廣生行銷

生髮現補

雙妹香水潤髮液

雙妹香水潤髮液

雙妹香水潤髮液

雙妹香水潤髮液
Kansai Yamamoto
Fashion Avant-Garde - Art + Culture
Japanese Contemporary Kimono - Classic
“How did we all get here today? The choices we made, the sheer force of our will, something like that? Here’s another answer... the winds of fate. Random coincidence, some unseen hand just pushing us along. Destiny.”
Vertical headers

話年止有簡年及文言，城導群中的一
风也槟走单轻家化惜语。致岛国特个

庇能福建の故事
PGHK stories

Slim waist no good?
Why build this site?
Not yet k-out
Han-na, han-naa
Have a story? Send it in!

Speak
Banana
A guidebook
Learning
Building for cross-browser compatibility

This is the third post of a multi-part series about developing the brand identity for Wismut Labs.
Vertical navigation

Without roots.
Everywhere.
THEN SUGDENLY, IN A FLASH, I SAW SOMETHING WHITE BEING GRABBED. I TURNED AROUND AND CLICKED THE MOMENT THE SAILOR KISSED THE NURSE.

ALFRED EISENSTAEDT

VICTORY OVER JAPAN DAY
Bogart

Humphrey

It was during Bogart's naval stint that he developed his characteristic lisp, though the actual circumference of his uncle's.
An der Schnittstelle zwischen persönlichem Schicksal und melancholischer Langeweile — wenn das Warten zum Bild wird.
# Feature Queries

**CSS Feature Queries**

CSS Feature Queries allow authors to condition rules based on whether particular property declarations are supported in CSS using the `@supports` at rule.

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Data from caniuse.com | Embed from caniuse-bitpfo.de
.selector {
    /* Styles that are supported in old browsers */
}

@supports (property:value) {
    .selector {
        /* Styles for browsers that support the specified property */
    }
}
“CSS isn’t a programming language. It’s a stylesheet language. We shouldn’t expect it to behave like a programming language. It has its own unique landscape and structures, ones that people with programming language mental maps might not expect.”

—Danielle Huntrods
A long list of references

- CSS Isn’t Black Magic
- Six Layout Myths Busted
- List of CSS properties, both proposed and standard
- CSS Inheritance, The Cascade And Global Scope: Your New Old Worst Best Friends
- History of Flexbox
- 11 things I learned reading the flexbox spec
- Deep Dive into Grid Layout Placement
- CSS Grid Layout and positioned items
- Powerful New Additions to the CSS Grid Inspector in Firefox Nightly
- There are maps for these territories
The CSS Layout Workshop

Does this sound familiar?

“Love designing a site, but then find I have to compromise the design when it comes to building it with CSS.”

“My approach to building layouts is to try things, reload and see what happens.”

“I use a framework to do my layouts. I’d love to know what it is really doing under the hood.”

“Once I get my CSS working I’m afraid to make changes in case it all falls apart again!”

“I’ve never really understood why margins collapse.”

Salamat!

http://www.chenhuijing.com

@hj_chen

@huijing