

## **AMENDED Exhibit 793**

# **PLAINTIFFS' OMNIBUS OPPOSITION TO DEFENDANTS' MOTIONS FOR SUMMARY JUDGMENT**

Case No.: 4:22-md-03047-YGR

MDL No. 3047

In Re: Social Media Adolescent Addiction/Personal Injury Products Liability Litigation

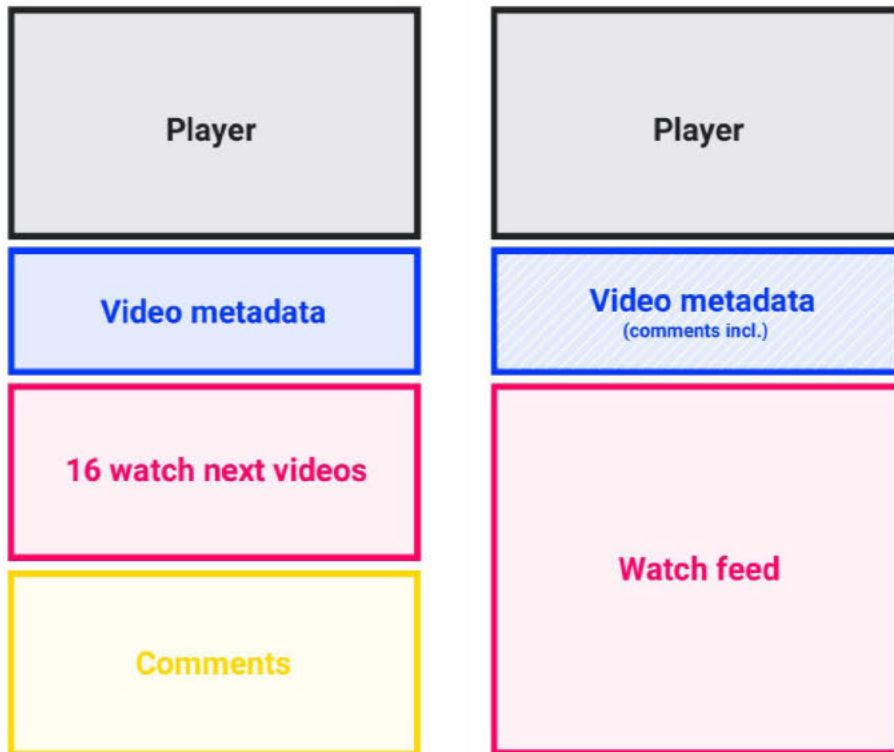
## PRD: Watch Feed

[ HYPERLINK ██████████ ] HYPERLINK ██████████  
 ██████████ | Feb. 2019 | **Launched!**

**tl;dr:** we're building a full-featured YouTube content feed on watch (including ads, Posts, etc).

### Project summary

Watch Feed is a reorganization of the space below the player on the YouTube mobile app. This project aims to make it easier to add new content to the watch page (e.g. Display Ads, Posts, Nitrate, Surveys) while improving user comprehension with a simpler information architecture. The biggest change comes from altering the behavior of the infinite scroll, as pictured below:



**Before:** Comments are separated from other video metadata and occupy the infinite scroll

**After:** Comments preview and endpoint in video metadata, discovery feed with infinite scroll

**Commented [1]:** Thanks for creating this!

**Commented [2]:** Possible to link current design docs? This is always the first go/ link I try (well done); would be nice to branch out from here to see what parts are currently being worked on

**Commented [3]:** ██████████ can you add?

**Commented [4]:** Not sure where to slap them but go/AboveTheFoldServer and go/AboveTheFoldClient are the engineering designs that have been reviewed.

Deposition Exhibit

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Google/YouTube - Reid Watson

While this layout dramatically improves our ability to add new content onto the watch page, it's a major change that requires us to consider tradeoffs. Moving the comments entrypoint above the fold means:

- **Watch Next** may be pushed farther down the page by the new comments entrypoint, but gains the ability to easily add new content using infinite scroll
- **Comments** will no longer own the infinite scroll, but has the potential to boost top of funnel dramatically (today, only 25% of mobile DAU see anything related to comments)

## Background

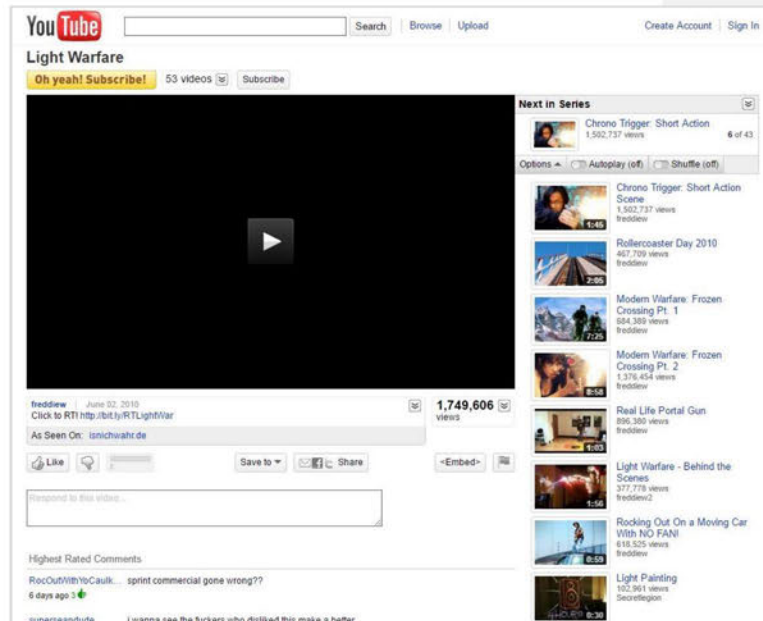
There have been thousands of launches in the last 10 years that affect the YouTube watch page (the page where you watch the videos), but we can distill them down into four key phases:

### Early desktop (200X - 2012)

The desktop watch page pioneered the two column desktop layout still in use today:

The player and title / description lived in the top left, while comments sat underneath them. Recommended videos lived on the right side of the page.

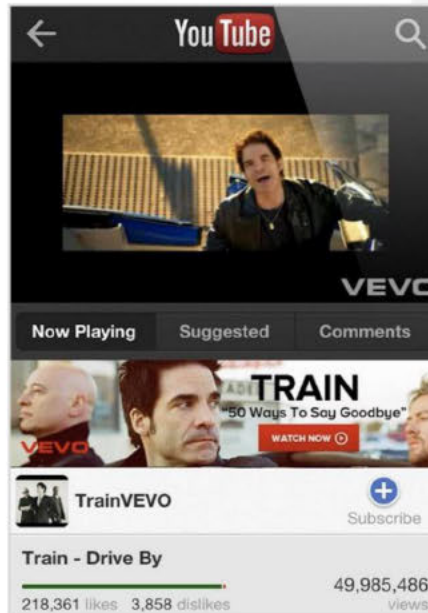
In this world, both comments and recommended videos had access to an infinite scroll, since the page had two columns to work with.



## Mobile tabs (2012 - 2014)

The first YouTube owned mobile app on iOS gives insight into the original mobile UI patterns, which largely mirrored desktop.<sup>1</sup>

To condense the desktop layout onto a smaller phone screen we simply took the different sections of the page and grouped them into tabs. “Now playing” had video metadata and channel information, “Suggested” showed recommended videos, and “Comments” were their own tab. This meant that each feature could show as much content as they wanted with their own infinite scroll, though only one tab could be the default tab.



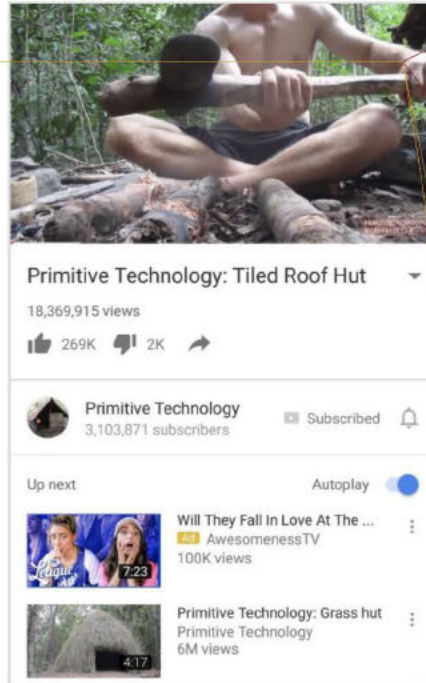
<sup>1</sup> See also [HYPERLINK] [REDACTED]

of circa 2012 YT Android

### Flattened tabs (2014 - 2016)

After the first launch we realized that most users didn't select tabs other than the default, so we decided to move all of the tabs into a single page. Of course, we couldn't move three infinitely long tabs into one tab without capping the size of at least two of the tabs.

We capped the size of the "Now playing" section by leaving the description unexpanded by default, and capped the size of Watch Next by only showing a finite number of videos (between 12 - 20, exact value varied by platform). As the bottom element, comments continued to keep an infinite scroll without any disruption.



**Commented [5]:** [REDACTED] Any chance you could help us dig up the original PRD for this? It would be fascinating to understand the original motivations.

**Commented [6]:** iirc this layout was introduced in Android v5.0 and iOS v2.0 which was the big "Nirvana" redesign: [go/nirvanapr](https://nirvanapr.com)

Skimming that doc, I'm not sure it has what you're looking for.

[REDACTED] may have a better memory and more user links.

**Commented [7]:** Nirvana UX site: [watch you notes.](https://nirvanapr.com)

**Commented [8]:** Removing tabs:  
1) iirc, with this redesign, we introduced a set watch (playlists) on mobile. A few options were explored such as video watch page in tab 1 and the list view in tab 2 or adding a playlist bar. But in most options, we quickly moved away from the previous 3 tab approach to make room for a playlist view.  
2) We also loved putting everything in "cards" across Google. So we put everything in cards such as video info, comments, related videos, etc.

## P13n and metrics (2016 - present)

The two biggest changes since the launch of flattened tabs are more subtle than what we've seen previously, but they've had significant impact on both our users and internal YT teams:

### #1: Increasing p13n in watch next

Videos in Watch Next used to be strictly related to the currently playing video. Over time, we've injected more personalized recs into watch next ("recommended for you"). These aren't just "related videos" that are tied to the currently playing video. Instead, Watch Next has become a general discovery surface.

### #2: Better measurements, metrics focus:

Historically we were much less rigorous in our measurement of the impact of launches across teams. For example, Android and iOS had a completely different number of watch next videos (12 vs. 20), which results in [ HYPERLINK



Commented [9]: I'll try to dig up an estimate of how positive this has been

"https://docs.google.com/

h ]. A difference that major wouldn't go unnoticed today.

We resolved this inconsistency by moving to [ HYPERLINK  
"https://docs.google.com/[REDACTED]  
[REDACTED]h ], but the fundamental tradeoffs remained. Projects which  
increased the height of Watch Next may have been positive for YTT, but were often significantly  
negative for comments.

For example, the [ HYPERLINK  
"https://docs.google.com/[REDACTED]  
[REDACTED]h ] was put on hold because while it was YTT positive (+0.3% YTT), it hurt comment  
metrics (-8% impressions)

The metrics situation has created a “landlocked” watch page, where teams can’t add new content without navigating complex metric tradeoffs with multiple teams. We formalized a compromise with the Comments team in 2018, giving a fixed amount of space to Watch Next, equivalent to 16 [ HYPERLINK ] or ~5 [ HYPERLINK ] ([ HYPERLINK ] from [ HYPERLINK ]).

The compromise has stabilized cross-team metrics tradeoffs, but makes it extremely difficult to add new things. Adding a new feature means showing fewer video recs to users, which hurts Watch Next WT. We’ve considered a variety of proposals for new features in Watch Next, but many never make it to experiment given concerns over having to displace standard Watch Next videos. For example, adding a single [ HYPERLINK ]

[ HYPERLINK ] to Watch Next would require displacing 4-5 Watch Next videos, removing over ¼ of user’s options.

## Goals

The motivating goal of this project is simple: **allow users to *Move On* and discover the full variety of YouTube content with a simple, flexible feed on the Watch Page.** This can be broken down into sub-goals for the different watch page stakeholders:

- *A simple yet flexible surface for Viewers:* Viewers should be able to predictably find core functionality while feeling comfortable seeing new and diverse content types like Posts, Nitrate, Surveys, Stories, and Display Ads.
- *Better formats, simpler distribution for Creators and Advertisers:* We should offer content creators engaging formats on both home and watch, giving them the best chance to showcase their content in a consistent manner.<sup>2</sup>
- *Faster execution, easier launches for YouTube Teams:* New teams have a predictable path to launching features on the Watch Page using principles similar to our existing process on the YT home feed.

Ideally, we want to make sure that all relevant internal stakeholders understand these goals, including the ads team, Watch Next team, comments team, and any team looking to add new content types to the Watch Page. We’ll help circulate this viewpoint using the Watch Page playbook ([ HYPERLINK ]).

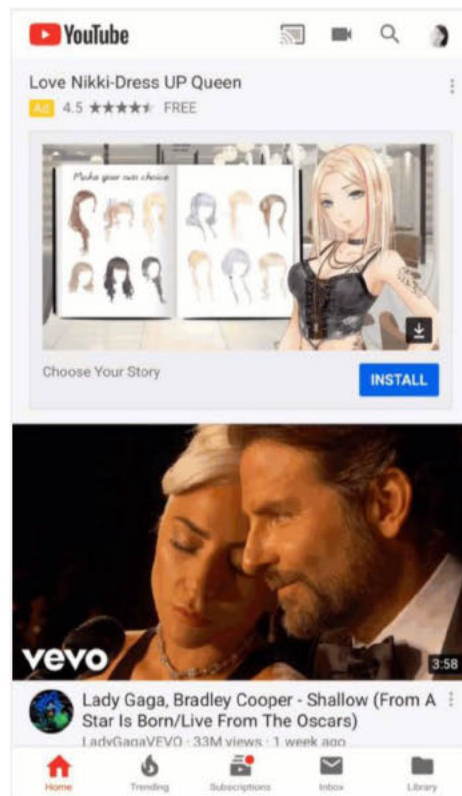
**Commented [10]:** I think the personalization aspect is important here too -- not just feeling comfortable but actually finding the most relevant new and diverse content types

<sup>2</sup> The “[ HYPERLINK ”https://docs.google.com/ [ HYPERLINK ]” 2-pager focused heavily on the opportunities afforded to YouTube by new, more engaging Direct Response ad formats

## Principles

As we started exploring changes to the below the player area, we defined three core principles:

### Use infinite scroll to showcase mixed content

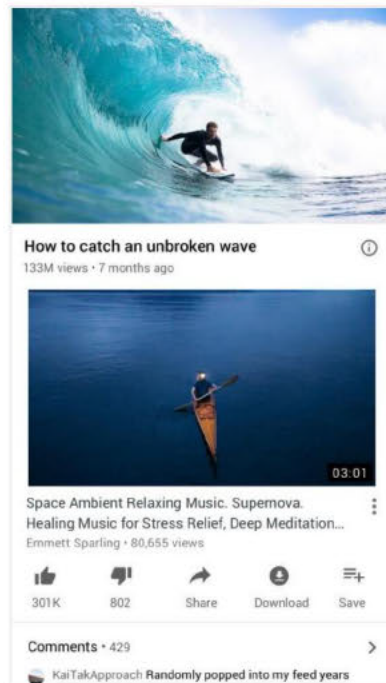


The YouTube home feed is a great example of a successful mixed content feed. Videos, Ads, Mixes, Nitrate promos, surveys, posts, stories, and other content types all live in the same surface. Users not interested in a certain feed item can simply continue to scroll (infinitely!). Adding a new element to the feed is straightforward, and we've already developed significant experience ranking a feed of diverse content on home.

**Commented [11]:** [REDACTED] do you have a version of this which passes on one different content? This one moves quickly so it's hard to tell the difference between the content types?

**Commented [12]:** This would shift the mapping between WNIFS and the current WN. Is this something we should consider? Would users understand that WNIFS has different content than portrait WN?

## Video actions need predictable entry points



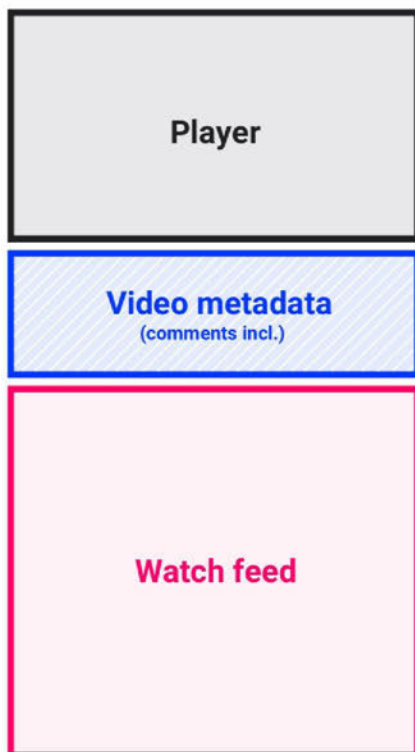
While an infinite, ranked feed is a powerful tool to rank diverse content, it's not a panacea for all prioritization problems on Watch. A watch page is anchored to a video, and users expect to be able to reliably find certain features. For example, say we started dynamically ranking the action buttons (Like, Dislike, etc.) and channel bar inside a feed. Users who wanted to like the video or subscribe to the channel wouldn't have a predictable way to find those features. These core actions tied to the current video need to have predictable entry points on the core watch page.

**Commented [13]:** There's always been a disconnect between portrait WN and WNIFS (ad support in WNIFS has only come about since our work on FS Engagement Overlay). I'm not too concerned that users might not understand the differences between WN and WNIFS. I also think it makes sense that WNIFS would only support video content initially (posts and even stories would force the users out of FS).

**Commented [14]:** This is an example of what we don't propose to do right? Can you make it super obvious via a caption or X through it or something.

**Commented [15]:** Good point [REDACTED] any ideas for how to indicate this is not recommended?

Keep the framework as simple as possible



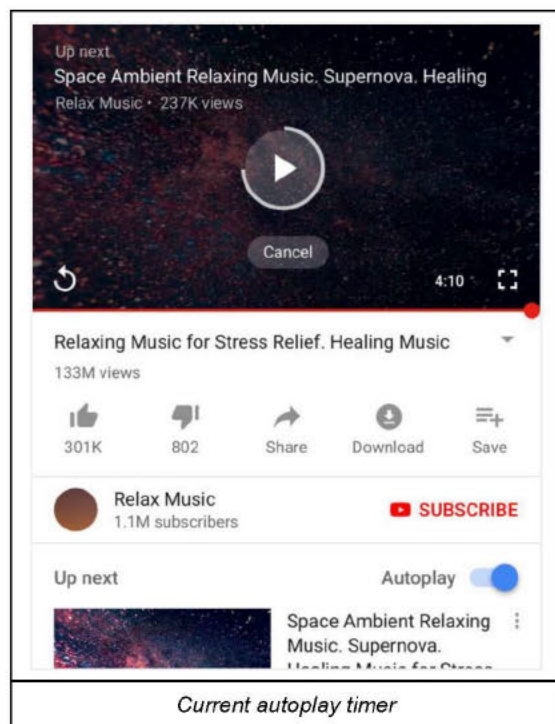
While individual components benefit from predictable, consistent entry points, the system as a whole benefits from being simple to explain to users. Users should be able to develop an instinctive sense of “what belongs where”. This understanding should give us enough flexibility to custom the page while still giving users a simple and easy to learn UI.

## Proposed changes

Given the complexity of this change, we’ve split the work into three discrete arcs of work. The different arcs are dependent on each other to succeed, but work on each can proceed largely independently:

**#1: Autonav redesign: [ HYPERLINK**

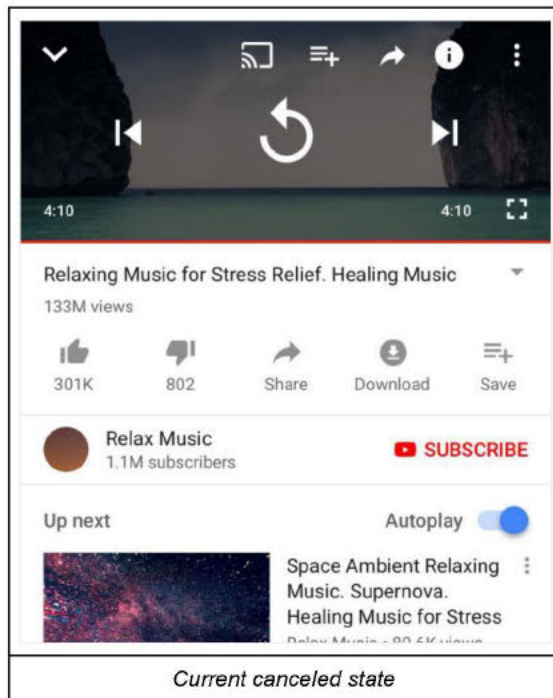
We start with a redesign of the autonav (AKA autoplay) UI, which simplifies our UI and frees up a line of space below the player:



**Commented [16]:** Is this a mock bug because there is no Autoplay toggle even in the player?

**Commented [17]:** or is that intentional because Autoplay toggle appears when user hits cancel?

**Commented [18]:** This is one of the older options we were considering for the autoplay countdown. The version we launched includes an explicit cancel button.



Aside from freeing up some space, this change addresses two common confusions with the existing autonav UI:

- **Presenting two different cancel affordances at the same time:** The existing autonav countdown UI shows two different buttons which seem to cancel autonav, but only the toggle below the player is permanent ([ HYPERLINK ██████████ ]). The fact that pressing "Cancel" during autoplay only temporarily cancels autoplay is confusing to many users.
- **Users believe videos will play in order:** Additionally, users see the text "Up next" and believe that the list of 16 Watch Next videos will play in order. However, only the first video will actually be played next, while the remaining 15 videos might never be suggested by autoplay.

We believe these changes free up some space below the player (but above the fold) while still preserving a user's ability to understand and control Autonav. You can read more about our redesign of the autonav UI at [ HYPERLINK ██████████ ].

## #2: Comments above the fold: [ HYPERLINK "https://goto.google.com/AboveTheFold" \h ]

Next, we turn our focus to comments. Comments are part of the currently playing video, but their entrypoint is all the way below Watch Next and occupies the infinite scroll. This gives us the opportunity to also address the fact that only ~25% of mobile DAU will ever see anything related to comments. We can use the extra bit of space freed up by the [ HYPERLINK \

[REDACTED] to relocate the primary comments entrypoint from the bottom of the watch page to above Watch Next. We're particularly excited about the flexibility this system allows us. We can choose between different layouts depending on the quality of the video and associated comments:

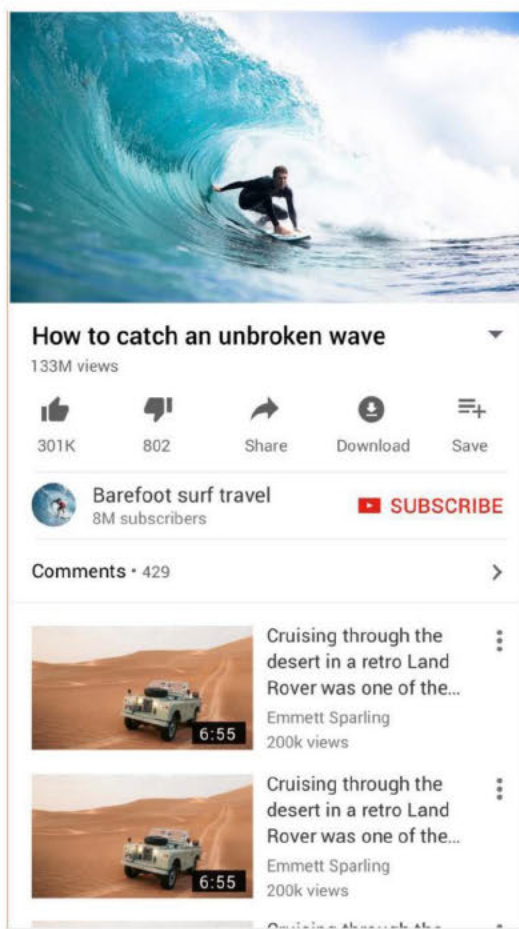
**Commented [19]:** What about shorter devices? Would this go above the ad? For some videos there are merch, and ads, which already take up all the vertical space on my iPhone X which is taller than the median phone.

**Commented [20]:** Both merch and the companion ad would go below the comments entry point -- they're both considered elements in the watch feed.

**Commented [21]:** hey [REDACTED] which of these was the winning candidate? I'm adapting your doc for mWeb watch feed and wanted to pick your winning candidate.

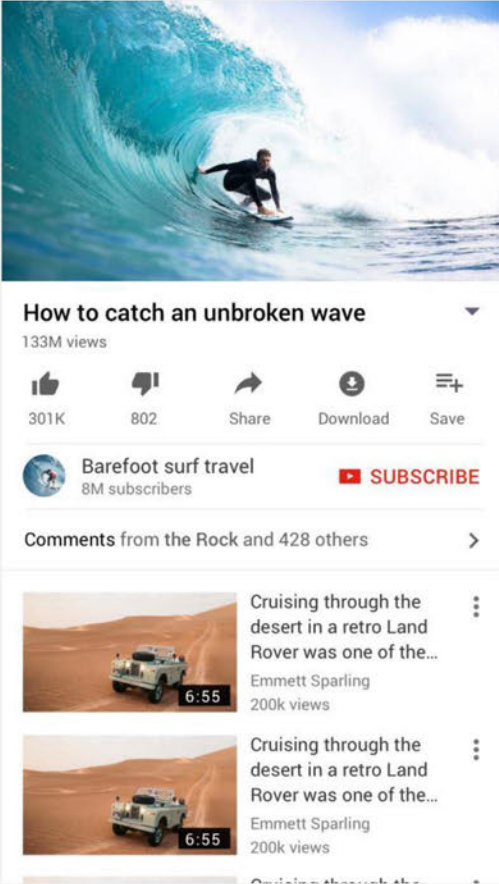
[REDACTED] FYI

By default, we can show users a simple entrypoint that offers quick access to comments without having to preview a specific comments



**Commented [22]:** [REDACTED] what's the vertical height of the comments bar relative to the up next line? It looks ever so slightly (~20%?) taller in this mock

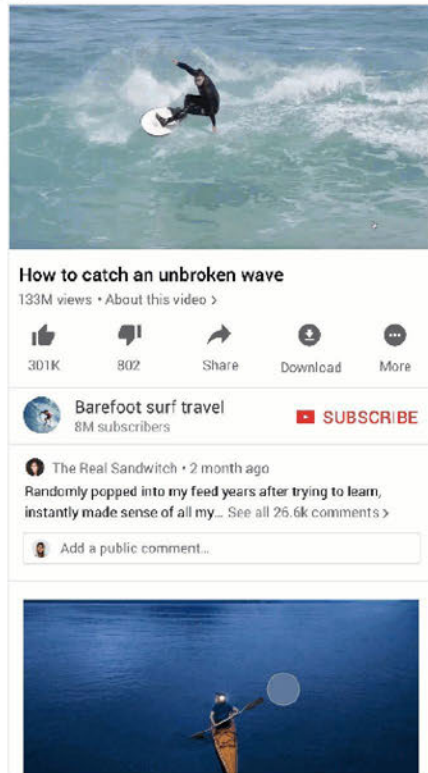
**Commented [23]:** Yes it's taller because up next line doesn't have a separator. We do need a separator for comment tho. This is the shortest we can get to maintain a 48dp tap target

|                                                                                                                                                                               |                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <p>For videos with comments from well known accounts, we can add a simple preview UI which highlights the identity of the commenter without previewing a specific comment</p> |  |
| <p>If we have high confidence in the quality of a comment we can show a preview above the fold.</p>                                                                           |                                                                                     |

### #3: Infinite Watch Next

Finally, with the infinite scroll unlocked we can add a variety of new content types into the Watch Next feed. We've already started working with a number of teams including Ads, Posts,

Surveys, Nitrate, and others:



We may also consider larger changes to the structure of Watch Next, including a switch to home-size thumbnails in the Watch Next feed. We've been interested in pursuing this before, and it's been massively positive for Watch Next WT (>+2%), but it's been on hold due to comments metrics.

## Evaluating success

Given the goals and complexity of this project it's difficult to judge success in a simple A:B experiment. Adding new features and content-types is a long term project, and many of the features that take advantage of the newly available space will take time to develop. We'll evaluate impact on core features affected by the change, with an emphasis on the value of the new UI.

## Next steps from roadmap review / Open questions

- Better naming for each of the sections ("Watch", "Understand / Engage", "Discover")
- Better answer around evaluating success
- Answer for the question: "can we have self-referential items in the watch feed"?
- Is the watch feed finite? Do we divide it into sections?
- Should we split out the channel bar from video info?

## Reid's hot takes

A couple of strawman answers to the questions above to try and get a sense of things...

- The watch page is divided into "Watch", "Understand / Engage", and "Discover"
  - Understand / engage is the most complex one, and is itself divided into three sections: video info, video actions, and the channel bar
  - Each of these sections has an associated "highlight" experience, where we will anchor a small box below the section highlighting a specific element
    - Description highlights: e.g. clarify box, donations, etc.
    - Video action highlights: e.g. comments teaser
    - Channel action highlights: e.g. memberships teaser
  - We will show **AT MOST one highlight** at a time, though the exact highlight may vary by user.
  - When there are 6+ buttons in the video actions section we **scroll** the bar horizontally.

- Success is a hard one, especially given we're trying to break out of a local maxima.
  - What about # of features launched? Could we have a UXR based goal?

**Commented [24]:** Agree that we don't want to have too many highlights shown above the fold. Though that means when there is comment teaser, there cannot be any metadata highlights?

**Commented [25]:** I think that's OK IMO. If a video has a clarify box or a publisher transparency note do we really want to promote comments? I also just generally don't want to have the watch page feeling like a giant glowing box that says "CLICK ME CLICK ME CLICK ME" everywhere

**Commented [26]:** I would love to have a horizontal scroll bar although we need to learn more about its potential conflict with swipecy and the implication that we are going to allow teams to add horizontal scrollable elements above the fold on watch (maybe after the research we will learn that it's okay but we should do the research first)

**Commented [27]:** I'm very interested in this research, and I'd love to chat about exact research plans when I'm back.

My current hot take: we should allow horizontally swipecable elements above the fold. The only downside of doing this is that if you swipe attempting to page navigate you may accidentally navigate within the carousel instead. This is an easily correctable action, and should be relatively rare given that enabling swipe below player only results in +12% more swiping, indicating that the majority of swiping happens in the player. "Swipe lock" based solutions still feel clunky to me, and I'm more likely to accidentally navigate the page when I meant to navigate the carousel with a swipe lock, a costlier mis-tap.

**Commented [28]:** Interesting stats! Agree that we should reconsider if we actually need swipe lock

**Commented [29]:** Strongly agree. IMO the approach for designing Watch and the approach for designing a purely discovery surface are not necessarily the same and I'd love to push for a sense making IA. Also agree with what Attila said, it's hard to argue just because this side of the table dislikes the idea. Next step we should design a research that either validate or challenge our...

**Commented [30]:** Yup, exactly. Do you have early mocks of what a self-referential watch feed item could look like? Ideally we'd have something for comments, lyrics, and maybe one other thing (a like button promo) to test.

**Commented [31]:** I sense a shared theme here. We have a developing principle that the more you scroll on the Home feed, the further you get away from your core interests.

<https://docs.google.com>