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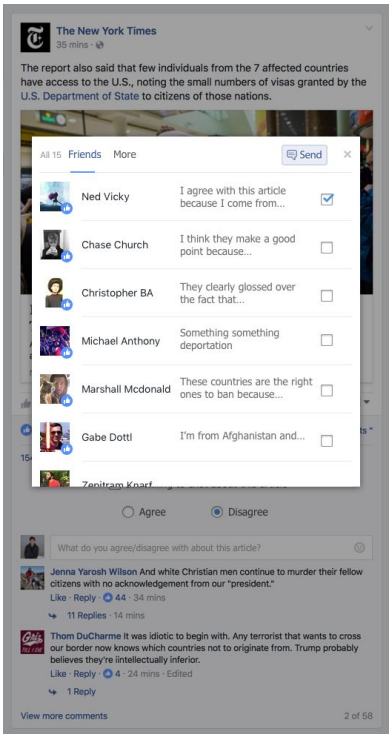
The design process from Part 1 led us to focus on the following design concept:

Design Concept:
Agree-to-Disagree as entree to synchronous discussion.

We decided to move forward with an interaction that allowed users to stake their agreement or disagreement with a Facebook post, select a chat partner of the opposing stance, and chat synchronously with that individual:

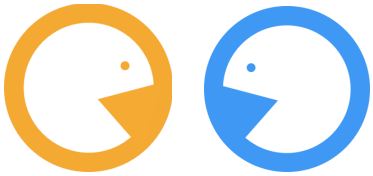


Here users can check a box indicating that they are willing to chat about an article, which reveals radio buttons allowing you to indicate whether you agree of disagree, and a text box allows you to briefly summarize your opinion on the article. Then, you are shown this list of people who have also checked the box to discuss the article, but you are only shown people who marked themselves as having a stance different from yours. You can select different people using the checkboxes and then send them a message. After picking the people you want to talk with about the article, you click “send”, and a facebook message is initiated between you and the selected people. Now you can productively discuss an article with someone who wants to talk about it AND holds a different point of view.

MOOD BOARD

We built our mood from the existing art and color schemes on Facebook, and also sought images that captured the friendly conversations we hoped to our chat feature would invoke:

Assets we created, inspired by the mood board:



PIXEL-PERFECT MOCKS

We tried and iterated on a few versions of the pixel-perfect mocks. Some of the design foci we prioritized:

- How could we make the engagement less cumbersome, and more smooth and obvious?
- How could we minimize the number of user decision points?
- How could we make the interaction self-evident and eliminate the need for explicit instructions or tutorials?
- How could we make the feature fit naturally in the Facebook environment?
- Conversely, how could we make the feature pop to grab the user's attention?

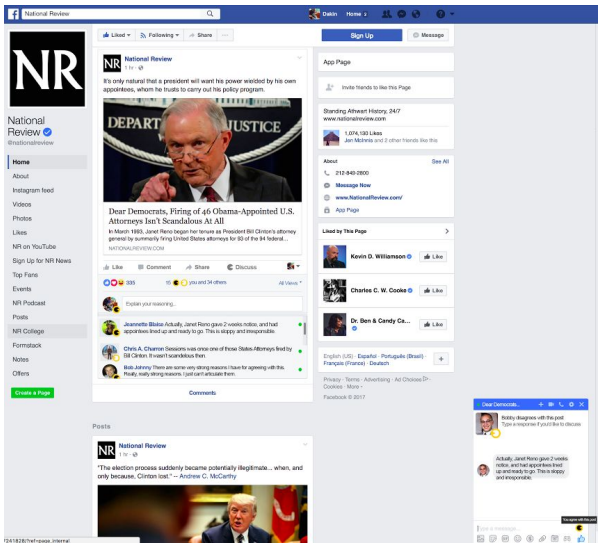
We came up with the following picture-perfect mocks:

The view of a Facebook post in our pixel-perfect mock.

Some of the changes that we made from the wireframe from Part 1 of the project:

- This feature is only applied to posts which are divisive or opinionated
- The number of people who agree vs disagree are displayed, next to the number of people who like/love/react
- To reduce the cumbersome series of steps required for the interaction, we decided to embed the discussion space in the area of the post itself, rather than popping out to a modal window.
- The list of people to chat with, and their statements, are visible in an embedded scrolling section
- We removed the “I’m willing to chat” checkbox, operating under the belief that we could build the interaction itself to be more self-evident.

- We also decided to remove the checkboxes as the way to select a conversation partner - instead, we designed the interaction so that clicking anywhere in the discussant bar would start a chat.
- In order to embed the discussion in the post, we needed a way to swap between the discuss-mode and the comment-mode. In this version, we had comments collapsed at the bottom of the post. The comments could be expanded by clicking the comment link. (In our functional prototype, we decided to use the gray “Comment” and “Discuss” links (just above the reactions) as tabs to switch between the two modes. This helped keep the height of the post more consistent.
- The user’s stance is visualized with a pacman icon. (In our functional prototype, we scrapped the black and white color scheme). This visual indicator of agreement/disagreement is attached to each user’s thumbnail.



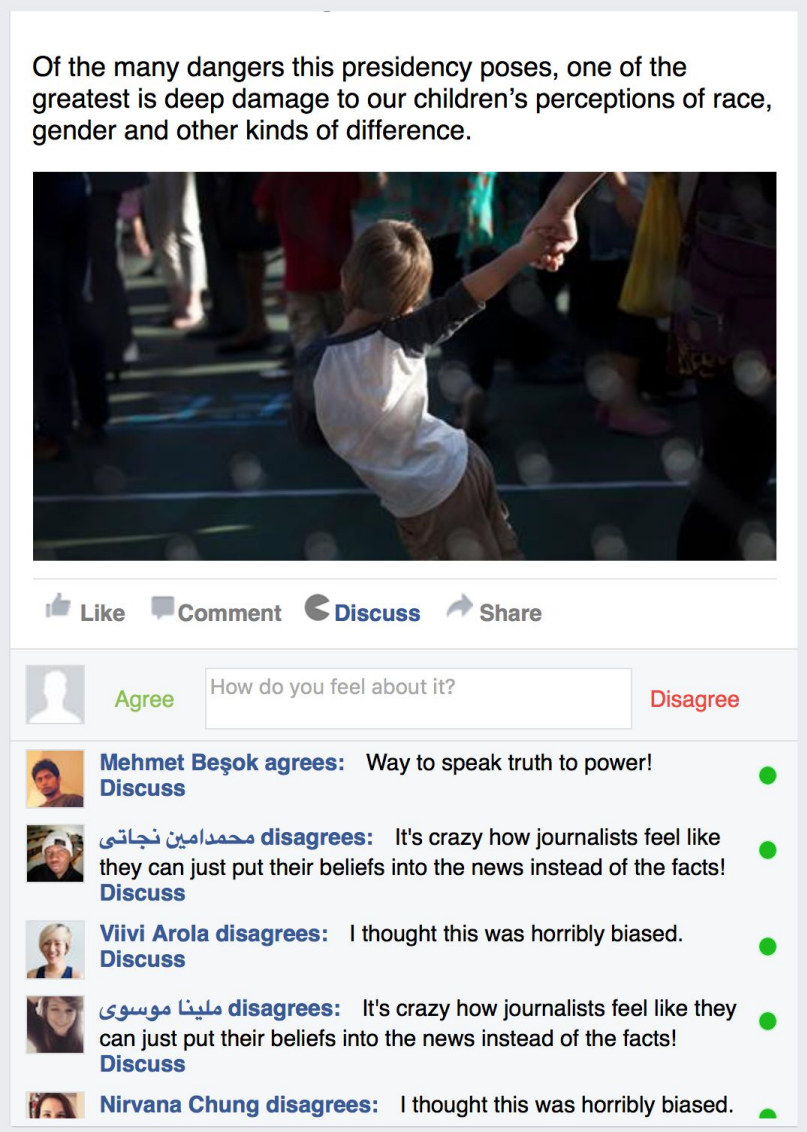
The view of a chat window in our pixel-perfect mock.

Changes that we made to the chat functionality:

- We decided instead of popping out a blank chat window for the users to initiate conversation, we would populate the chat with the users’ stances to help start the conversation. This would give them both (a) conversation content to start from, and (b) a foot-in-the door to chat, since the blurbs would provide visual indication that the chat had already begun.
- We also thought it would help to have the chat context (the title of the article) in the header of the chat, instead of the other user’s username. This would (a) help set the context of the conversation, and (b) center the conversation around discussion of the article.

FUNCTIONAL PROTOTYPE

The following is a screen grab of our initial functional prototype:



Screen grab from the initial functional prototype.

FEEDBACK

User Group 1 is a group of undergraduate and graduate students in the computer science department at Stanford. They are a heterogeneous group of male and female students, with varying Facebook usage habits and levels of political engagement.

User Group 1's feedback:

- On visual design:
    - Using red/green for opposing viewpoints is misleading; it's confounded with the colors associated with political stance (red/blue).

- On information hierarchy:
    - What is the difference between “Discuss” and the comment section? Would it have been possible to modify the existing comment section instead? One user said he would have been confused by the difference.
- On conversation partners:
    - Liked the idea of rating, “I had a great conversation with this person.” One user wanted to know which conversation partners would be likely to talk things through
    - Would the available conversation partners be in network, or the general public? (Answer: friends would be at the top, followed by friends-of-friends, and finally, strangers)
    - What order would conversation partners be presented in? An idea would be to present users with shared common ground higher on the list.

Therese is a 24-year old graduate student at Stanford, studying plant biology. She uses Facebook, primarily as a passive consumer. She is not highly engaged in politics, though she identifies as liberal. She doesn’t post opinions on political matters, because she is concerned with having her name publicly linked to opinions that she holds. She likes to use Facebook to find uplifting videos and fun news about her friends.

Therese’s feedback:

- On interaction design:
    - Although she liked that agree and disagree were on either side, she decided that she didn’t like the layout because it the “Disagree” button felt like it was in the “submit” position.
    - Was confused that there were many ‘clickable’ things that all led to the same chat interaction. She said that when she hovered over different things and saw each things was separately clickable, she assumed that clicking them would lead to different interactions.
    - Wanted to know whether there was a word limit on the text box. (No limit)
    - Was worried about “Enter” to post; hated when she accidentally posted when trying to do a carriage return.
    - The interaction that occurred after clicking Agree or Disagree was not immediately obvious. She clicked “Agree” and said, “I have no idea what just happened. Wait, it only showed me disagree people. I see.”
- On visual design:
    - Confused - why was there a pacman for “Discuss”?
- On information hierarchy:
    - Liked the green dots, read them to mean “available to chat now”; said it was pretty obvious.
- On conversation partners:
    - When deciding who to chat with, she looked for people whose blurbs were “a little bit longer,” with the thought that longer blurbs would give them something to talk

about, somewhere to begin. She thought blurbs that proclaimed “the whole thing was biased” were too broad.
    - She was torn between wanting to know more about the person, and thinking that people shouldn’t be able to know more about the person. She wanted to click on the person’s profile because she was “curious” but thought it was “maybe better if you can’t.”
- Other:
    - Would have liked to see other people’s dialogues. Was interested to see how other people’s ideas were coming together (that’s how she usually engages the comments section in the existing Facebook; she doesn’t post, but she reads the conversations others have).
    - She would have been interested to know which pairs of people who disagreed had actually come together to have a conversation, and whether it changed them at all.

John is a researcher at Microsoft Research, and is also our studio instructor.

John’s feedback:

- On interaction design:
    - Was disconcerted that after he registered his stance and agreement, “something happened but it didn’t show up”
    - Thought that there needed to be a visual indication of whether discussion was enabled or disabled. Felt that it needed to be more clear that discussion was enabled after registering one’s stance, and disabled otherwise.
    - Liked that clicking the agree/disagree buttons filtered the other users who were available to chat; thought this did a good job of reinforcing the user’s model of the purpose of the feature.
- On visual design
    - Wondered whether the green dot was redundant? (We decided that the green dot offered helpful visual signalling of the user being online; it was a way to differentiate the appearance of comments from the discussion stances).
- Other
    - Was interested that we forced users to take a position in order to discuss.
    - Wondered why it was important to show other users’ agree/disagree statements before users registered their own opinions. (We thought that it would help to make the interaction more self-evident; users would have a better idea of the context, and how to engage)

Julie is a user experience researcher at Facebook. She uses mixed methods (qualitative and quantitative) to study Facebook users. She currently works on the “teen project” looking at how teens engage Facebook, and previously worked on a team that made sure Facebook ads were ethical.

Julie's feedback:

- On interaction design:
    - Had trouble registering her stance (First clicked "Agree" but didn't notice that anything changed, so un-clicked "Agree". Then typed in a stance, but since she had un-clicked "Agree", it would not submit.)
    - Thought that we should consider how this interaction would happen on mobile; how would the experience differ? Also thought that designing for mobile first would help us drill down to the bare bones of the functionality we wanted to implement.
    - Wanted time to formulate an opinion, and thought that sometimes people formulate their opinions by writing. Was unsure whether she'd have a nuanced idea to state in her stance.
- On visual design
    - Was confused by the green status indicator; at first thought green meant that the user agreed with her. She suggested putting the status indicator on the face itself (we decided that it would be nice to have the actual stance - agree or disagree - on the face itself, so we kept the green status indicator as is. Also, the right-aligned indicator is consistent with the Facebook messenger layout.)
    - Wanted to have an "Agree" or "Disagree" symbol to accompany each user. This was especially desirable because the way agree and disagree are currently formatted (e.g. "Nirvana Chung agrees" and "Mehmet Besok disagrees", followed by their written stance), the agreement/disagreement blends in with the text of the name. They are not sufficiently different from the text, nor are they sufficiently different from each other (i.e. there is only a 3-character difference between the words agree and disagree.)
- On information hierarchy
    - Thought that discuss was a type of commenting, and was not sure that it needed to be in a separate mode. Was more convinced when we discussed the relative privacy of a discussion, and relative publicity of a comment. However, this then led to a discussion about privacy (see discussion below).
- On conversation partners
    - Wondered whether this would draw only the people on the furthest ends of the agreement/disagreement spectrum, and discourage moderates from participating.
    - Wondered whether good, nuanced conversations could still be had among people with the same officially-registered stance (You and I might disagree with the article for very different reasons.) Thought that the agree/disagree might over-restrict conversation partners.
- Other
    - Privacy was a concern. Julie noted that people are protective of their Facebook identities, and this type of discussion might open you to attack (say your conversation partner can see pictures of you kids, stalking).

    - Thought that an anonymous messaging was an option, but acknowledged that full anonymity might give people license to be hostile. Suggested that progressive disclosure might be an option. Thought that even if not full anonymity, providing some progressive disclosure might help signal to the user that the issue of privacy was being considered and addressed.

Marty is a 27-year old graduate student at Stanford, studying education. He is a Facebook user, but uses Facebook to see what his friends are up to, not as a news source. He actively seeks his news elsewhere, and is a liberal who consumes news on both sides of the political spectrum. He worries about his digital footprint, and hence never posts anything online.

Marty's feedback:

- On interaction design:
    - His initial instinct was to scroll by the post (evidence that this is his usual browsing mode; reading and scrolling, skimming for the things that will engage him most).
    - Upon seeing the "Discuss" opinion, he was nervous. His first instinct was not to touch anything, in case he was accidentally and unwillingly thrown into discussion.
    - Also noted that he wouldn't register "Agree" or "Disagree" because he didn't know what would happen. Would his friends see it? He said, "I don't want that, I like my opinion to be unclear."
    - Was able to navigate between the comment-mode and discuss-mode very easily.
    - First read the text box ("How do you feel about it?"), and realized he could start writing his stance. He didn't start writing immediately; he first clicked through to the article (which opened in a new tab) to read the article, before clicking back to the Facebook tab.
    - When he clicked "Agree" he noticed, "Something happened?" He realized that when clicking between "Agree" and "Disagree", different users were available to him for chatting. (So, the change was fairly noticeable).
    - Tried clicking to chat with someone, but was popped back up to the input box. He observed, "I can't click, I have to say something first." This prompted him to type.
    - When he clicked on a conversation partner, he noticed that their two blurbs were auto-populated in the message. He thought this was a bit awkward - he noted that if he wanted to respond to the other user's stance, it was a bit strange to do so after his own blurb was auto-populated as well, because his auto-populated blurb made him the last person to have "spoken" in the conversation.
- On visual design
    - In line with Julie's feedback, Marty also observed that the text-based notation of agree/disagree on each user blended in with the name.
    - Was able to determine that the green status dot indicated that the user was online and able to talk right now, but also thought that it was important to change the color of agree/disagree so that agree was not also green.

- Other
    - Isn't a fan of opinion pages; he thinks that the article will be more personal stories and personal experiences, rather than a useful breakdown of statistics.

John is a 30-year old lecturer in design at Stanford. He generally uses Facebook for 10 minutes a day or less, to respond to friend requests and messages, and scroll through his news feed. He does not do a lot of public posting.

Johns feedback:

- On interaction design:
    - Am I filtering, or am I saying that I agree or disagree? The meaning of the "agree" and "disagree" buttons is not clear.
    - If I am filtering, that's a cool function.
- On information hierarchy
    - It needs to be clearer that the "agree" and "disagree" buttons mean that I, myself, am agreeing or disagreeing with the post.
- On conversation partners
    - I'm not interested in discussing. There are trolls everywhere. I think that's what would happen. If I said "I Agree" I would get a bunch of hate mail. I'm just not interested. Also I don't really use FB that way. I'm completely uninterested in engaging with strangers on FB.
    - In the fantasy world where I do engage with someone, I would probably want it to be public. A lot of people want to demonstrate how smart they are, or make other people look bad.
        - People are addicted to digital feedback. The addictive function of checking to see if someone has responded. That wouldn't be there with this.
- Other
    - I hate it when people don't read the article, but comment with an opinion. Don't agree or disagree without having read the article. It's a bad function if you can agree or disagree without having read it. If the purpose is to get people's opinions, wait until they've read the whole article.
    - For most posts where it's a person posting, and mostly their friends see it, there wouldn't be an equal distribution. Everyone would agree with you, and this functionality wouldn't be as useful. Even if it were something political.
        - (I explained to John that our function would expand beyond personal networks, to anyone and everyone who had shared the post)

ITERATE

From user testing, we realized the importance of certain elements of flow and functionality we had previously overlooked. Some of these we were able to incorporate into our final functional prototype. These included:

- Interaction design changes:
    - Previously, when the user registered an opinion (Agree/Disagree and blurb), the stance would be accepted as input, but there was no visual evidence of this having occurred. It would essentially disappear from view. We made changes so that the user's input would be reflected in the visual state - now, when the user types and submits their stance, it is inserted as the first entry in the list of stances.
    - We changed the interaction such that clicking anywhere in the discussant bar would allow the user to initiate a chat, instead of having three separate links (the username, the thumbnail, and the "Discuss" link) that all led to the same chat interface.
    - In the original functional prototype, clicking on someone to chat with immediately opened a chat box--even if the user had not yet indicated their stance (agree/disagree) and typed their reasoning. We decided to disable this function, and not allow chats to be initiated until the user had done this. Now, if you click on someone to chat with before indicating whether you agree or disagree and typing your reasoning, the text box above blinks, to remind you to do that first.
- Visual design changes:
    - We changed the color scheme of the Agree/Disagree buttons to disambiguate agreement (orange/teal) from political stance (red/blue) and from online availability (green).
    - We used "Agree" and "Disagree" icons (the orange and teal pacmen) instead of the textual marking of agree or disagree; this made each user's stance more obvious upon a glance.
    - Instead of merely "Agree" and "Disagree", we changed the text to "I agree" and "I disagree", to make clear to the user that they were registering their own stance, not merely using the buttons to filter the list of people available to chat.

Our final functional prototype is here: http://chrisproctor.net/cs247

FUTURE ITERATION

If we had time for another iteration, we would make a few more changes to streamline the flow of steps a user needs to take to initiate a chat. We would make these steps more explicit by rearranging the position of the agree/disagree buttons in relation to the textbox. In a future iteration, when a user first encounters the post, they would see only the agree/disagree buttons, with no textbox, followed by the greyed-out list of potential chat partners. Once the user clicked agree or disagree, the text box would appear below. THEN, after entering her reasoning, the

chat partners would be activated and the user would be able to initiate a chat. This would make the flow more explicit.

In addition, an important future direction would be to design the conversation experience. Users brought up interesting points about the need for initial anonymity with progressive disclosure, a need to know about shared common ground with the other user, and also a way to enter naturally and easily into a conversation (the auto-populating blurbs being an insufficient starting point.) This would be a vital next step - while our present design focuses on getting users from the newsfeed into a chat dialogue, what comes next would be facilitating the actual conversation.