Fix a timing issue

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Control variation code timing
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RELEVANT PRODUCTS:

• Optimizely Web Experimentation
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THIS ARTICLE WILL HELP YOU:

• Fix issues with timing that causes variation content not to appear on your live site
• Adjust the timing of variation code for elements that don't exist on the page when it first loads

Not all web pages load all content on a page at the same time. Sometimes, some of the content on a page may depend on an AJAX requestor may be automatically loaded after some delay following the initial page load. If an element doesn't exist on a page when Optimizely's variation code tries to change it, the change may not occur. This is a timing issue.

If you're seeing a timing issue, you'll see variation code load as expected in the Editor, but not on your live site.

To fix timing issues, you'll essentially tell Optimizely to both wait until the element is loaded on the page before changing it, as well as hide the element until Optimizely is able to make the change. This article walks you through a couple of approaches.

Control variation code timing

Optimizely provides a few utilities to help you control the timing of your variation code:

```javascript
util.waitForElement(selector);
```
Use the `waitForElement` function to wait for an element before executing the variation code. The `waitForElement` function waits for the element's opening and closing tag before executing the variation code. For example, if you wait for `body`, `waitForElement` waits for the opening and closing `body` tag before executing. This runs just once, when the element is found.

```javascript
utils.observeSelector(selector, callback, options);
```

The `observeSelector` function uses DOM mutation observers to constantly check if an element has changed and run the variation code when a change is detected. This is useful for dynamic content and SPAs, but it's not compatible with all browsers.

Here's where to use them:

1. Navigate to the experiment or campaign, select a variation, and click the Variation Code Editor icon (🔗).

2. Select `JavaScript` to add custom code. Use the utilities above to adjust the timing of your variation code, or find more utilities in our developer docs.

To see an example using an Optimizely utility, click the Help icon (❓) below the Variation Code Editor window.

Here are some extra resources in case you're not confident about what jQuery is and how Optimizely uses it, and how to manually find selectors on your page.

**Related articles**

- [Troubleshooting: Variation content doesn't appear](#)