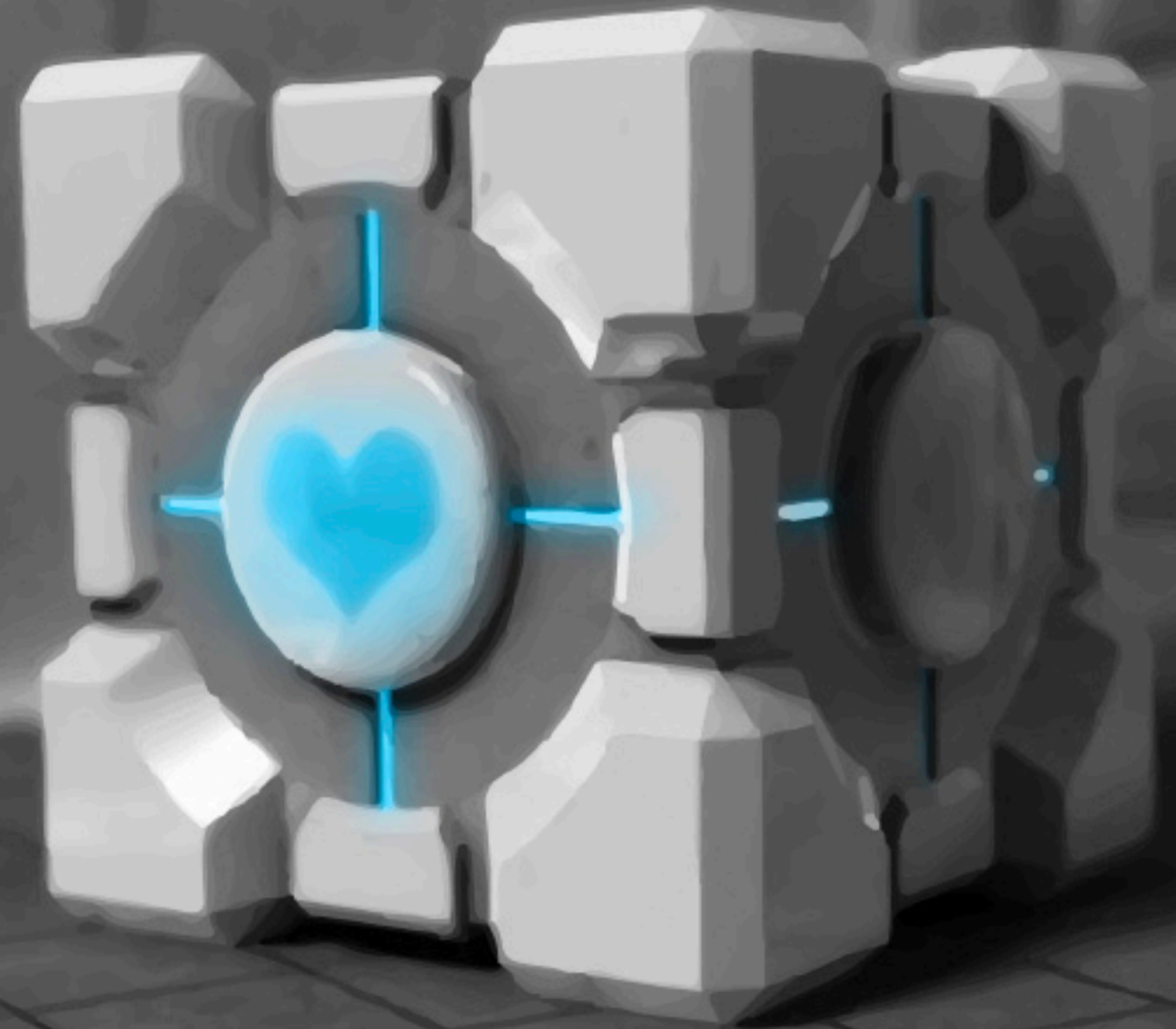What are React Portals?

Why are they useful?

How do you use them?

Let's have some cake.

ben draws life

React Portals can render content outside of our main application

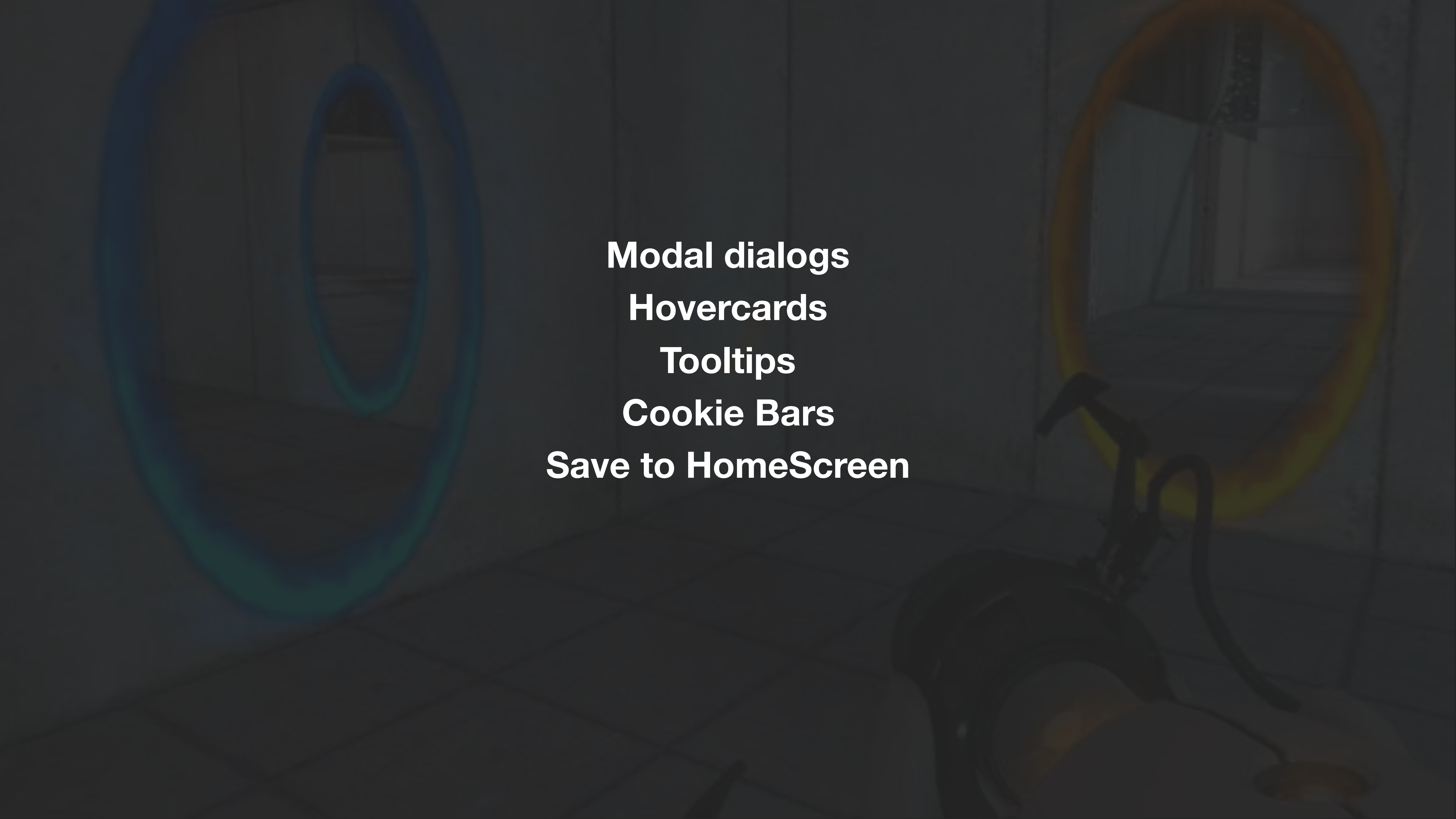**Typical use case:**

When a parent component has

`overflow: hidden` **or**
`z-index style`

**but the child needs to "break out"
of its container.**

Modal dialogs
Hovercards
Tooltips
Cookie Bars
Save to HomeScreen

Using Portals

My website

Welcome to my website Lifeworkers!

Show modal

```html
<!DOCTYPE html>
<html lang="en" class=" -webkit-">
  <head>…</head>
  <body>
    <div id="app">
      <div class="app">
        <h1>My website</h1>
        <p>
          "Welcome to my website "
          "Lifeworkers"
          "!"
        </p>
        <button>Show modal</button>
      </div>
    </div>
    <div id="modal"></div>
    <script src="//static.codepen.io/assets/common/stopExecutionOnTimeout-b2a7b3f….js"></script>
    <script src="https://cdnjs.cloudflare.com/ajax/libs/react/16.2.0/umd/react.development.js"></script>
    <script src="https://cdnjs.cloudflare.com/ajax/libs/react-dom/16.2.0/umd/react-dom.development.js"></script>
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    ▶<script>…</script>
  </body>
</html>
```

"*Portals provide a first-class way to render children into a DOM node that exists outside the DOM hierarchy of the parent component.*

ReactDOM.createPortal Syntax

```
ReactDOM.createPortal(child, container);
```

`child` - any React child
`container` - DOM element

HTML

```html
<div id="app"></div>
<div id="modal"></div>
```

JavaScript

```javascript
// These two containers are siblings in the DOM
const appEl = document.getElementById('app');
const modalEl = document.getElementById('modal');
```

Modal Component

```jsx
class Modal extends React.Component {
  constructor(props) {
    super(props);
    this.el = document.createElement('div');
  }

  componentDidMount() {
    // Append the element into the DOM on mount.
    modalEl.appendChild(this.el);
  }

  componentWillUnmount() {
    modalEl.removeChild(this.el);
  }

  render() {
    const { children, handleClose } = this.props;
    return ReactDOM.createPortal(
      <div className="c-modal">
        <div className="c-modal__veil" onClick={handleClose} />
        <div
          className="c-modal__box">
          <button className="c-modal__close" onClick={handleClose}>X</button>
          {children}
        </div>
      </div>,
      this.el,
    );
  }
}
```

Parent Component

```jsx
class App extends React.Component {
  constructor(props) {
    super(props);
    this.state = {showModal: false};
  }

  handleShow() {
    this.setState({showModal: true});
  }

  handleHide() {
    this.setState({showModal: false});
  }

  render() {
    const modal = this.state.showModal ? (
      <Modal handleClose={() => this.handleHide()}>
        <React.Fragment>
          <h1>Thanks for clicking!</h1>
          <p>This is being rendered inside the #modal div, {this.props.members}.</p>
          <button onClick={() => this.handleHide()}>Close</button>
        </React.Fragment>
      </Modal>
    ) : null;

    return (
      <div className="app">
        <h1>My website</h1>
        <p>Welcome to my website {this.props.members}!</p>
        <button onClick={() => this.handleShow()}>Show modal</button>
        {modal}
      </div>
    );
  }
}
```
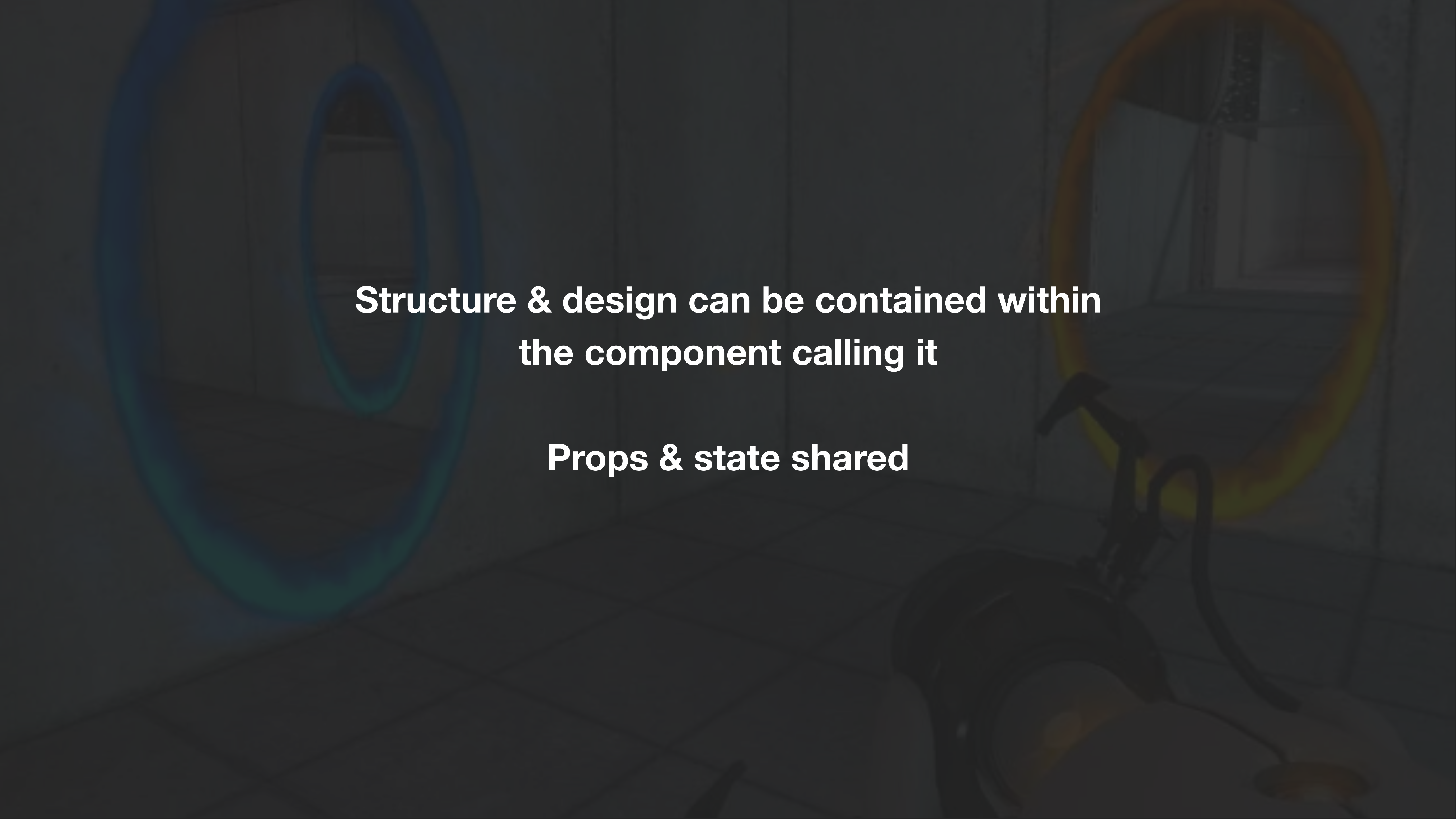
https://codepen.io/andismith/pen/xjjKrW

Structure & design can be contained within
the component calling it

Props & state shared

Document Object Model

↓

React Tree

Event Bubbling Through Portals

Because the portal exists in the React tree, you can use all the same features you'd use in the DOM. Like event bubbling.

Trigger a click in the modal, catch it in the component.

https://codepen.io/andismith/pen/rvvMGa

Go crazy with the idea and
open up a portal in a new window!

https://codepen.io/davidgilbertson/
pen/xPVMqp

(don't do this)

The cake is a lie
The cake is a lie
The cake is a lie
The cake is a lie