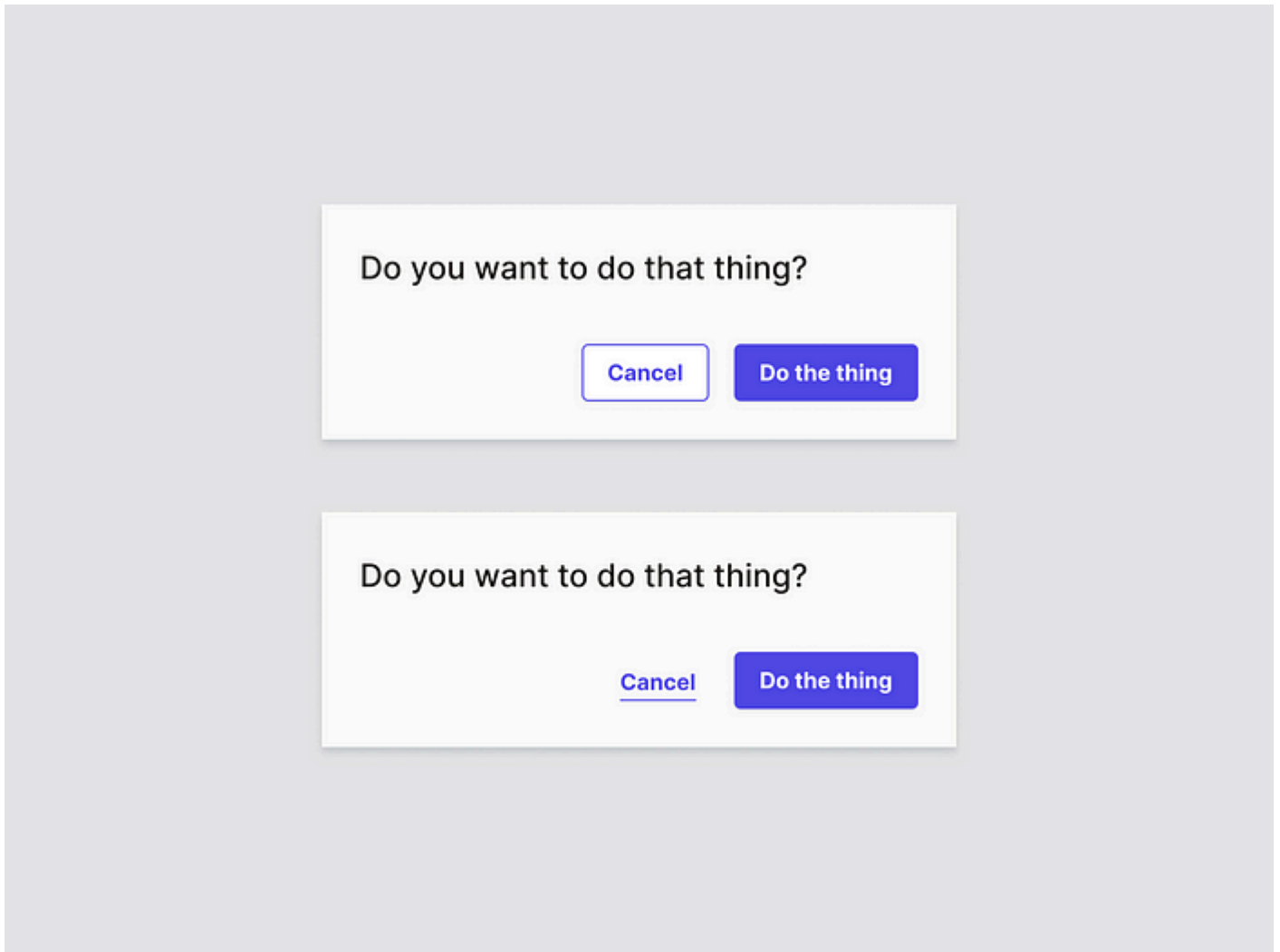


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# Should "cancel" be a button or a link?

Which one is UX best practice?



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UX Collective a11y-light ~10 min read · March 21, 2022 (Updated: June 29, 2023) · Free: No

A common type of dialogue that is often presented when interacting with a web app, is the "cancel" option. Usually when the user is filling out a form, or manipulating data (e.g. inside a side panel, detail page or modal view). One would typically see it next to a primary action, presented as a link. More and more however, this cancel option is presented as a button. Is this good or bad practice, and why?

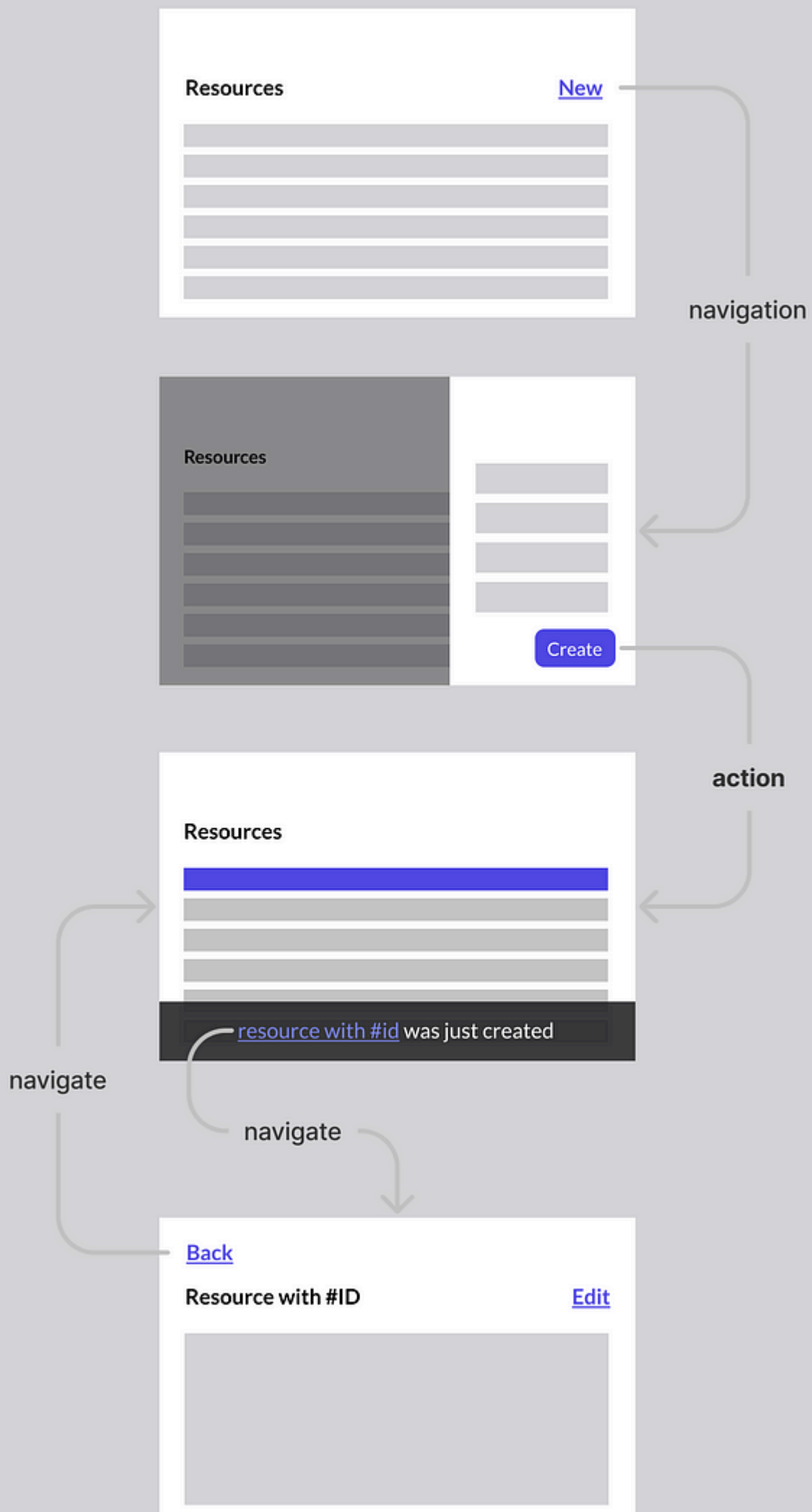
## Navigation vs. Action

When looking at a web app, a user typically has to deal with two types of interaction: navigation and actions. Both types of interactions are usually represented in a different but distinct way.

1. Navigation is a link.
2. Action is a button.

Why is this? Links stem from the early days of the world wide web. It's what it makes it be a web (and also world-wide). Buttons are a form of skeuomorphism that translates the physical world of flipping switches and pressing buttons to do stuff, into the digital world of the internet. And thus, they are used differently:

**Actions are manipulation of data the user is managing** through the interface of the web app, while **navigation is a state change of the interface** the user is, well, navigating through. In other words, links (or navigation) don't lead to changes of the underlying data, but can lead to the presentation of new pages, or a different presentation of the current page the user is navigating in (i.e. change the view). So when we look at it this way, we are basically saying that navigation is a state change of the UI and an action is data manipulation. In other words, going from one state to the other is the same as *navigating* from one state to the other. I'd like to note that actions (buttons) *can* lead to navigation, but it's not a requirement.



**UI Design** How one would visualize a link and button is of course a design style decision, but typically links are blue underlined text and buttons are boxes with text inside of them. Both links and buttons can contain icons to emphasize the intended action or navigation (Relying on icons only is discouraged, as this would make a user needlessly think about said action or navigation, but that's a different topic to discuss).

**Information Architecture** Obviously, having your web application adhere to a certain information architecture which allows for this behavior, is beneficial to the user experience of your solution. That said, understanding the principles of how an application is representing its data, is key to understanding the difference between data manipulation and state changes of your user interface.

Let's take the example of a fruit shop, which sells fruit. This shop could have a list of all fruits they sell. This "list of resources" would be the "list of fruits" for this specific shop:

Fruits (10)				<a href="#">+ Add Fruit</a>
<a href="#">Type</a> ^	<a href="#">Color</a> ⚡	<a href="#">Weight (g)</a> ⚡	<a href="#">Origin</a> ⚡	
Apple	Red	110	<a href="#">Netherlands</a>	
Apple	Green	115	<a href="#">Belgium</a>	
Apple	Green	95	<a href="#">Netherlands</a>	
Banana	Yellow	190	<a href="#">Colombia</a>	
Banana	Yellow	210	<a href="#">Costa Rica</a>	
Banana	Yellow	185	<a href="#">Colombia</a>	
Lemon	Yellow	110	<a href="#">Netherlands</a>	
Lemon	Yellow	85	<a href="#">Spain</a>	
Lemon	Yellow	75	<a href="#">Spain</a>	
Lemon	Yellow	90	<a href="#">Italy</a>	

A user can decide to do the following:

- Add a new fruit to the list.
- Filter or sort the list of fruits
- Go to the detail view of a specific fruit from the list
- Go to the detail view of the origin of a specific fruit from the list

Let's find out how these user interactions would look like when applying our logic to it.

## Applying this logic to a typical user interface

**Add new fruit** When wanting to add a new fruit to the list, the user clicks the "add fruit" link, which would lead to a state change of the UI (i.e. a form to fill out the new fruit appears).

It's merely a state change that shows the view to create a new fruit. Hence, it's navigation. By doing this, it sends the message to the user they are not doing data manipulation directly when clicking on "add new fruit" but can expect a new view to perform said task. Therefore, I advice against the FAB or a button in general for this interaction.

## Fruits (10)

+ Add Fruit

Type ^	Color ^	Weight (g) ^	Origin ^
Apple	Red	110	<a href="#">Netherlands</a>
Apple	Green	115	<a href="#">Belgium</a>
Apple	Green	95	<a href="#">Netherlands</a>
Banana	Yellow	190	<a href="#">Colombia</a>
Banana	Yellow	210	<a href="#">Costa Rica</a>
Banana	Yellow	185	<a href="#">Colombia</a>
Lemon	Yellow	110	<a href="#">Netherlands</a>
Lemon	Yellow	85	<a href="#">Spain</a>
Lemon	Yellow	75	<a href="#">Spain</a>
Lemon	Yellow	90	<a href="#">Italy</a>

## Fruits (10)

Type ^	Color ^	Weight (g) ^	Origin ^
Apple	Red	110	<a href="#">Netherlands</a>
Apple	Green	115	<a href="#">Belgium</a>
Apple	Green	95	<a href="#">Netherlands</a>
Banana	Yellow	190	<a href="#">Colombia</a>
Banana	Yellow	210	<a href="#">Costa Rica</a>
Banana	Yellow	185	<a href="#">Colombia</a>
Lemon	Yellow	110	<a href="#">Netherlands</a>
Lemon	Yellow	85	<a href="#">Spain</a>
Lemon	Yellow	75	<a href="#">Spain</a>
Lemon	Yellow	90	<a href="#">Italy</a>

+

Buttons instead of links where navigation is the default interaction. Thanks, Material UI.

The image shows a web application interface. On the left, a modal titled "Fruits (10)" displays a table of fruit data. On the right, an "Add Fruit" modal is open, allowing a user to add a new fruit entry.

Type ^	Color ^	Weight (g)
Apple	Red	
Apple	Green	
Apple	Green	
Banana	Yellow	
Banana	Yellow	
Banana	Yellow	
Lemon	Yellow	
Lemon	Yellow	
Lemon	Yellow	
Lemon	Yellow	

**Add Fruit**

Type:

Weight (g):

Origin:

[Cancel](#) [+ Add Fruit](#)

"Add Fruit" here indeed is an action. It confirms the intention of the user and sends a data change request to the server.

This interaction actually brings up an interesting discussion: what will the user see when having added the new fruit? Will they go back to the list of fruits, or will they go to the newly added fruit detail page? This really depends on what is important for the user and is something that needs to be determined through user research. Both options are valid, but **both are navigation**, albeit triggered by the performed action. (remember I said that actions *can* lead to navigation?)

Ignoring the "cancel" interaction for a second and let's dive into the other interactions a user can do, so that we can build up to the final answer:

**Filter & Sort** When going through the list of fruits, the user can decide to narrow their list by applying a filter. They decide to apply the "apples" filter and sort the



has been manipulated at all. All fruits in the list still exists. None were added or altered. The only thing the user did, was applying a different view, or, changing the state of the UI. This means, filters or sorting would warrant a link instead of a button:

Fruits (10)

+ [Add Fruit](#)

[All Types](#) ▾

[All Colors](#) ▾

[All Weights](#) ▾

[All Origins](#) ▾

Type ^	Color ↕	Weight (g) ↕	Origin ↕
Apple	Red	110	<a href="#">Netherlands</a>
Apple	Green	115	<a href="#">Belgium</a>
Apple	Green	95	<a href="#">Netherlands</a>
Banana	Yellow	190	<a href="#">Colombia</a>
Banana	Yellow	210	<a href="#">Costa Rica</a>
Banana	Yellow	185	<a href="#">Colombia</a>
Lemon	Yellow	110	<a href="#">Netherlands</a>
Lemon	Yellow	85	<a href="#">Spain</a>
Lemon	Yellow	75	<a href="#">Spain</a>

Fruits (3/10)

+ [Add Fruit](#)

[Apples](#) ▾

[All Colors](#) ▾

[All Weights](#) ▾

[All Origins](#) ▾

Type ^	Color ↕	Weight (g) ↕	Origin ↕
Apple	Red	110	<a href="#">Netherlands</a>
Apple	Green	115	<a href="#">Belgium</a>
Apple	Green	95	<a href="#">Netherlands</a>

Filtering and Sorting

**Clearing a filter** This also makes it easier to understand that a user interaction that denotes "clear all filters" or "reset sorting" should not be a button (i.e. it's not an action), but warrants a link (i.e. it's a state change of the UI, or navigating back to the preview state of the UI) as no data has been altered:

Fruits (2/10)

+ [Add Fruit](#)

[Apples](#) ▾

[Green](#) ▾

[All Weights](#) ▾

[All Origins](#) ▾

× [Clear all filters](#)

<a href="#">Type</a> ^	<a href="#">Color</a> ⌵	<a href="#">Weight (g)</a> ⌵	<a href="#">Origin</a> ⌵
Apple	Green	115	<a href="#">Belgium</a>
Apple	Green	95	<a href="#">Netherlands</a>

Clear all filters is a link (it's a UI state change and not actual data manipulation), denoted in "destructive" red to warn the user.

**Going back to the preview page** As said earlier, it's a valid interaction to have the user automatically navigate to the newly added fruit page after the action has been performed. But what if the user wants to go back to the previous page (list of fruits)? Well, this of course depends heavily on how this is presented in the UI, but typically one would expect the user to have access to either one of these options (or both):

1. Back navigation
2. Breadcrumb

Realizing the fact that in both cases, the user would still just be *navigating* back to a previous state of the UI (and thus, not undoing the performed action on the data, nor doing any new type of data manipulation), both options would be links:

[← Back to all Fruits](#)

Apple

[Edit](#)

detail information

[Home](#) / [Fruits](#) / Apple (ID:100)

Apple

[Edit](#)

detail information

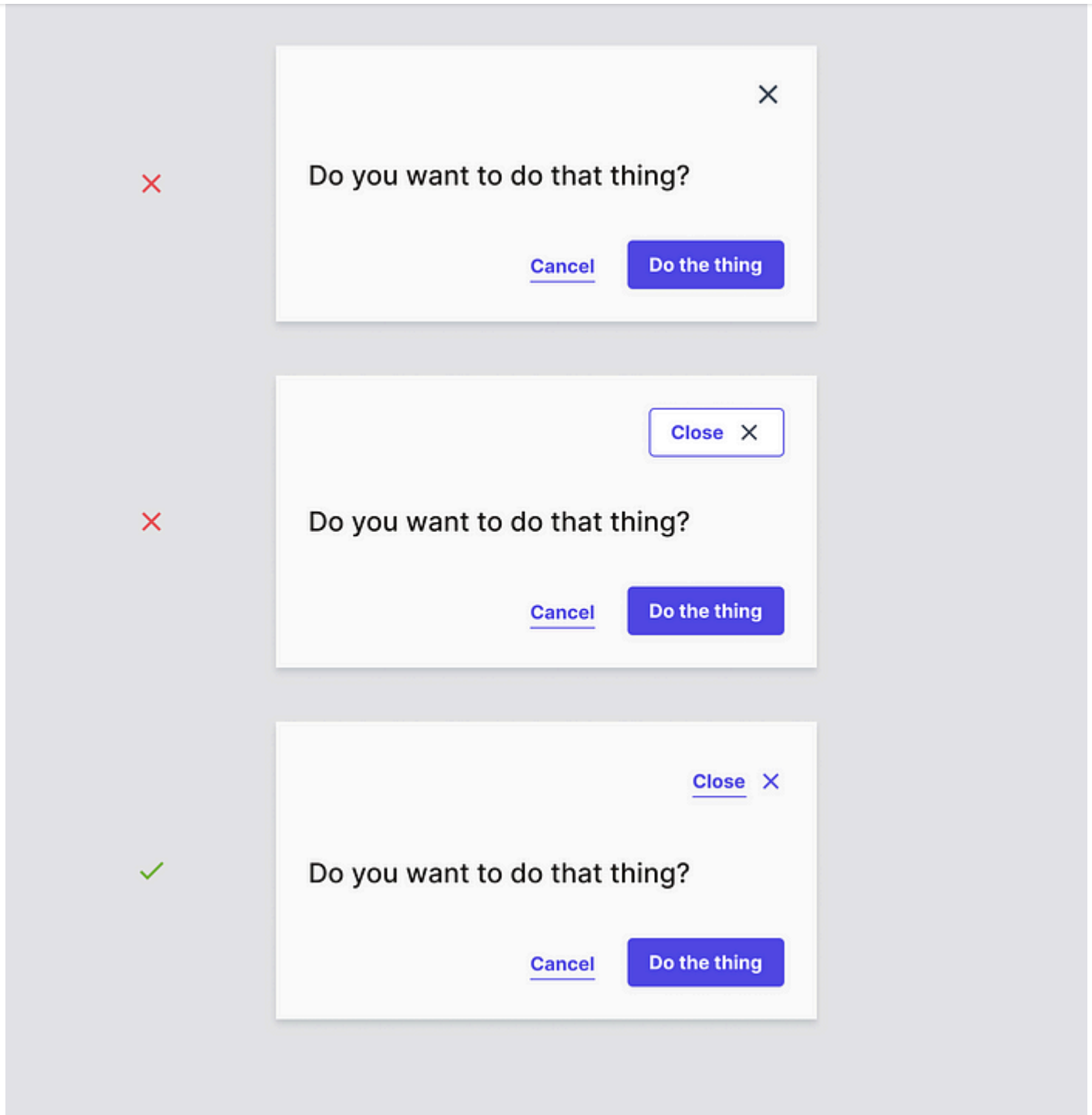
Now, a third option would also typically exist; the back button of the browser. Yes, this is a button, not a link. I will address the OS elephant in the room later in this article.

**Closing the side panel** And thus this brings us one step closer to the main question of this article. What if the user wants to close the side panel of the "add new fruit" view? Well, typically this would be done by either clicking outside of the view (dismissing it), or clicking a "close" option. Again, asking the question what is it the user is actually doing when "closing" the side panel, we come to the conclusion they are basically *aborting the action* they are performing. In other words, they are navigating back to the previous state of the UI. This means, it warrants a link, and not a button:

The image shows a mobile application interface. On the left, there is a list titled "Fruits (10)" with columns for "Type", "Color", and "Weight". The list contains 10 items: 3 Apples (2 Red, 1 Green), 3 Bananas (all Yellow), and 4 Lemons (all Yellow). On the right, there is a "Add Fruit" form. At the top right of the form is a "Close" link with an "X" icon. The form has three input fields: "Type" (with "Apple" selected), "Weight (g)" (with "0" selected), and "Origin" (with "Belgium" selected). At the bottom right of the form are two buttons: a "Cancel" link and a "+ Add Fruit" button.

Close is a link, as it's a UI state change.

The same can be said about closing any view:



Closing is not an action; it's a UI state change.

## Cancel the action

Whether it be inside a side panel, or inside a pop-up (modal view), or maybe even just on a full page form (edit a fruit on the fruit detail page), whenever a user wants to "cancel" the action(s) they are trying to perform, they are basically doing the exact same thing as described in the "Closing the side panel" section; they are aborting the action and thus navigating back to the previous state of the UI. Thus, it requires a link, and not a button.



Do you want to do that thing?



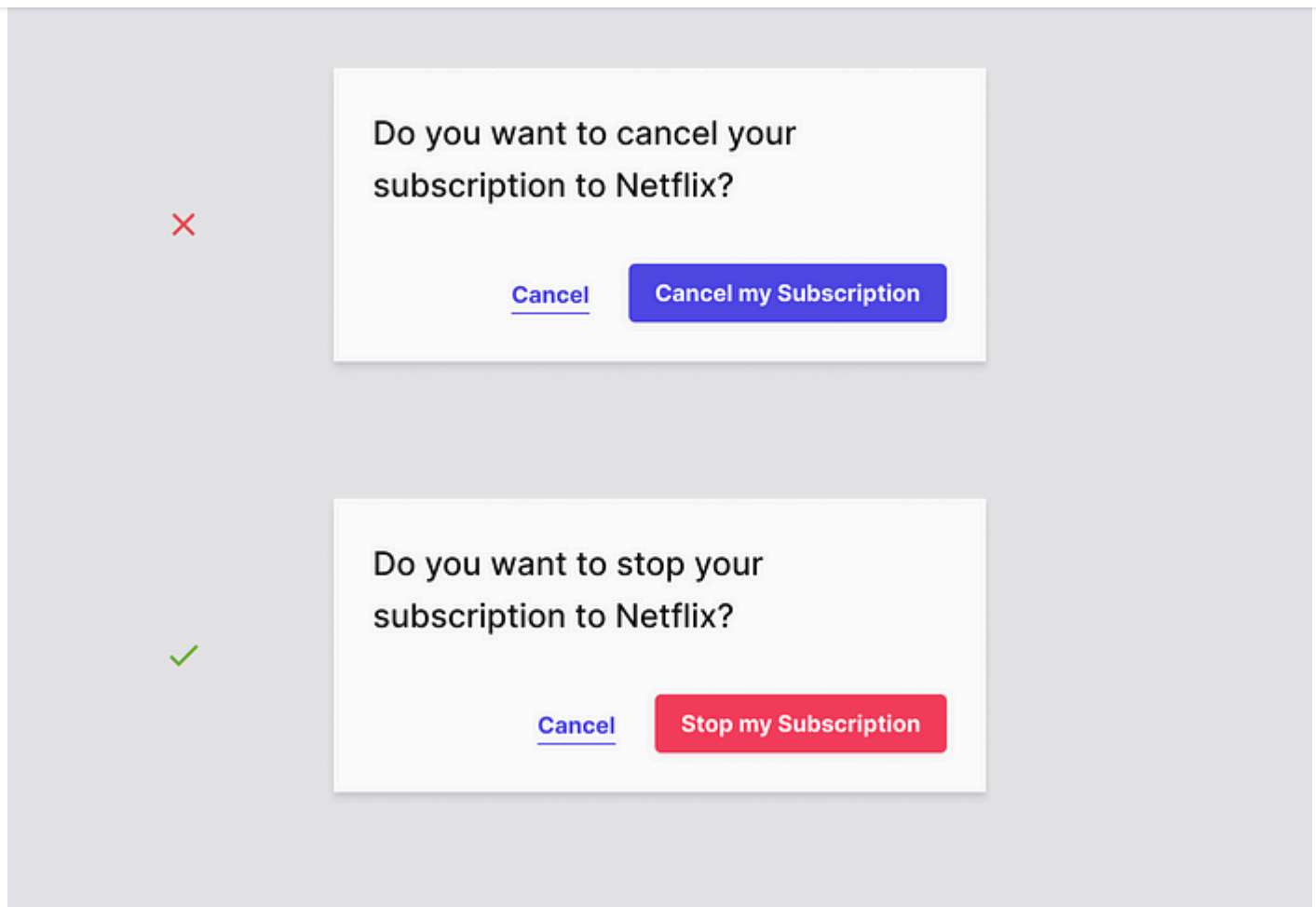
Do you want to do that thing?

[Cancel](#)

The answer to this article's question.

**"But cancelling is like an action, no?"** As you by now might expect, to this, I state a hard "no"! A user cancelling an action is quite the opposite of performing an action; it's the "noping out" of an action. In all the cases described above, cancelling would entail navigating back to the previous state of the UI.

**"But what about cancelling my Netflix subscription?"** This is an interesting exception, but is simply explained when understanding that in this case, "cancelling" is the primary action. A user can still abort the primary action through a cancel link. Of course, it's probably best not to call it "cancel" and "cancel":



Confusion is confusing.

**"But what about iOS, or Windows or MacOS?"** Sure enough, as addressed earlier, the actual user interface of your operating system basically only uses buttons. For pretty much everything. This completely breaks anything I just wrote. However, you have to realize that a web application is not the same thing as an operating system. It's best to avoid the uncanny valley of UI. Users are confused by mimicking an actual OS, plus one would ignore the power of web UI conventions users are familiar with, which would break usability. Let the OS be the OS and the web be the web.

It's also why responsive design is not the same thing as building a native mobile application. They are two kinds of different UI.

**"What about the main menu? That certainly is navigation?"** Yes, very true. They are indeed navigable items and would only lead to a state change. Therefore, one would expect links instead of buttons. And in reality, the way of visualizing main menu items as a row of buttons has become somewhat of a standard. Users



However, back in the days of ye old interwebs, it was quite common to represent main menu items as links too! (because, you know, they are navigation). And to this day, those items are still links in code, and not buttons, when written in semantically correct HTML.

The screenshot shows the Digg homepage with a blue header bar containing the Digg logo and navigation links: News, Videos, Podcasts, Join Digg, Login, and a search bar. Below the header is a green bar with category links: All Topics, Technology, Science, World & Business, Sports, Entertainment, Gaming, and a link to Submit a New Story. A yellow banner below the green bar reads: "Spreading the Word... Digg user 'MuleMath55R' just invited 'jespaul1001' to join Digg! Login to invite your own friends!".

The main content area is titled "All News" and features a list of stories. Each story includes a digg count, a title, a submitter, a timestamp, a brief description, and a "More..." link. The stories are as follows:

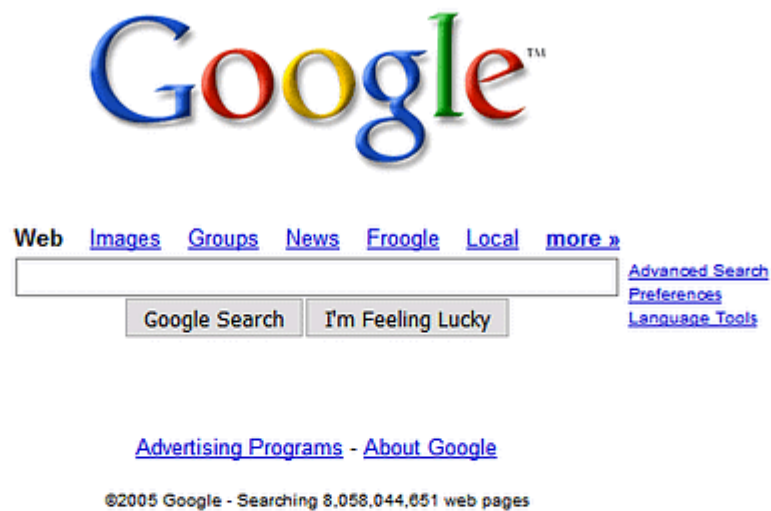
- 80 diggs**: **Last chance to join open source movie project, before phase 3**. Submitted by mattbrighton, made popular 18 minutes ago (blogs.zdnet.com). Description: A Swarm of Angels, an ambitious open source movie project that I wrote about in March, is about to move into its next phase, which should see the community grow to 5,000 members (from just under a thousand). It's counting down today as it moves past 1,000 and closes public registration to go invite-only. More... (16 comments, Blog It, Email It, Topic: Movies, Bury It)
- 206 diggs**: **Maybe a contract-free iPhone is NOT out of the question**. Submitted by SillyMamma, made popular 48 minutes ago (www.buaw.com). Description: Something is missing from the latest iPhone commercial—namely the bit about "2 Year Activation Required". And today AT&T, launched new pay as you go Feature Packages. Could this be leading up to the pre-paid contract-free iPhone that we all gave up on when the iPhone commercials debuted this week? More... (30 comments, Blog It, Email It, Topic: Apple, Bury It)
- 409 diggs**: **PirateBay proprietor raided by Swedish police!**. Submitted by trylonbuley, made popular 58 minutes ago (www.anakata.hack.se). Description: A note on the personal website of Gottfrid Svartholm, who runs ThePirateBay.org, announces that his computers have been seized by the Swedish police. More... (74 comments, Blog It, Email It, Topic: World News, Bury It)
- 417 diggs**: **Just add water - students invent alcohol powder**. Submitted by QueenBeeCassie, made popular 1 hour 8 min ago (www.reuters.com). Description: Dutch students have developed powdered alcohol which they say can be sold legally to minors. The latest innovation in inebriation, called Booz2Go, is available in 20-gramme packets that cost 1-1.5 euros (\$1.35-\$2). Top it up with water and you have a bubbly, lime-colored and -flavored drink with just 3 percent alcohol content. More... (58 comments, Blog It, Email It, Topic: Offbeat News, Bury It)
- 376 diggs**: **How much does a NY cabbie make? How about drug dealers or sex shop owners?**. Submitted by mooji, made popular 1 hour 9 min ago (nymag.com). Description: You can't live in New York—arguably, you can't spend an hour in New York—and remain oblivious to the machinery of profit pumping away under every surface. This city makes money, loses money, houses money; lately, with luxe condos stacking up like casino chips along the waterfront, the city looks like money. More... (26 comments, Blog It, Email It, Topic: Offbeat News, Bury It)
- 506 diggs**: **What Would Happen If the Post Office Had Competition?**. Submitted by freemarketer, made popular 1 hour 48 min ago (www.lewrockwell.com). Description: Would we get more services? Cheaper rates? Shorter lines? Better handling of mail? More convenient location of mailboxes? Just to name a few. Are there risks? Only if you expect poor service at a higher rate. More... (161 comments, Blog It, Email It, Topic: Political Opinion, Bury It)
- 352 diggs**: **How To Fix "24"**. Submitted by 1KrazyKorean, made popular 1 hour 48 min ago (homorequo.blogspot.com). Description: "It's not a debate: This was the worst season of 24 ever, often painful to watch. Even the President of Fox thought so. But rather than rail endlessly about how bad it's become, I thought I'd channel my energy into thinking about how they might make it better next year." More...

On the right side of the page, there are two sections:

- What's Digg?**: A brief description of Digg as a user-powered content site, with links to Join, Login, and Learn More.
- Top 10 in All Topics**: A list of the top 10 stories in all topics, including "ZFS To Become Default File System in Leopard", "Girl Found in locked room after missing for YEAR!!", "Substitute teacher spared sentencing for porn pop-ups, gets new trial", "Best MySpace Layouts That Don't Look Like MySpace At All", "There's a problem. It's called Net Neutrality", "Man sues over permanent erection", "Radio station plays the entire new White Stripes album without permission", "Thundercats Headed for the Big Screen!", and "GOB Bluth -- The Only Man I've Ever Loved".

At the bottom right, there is a section titled **Digg Labs Updated!** with a description of the Digg Labs project and a link to the Digg Labs page.

Aah, the old digg. Links everywhere! Even in the main navigation.



Google's main navigation used to be hyperlinks.

**Empowering the user by being consistent** When we look at the difference between buttons and links, we can easily see that there is a fundamental difference when presented both interactions:

These imply actions directly done on the item in the row:

Fruits (10)

+ [Add Fruit](#)

Type ^	Color ^	Weight (g) ^	Origin ^	Actions
Apple	Red	110	<a href="#">Netherlands</a>	<a href="#">Buy</a>
Apple	Green	115	<a href="#">Belgium</a>	<a href="#">Buy</a>
Apple	Green	95	<a href="#">Netherlands</a>	<a href="#">Buy</a>
Banana	Yellow	190	<a href="#">Colombia</a>	<a href="#">Buy</a>
Banana	Yellow	210	<a href="#">Costa Rica</a>	<a href="#">Buy</a>
Banana	Yellow	185	<a href="#">Colombia</a>	<a href="#">Buy</a>
Lemon	Yellow	110	<a href="#">Netherlands</a>	<a href="#">Buy</a>
Lemon	Yellow	85	<a href="#">Spain</a>	<a href="#">Buy</a>
Lemon	Yellow	75	<a href="#">Spain</a>	<a href="#">Buy</a>
Lemon	Yellow	90	<a href="#">Italy</a>	<a href="#">Buy</a>



Fruits (10)

+ [Add Fruit](#)

Type ^	Color ^	Weight (g) ^	Origin ^	Actions
Apple	Red	110	<a href="#">Netherlands</a>	<a href="#">Buy</a>
Apple	Green	115	<a href="#">Belgium</a>	<a href="#">Bought</a>
Apple	Green	95	<a href="#">Netherlands</a>	<a href="#">Buy</a>
Banana	Yellow	190	<a href="#">Colombia</a>	<a href="#">Buy</a>
Banana	Yellow	210	<a href="#">Costa Rica</a>	<a href="#">Buy</a>
Banana	Yellow	185	<a href="#">Colombia</a>	<a href="#">Buy</a>
Lemon	Yellow	110	<a href="#">Netherlands</a>	<a href="#">Buy</a>
Lemon	Yellow	85	<a href="#">Spain</a>	<a href="#">Buy</a>
Lemon	Yellow	75	<a href="#">Spain</a>	<a href="#">Buy</a>
Lemon	Yellow	90	<a href="#">Italy</a>	<a href="#">Buy</a>



Fruits (10)

+ [Add Fruit](#)

Type ^	Color ^	Weight (g) ^	Origin ^	Actions
Apple	Red	110	<a href="#">Netherlands</a>	<a href="#">Buy</a> →
Apple	Green	115	<a href="#">Belgium</a>	<a href="#">Buy</a> →
Apple	Green	95	<a href="#">Netherlands</a>	<a href="#">Buy</a> →
Banana	Yellow	190	<a href="#">Colombia</a>	<a href="#">Buy</a> →
Banana	Yellow	210	<a href="#">Costa Rica</a>	<a href="#">Buy</a> →
Banana	Yellow	185	<a href="#">Colombia</a>	<a href="#">Buy</a> →
Lemon	Yellow	110	<a href="#">Netherlands</a>	<a href="#">Buy</a> →
Lemon	Yellow	85	<a href="#">Spain</a>	<a href="#">Buy</a> →
Lemon	Yellow	75	<a href="#">Spain</a>	<a href="#">Buy</a> →
Lemon	Yellow	90	<a href="#">Italy</a>	<a href="#">Buy</a> →



Fruits (10)

Type ^	Color ^	Weight (g) ^
Apple	Red	110
Apple	Green	115
Apple	Green	95
Banana	Yellow	190
Banana	Yellow	210
Banana	Yellow	185
Lemon	Yellow	110
Lemon	Yellow	85
Lemon	Yellow	75
Lemon	Yellow	90

[Close](#) ×

Buy Fruit

Type

Apple

Weight (g)

115

Origin

Belgium

Shipping Address

My Shop

[Cancel](#)

[Buy](#)

## Conclusion

The subject of a cancel link or button has been asked previously. I think UX movement's article about this subject almost has it correct: the cancel is indeed not an action, but it should also not be a button. (I also think that a grey button looks more like a disabled button, but that's a different subject). Luke Wroblewski's almost famous blog.post comes close to the same conclusion as I do (On top of that it also addresses the position of said UI).

**To summarize** The cancel option is similar to aborting an action, and therefore similar to navigating back to the previous state of the UI. Navigation is represented in web UI as hyperlinks, and thus **the cancel option should be a hyperlink**. As with everything, this too can (and should!) be debated. I definitely can see the visual appeal to using a button instead of a link. And as with the main navigation convention, things can change over time.

Feel free to ping me if you want. **I can be found on Twitter.**

## Follow-up article

### Why “Cancel” should be a link, and not a button

Part 2: your feedback. About SPAs, hyperlinks, dark patterns, and accessibility.

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#ui

#user-experience

#design

#product-design