Poliscope

Team Members:
Janet Gao (Designer, Writer)
Kim Le (User Researcher, Writer)
Kiyana Salkeld (Project Manager, Storyboarding)
Ian Turner (Designer, Writer)

Problem and Solution Overview:

Our intended audience is comprised of college students who are interested in reading the news, but view this activity as being extremely time intensive. These individuals want to avoid the laborious process of sifting through multiple sources in order to receive their news. At present, if an individual wants to gain a well rounded perspective on a political issue or current news story, they will have to sift through multiple sources in order to accomplish this goal. Some individuals tackle this challenge through a combination of services, for example, browsing news stories via social media platforms in tandem with Google Alerts and news-centric podcasts. Other members of our target audience would like to devote more energy towards becoming better informed, but are so overwhelmed by the seemingly endless number of news sources available, that they choose to disengage entirely. Regardless of their current political news-gathering strategies, all members of our target audience want to stay abreast of the news in the most efficient, seamless manner possible.

Our proposed solution is a smartphone application that will aggregate news stories from multiple news outlets into a single location. An important aspect of this design is that users will have the opportunity to personalize their news consumption so that the aggregated stories are relevant and interesting to the user. Our contextual inquiry participants stated that smartphone use is prevalent amongst their peers, which leads us to believe that the smartphone application design will require a minimal learning curve. Additionally, our target audience has easy access to their smartphones, which allows for usage of our app throughout the day. We recognize the importance of social media to our users, and we will incorporate aspects of social media into our smartphone application designs going forward; for example, users will be able to share news stories with one another (both publicly and in private, direct messages).

Contextual Inquiry Target, Stakeholders, and Participants:

We conducted a total of six contextual inquiries with college-aged participants. In order to collect data, we relied upon interviews in which we asked participants to reflect upon their news-gathering habits. In order to mitigate the issue of participants struggling to remember the exact context in which a "retrospective account" took place, we made sure to ask our participants to speak about specific instances in which they found and then read a news story. We were cognizant of the fact that our participants might have left out details of these activities, and we attempted to ask follow up questions in an effort to fill those gaps. We also asked our participants to simulate how they might read the news; this often took the form of participants showing us which online news outlets they frequent. We chose these individuals for our contextual inquiries because we wanted to test a variety of people that varied widely on the scale of "political awareness/involvement". We think that regardless of the amount of effort you put towards gathering news, the challenges (stemming from too many sources and cumbersome data acquisition process) are largely identical.

For our first contextual inquiry, we interviewed an international graduate student in the Paul Allen Research Commons. She frequently uses her laptop and phone to access social media sites in order to view political news. She is also an avid listener of podcasts on her phone, which she uses to get information regarding current news events. She uses Facebook and Twitter accounts to subscribe to news outlets such as Vox, NPR, and The New York Times. We mistakenly assumed that she would provide us with the perspective of someone that does not have a strong interest in following the news, especially that which is political in nature, because she is ineligible to vote in U.S. elections. On the contrary, she is highly interested in following political news that relates to her own life, as well as her friends' lives; she is motivated to stay informed because she wants to be able to make meaningful contributions to conversations her friends have regarding political issues.

For our second interview, we interviewed an undergraduate student at his apartment in order to make things as convenient for him as possible. We wanted to speak to him because although his major is not related to the political sciences, he still views himself as being politically aware. Whenever he has downtime, he uses his smartphone to gather political news via social media (i.e., Twitter, Facebook, YouTube) from a variety of sources (e.g., CNN, The Daily Show,

The Colbert Report). Although he makes a concerted effort to follow the news, he does not vote in elections. He identifies as a liberal because his views tend to be left-leaning.

Our third interview was conducted with a high ranking member of a campus student political group and a self described "Poli Sci nerd." We spoke to this individual because we wanted to gain the perspective of someone who is highly motivated to keep abreast of the news; we wanted to be able to identify universal themes regarding the difficulty of consuming the news, regardless of an individual's level of political understanding. The interview took place in a meeting room in Paccar Hall. This person frequently uses her tablet to research political news issues. She supplements this research with podcasts, which she has integrated into her morning ritual. She also subscribes to Google Alerts in order to keep herself informed on issues of importance to her, especially at the state level. She describes herself as a moderate Democrat.

Our fourth interview took place with an elected member of UW's student government at their office on campus. We chose to speak with her to gain insight about her own news gathering methods, as someone who is highly invested in politics, as well as opinions on what works and doesn't work when trying to motivate others to become more involved with learning about and participating in politics. She is a senior majoring in Law, Societies, & Justice. Despite being a member of the student government, her practices of acquiring political news was not very different from our other participants. She shared information among her friends at work (specifically because she knew they were interested in talking about politics), and her acquisition of political news was by use of her phone if she was on the go, or on a computer if she was at home because it was easier to use Google search on a computer.

Our fifth interview was with an undergraduate international student at a casual setting in her apartment. We wanted to learn about her political news consuming habits, because of her ineligibility to vote, like Participant 1. Like Participant 2, she has not studied politics in an academic setting. She described herself as being open to political news but doesn't actively participate in any political news-gathering activities, because as an international student she is ineligible to vote in U.S. elections. She is only interested in reading news articles if they're related to conversation topics she has been exposed to. She receives news articles via her Facebook feed, but will not actively search for political news.

Our last interview was with an undergraduate student in a major unrelated to politics. He offered the perspective of somebody who is not interested in learning about political news. He does not find any interest in politics and does not concern himself with subjects of debate either (e.g., abortion) because he does not like the emotional conflict it can entail. He sees comments from friends about political subjects on social media such as Facebook, but doesn't read them in detail. He does not wish to access any political information because he finds all such information boring to read. He believes that there is an overwhelming amount of information provided by the media, which would make it difficult for him to find a place to start even if he wanted to.

Contextual Inquiry Results and Themes:

We used our contextual inquiries as an opportunity to gather information about how our participants currently follow the news, use the news, and feel about the news. Although our participants come from diverse backgrounds, we began to notice commonalities between their personal experiences.

The use of social media as a news outlet was common amongst our participants for multiple reasons. Our participants felt as if there are too many news outlets available, and that it wouldn't be feasible to track each one individually. Social media sites like Facebook and Twitter act as content aggregators because website referrals for a wide variety of news outlets and online sources are gathered into a single place. Our participants view this consolidation of information as a helpful tool in navigating what they perceive to be a deluge of information. Facebook's trending topics was a popular feature amongst our participants for this very reason because it allows them to see popular stories from five categories: All News, Politics, Science and Technology, and Sports and Entertainment. These trending topics also allow individuals to view what relevant articles, images, or videos their friends may have shared or followed. This interest in being able to view friends' activity or have a discussion with friends regarding a news story or issue was common across our participants as well.

As mentioned previously, our participants felt as if there is far too much information available online and there isn't enough time to parse through it all. For this reason, a commonly held view amongst our participants was that in order to have the motivation to closely follow a news story, it has to have some degree of personal relevance. For example, one of our participants was an international student and she stated that she tracked news stories regarding immigration because this is an issue that is relevant to her own life. When asked if they would like to have access to unbiased articles, that is, articles that merely present a summarized list of facts regarding a news story, our participants overwhelmingly agreed that this was not something they would be interested in as their sole influx of political information. Most of our participants

claimed that they were interested in gaining perspective on an issue from reading news stories from both left-leaning and right-leaning news organizations.

We believe that there is an opportunity to design a product that would provide individuals with a one stop source of news aggregated from multiple news outlets. We also believe that this news aggregator could be tailored to the individual so that he or she is only receiving information about the issues they find pertinent. Finally, this one stop news source could also provide individuals with a way to see what stories their friends and family are particularly interested in and to share relevant content with them.

Answers to Task Analysis Questions:

1. **Who is going to use the design?**
   As mentioned previously, we believe that college students who are interested in reading the news, but view this activity as being extremely time intensive, will benefit the most from our design. These individuals want to receive their news in the most efficient way possible, that is, without having to visit multiple sources.

2. **What tasks do they now perform?**
   At present, people use social media as a way to receive their news in a single location. These individuals supplement social media sites like Facebook and Twitter with subscriptions to news outlets through services like Google alerts. Because individuals are consulting content aggregators, their news is not coming from a single source like The New York Times, for example. Individuals are also passively acquiring information; for example, they will listen to podcasts so that they can simultaneously multitask.

3. **What tasks are desired?**
   Individuals from our contextual inquiries have indicated the desire to view political news from a single source that aggregates stories, rather than having to visit multiple news outlets. This single source should be easy to navigate and keep up with, because current platforms do not provide a well organized collection of stories. This means that a person should be able to follow the development of an on-going political issue. There should also be a way to personalize the experience by allowing people to choose stories they find interesting or relevant to their own lives. Political news found on our product should also include multiple perspectives of a topic, because our participants were not interested in unbiased articles. Additionally, the ability to interact with friends through the process of sharing stories or following friends' activities is an important feature. The final product should be accessible on-the-go.

4. **How are the tasks learned?**
   Individuals learn how to perform tasks from observing their friends' behaviors, as well as strangers present in their environment. For instance, a person may begin to follow a news source after seeing a friend post a link to an article on Facebook. Additionally, the platforms people are using can offer intuitive interfaces, allowing users to be able to self-teach themselves how to find current political news. These people must already have a general knowledge about how to operate computer devices.

5. **Where are the tasks performed?**
   Tasks can be performed in the privacy of an individual's home. In this environment, individuals can either be multitasking while reading, watching, or listening to political news, or they can be focused on the news source (that is, actively attending to the news source). Tasks can also be performed during passing periods or free time during the day, such as when taking the bus or waiting in between classes, meetings, etc.

6. **What is the relationship between the person and data?**
   The data is political news or information that each user deems as important because of its personal relevance or interest. Political news is accessible from any device that has internet access, and we found that our CI participants accessed political news using all three devices of smartphones, laptops, and tablets. In some cases, people can download political news stories to their device, so internet access is not necessary after importing the data. Over time, a person's relationship with the data may change because the stories themselves could change, or what a person believes is relevant to themselves could change.

7. **What other tools does the person have?**
   The tools that we saw our participants use included smartphones, tablets, and laptops. Participants who chose to use these devices to obtain news needed internet access in order to listen to podcasts and access social media sites including Facebook, Reddit, and Twitter.

8. **How do people communicate with each other?**
   People are communicating with friends through social media outlets, as well as in person. During these interactions, they may be having a casual conversations or more debate-like conversations on current political issues. During these interactions, political knowledge can be transferred between individuals.

9. **How often are the tasks performed?**
   The tasks are performed whenever it's convenient. Through our participants reports we, learned that tasks were done in times of leisure or waiting (e.g., between classes) when they were alone (i.e., without friends, but they could be in a public setting).

10. **What are the time constraints on the tasks?**
    There are no time constraints on when people will perform tasks to access political information in general, but there may be a time constraint on the relevance of the news subjects in which they may be interested. For example information about political policies may be time-sensitive to an election schedule.

11. **What happens when things go wrong?**
    The intent of our final product is to provide users with news and information that is relevant to them in a single endpoint that is easy to navigate. When this intent is not achieved, then something has gone wrong. This could manifest itself through users failing to use the product at all, or users being unsatisfied with the information they are receiving. Users may receive information that they do not want to see (that is, about topics they are not interested in), or, they may receive so much information and experience trouble filtering through it (thus defeating the purpose of simplifying the task of getting pertinent news). If the user feels unsatisfied, there should be way for them to alter their preferences so that the get the right kind and right amount of news (where "right" is a subjective measurement that will differ between individuals).

Proposed Design Sketches:
Design 1: Social Media Plugin
Because social media was popular amongst all of our participants, we feel as if there is no need to reinvent the wheel and create a stand-alone website or app. We propose a browser extension/add-on that lets you further customize your Facebook News Feed. A user could use this extension to filter their News Feed so that they could customize it beyond what Facebook currently allows ("Top Stories," "Most Recent," and Trending Topics). The extension would appear as a search bar beneath the currently existing "Search Facebook" search bar. This search bar would contain the text "Search News Feed," which would indicate to the user that they can interact with this search bar in the same manner that they would with any other online search bar, but that they should expect the results to return items contained within their Facebook News Feed. (See Figure 1.)
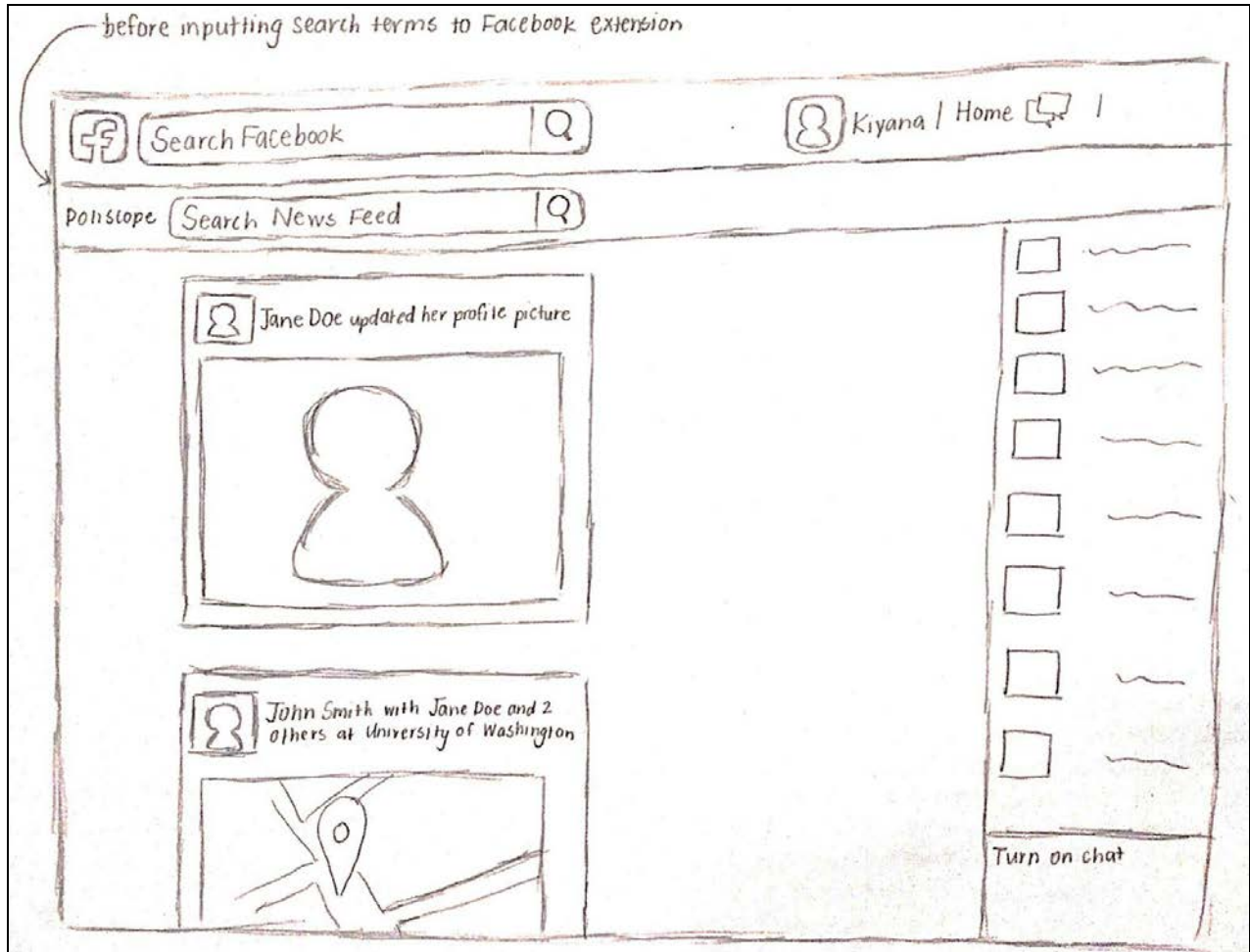
Figure 1. A typical Facebook News Feed

Our extension would allow users to filter their News Feed so that they only see information they deem relevant, like which of their friends were discussing the Hillary Clinton Benghazi Hearing, for example (this task would be accomplished by typing something to the effect of "Hillary Clinton Benghazi" into the extension's search bar). The extension could also be adaptive and learn over time; for example, if a user filtered their News Feed so they could see which of their friends were following the Hillary Clinton Benghazi Hearing, in the future, the extension would surface and highlight news stories or posts made by the user's friends related to Hillary Clinton, as well as new articles that detail developments in the Hillary Clinton Benghazi Hearing, without requiring the user to manually search for these stories. Additionally, there would be a feature for up-voting or down-voting a post, which is only viewable to the user. When the user upvotes a post, it prompts the system that the user would like to see more posts similar to it. A down-vote means that the user is not interested in seeing that type of post. This would allow for a user to further control the type of media they are seeing, and will feed into how the plug in aggregates relevant stories. (see Figure 2.)
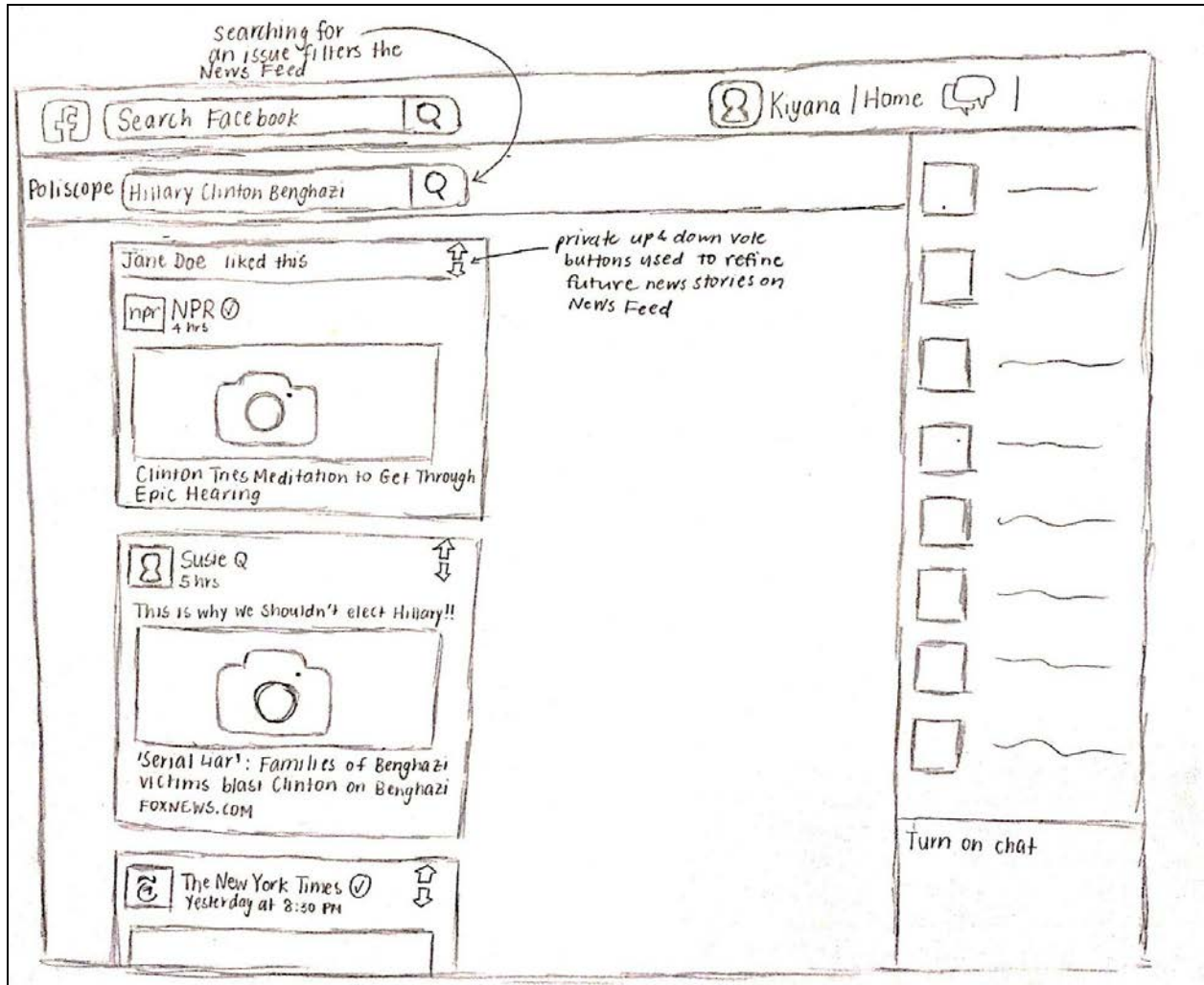
Figure 2. The Facebook News Feed that has been filtered to only show Facebook activity pertaining to the search terms

Tasks Addressed: Socializing with Friends, Following the Development of a News Story, Personalizing News Consumption, Gauging the General Opinion of a Group of People or a Region on a Particular Topic

Design 2: Smart House

In light of our observations, as well as the increasing prevalence of the Internet of Things in recent years, we propose the idea of using smart appliances throughout one's home as a means of providing the user with a non-invasive, hands free means of receiving personally relevant news stories (where "personally relevant" is defined as the aggregated subset of news topics that are important to the user, as determined by their set preferences and view histories). Users could receive news alerts through either a visual or auditory medium; for example, the news could be read to them, and relevant news clips could be sent to their computer or television. The data needed to provide this functionality would exist on a backend so that it could be translated to the user's car or other smart devices (that is, smartphone, tablets, etc.) as they leave the house. This design would make solving our chosen tasks easier by seamlessly integrating them into our users' daily routines:

Following the Development of News Stories:

The Smart House would configure to cache relevant political news stories while the user was sleeping and then would provide the user with a synopsis audibly (or visually via smart television) as a morning alarm. The system would also look for new stories on relevant topics to the user and alert the user either audibly (or visually, via a smart television interface) if they are in the house, or forward them to the user's car or mobile devices (smartphone or tablet, for example).

Personalizing News Consumption:

This system would employ the use of daily memos (see above) and smart devices (smart mirrors, smart TV's, etc.) to provide the user with a single, easily parsable interface that aggregates personally relevant news into a single location (for example, news stories would appear on the user's bathroom mirror as they get ready for work in the morning). The user should be able to interact with the interface either via touch or voice commands. This feature would carry over to smart devices outside of the home, using whatever medium of interaction the device employs (touch screen, voice, keyboard mouse, etc). (see Figure 3.)
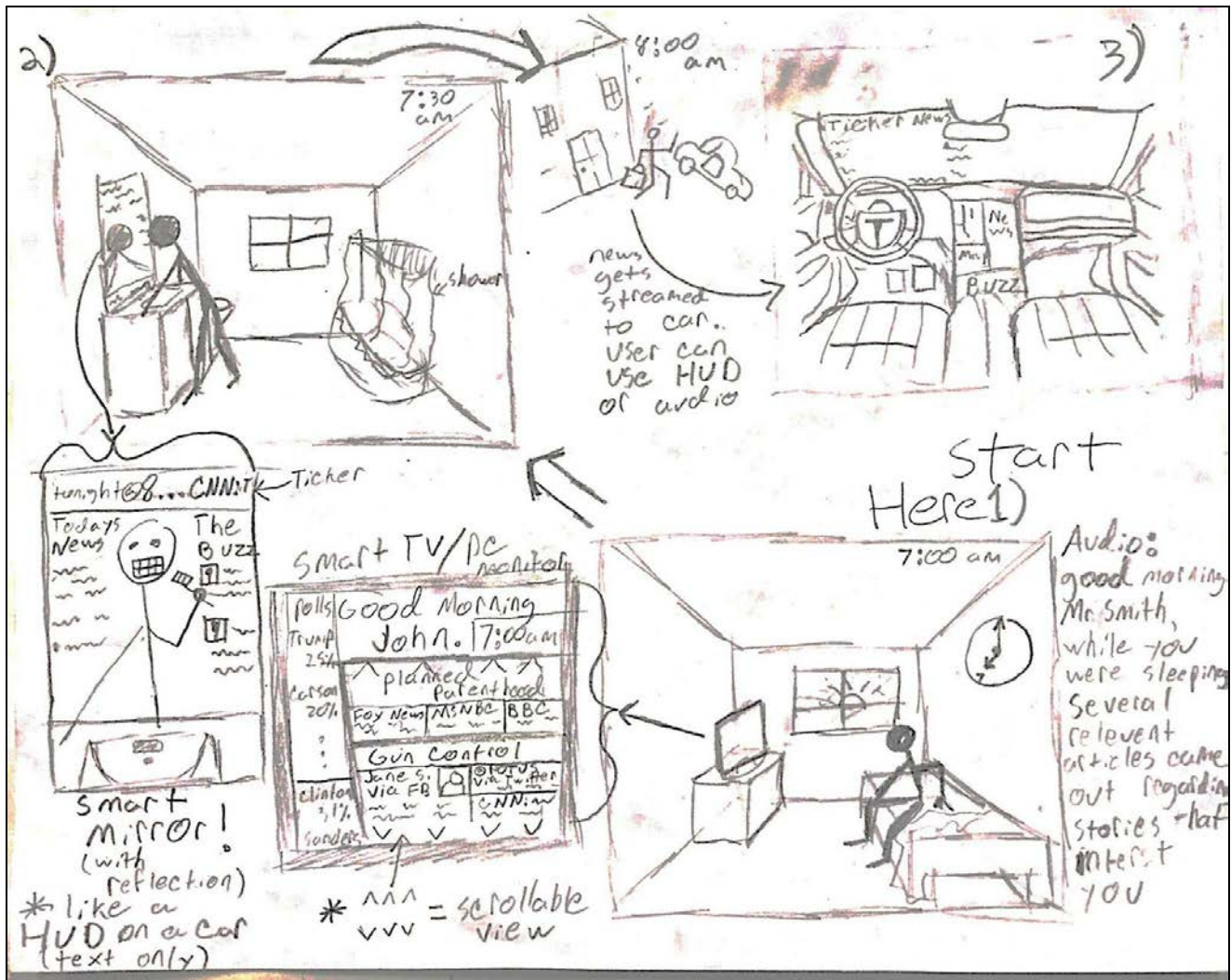
Figure 3. Smart House uses a combination of smart devices to provide the user with the means to efficiently acquire their news while conducting their daily routines (flow of the diagram start with the panel on the bottom right).

Socializing With Friends:

Social media as a source of news was a consistent theme across all of our contextual inquiry participants. In light of this observation, not only will this system aggregate content from news outlets like CNN, NPR, Fox News, etc., but it will also pull content from posts made by a user's Facebook friends, Twitter users they follow, etc. New stories could then be filtered by topic, as well as by a specific individual (for example, a user may be interested in seeing news stories their significant other has posted).

Maintaining privacy:

Because this system is inextricably linked to an individual's personal, private residence, privacy is a major concern of the smart house. The user would have the ability to toggle when and where they received their news. If the privacy were set to "on," the system would always request permission before conveying news to the user, in case the user had company over for example . The user could also toggle the system's interactive capabilities to be limited to only his emails, phone notifications, etc if the user was concerned about the possibility of other individuals in the home gaining too much insight into his or her political preferences. The user could configure the smart house to relay their relevant news to the bathroom every morning (via smart mirror) so that they could read their news as they get ready for work, instead of immediately when they woke up, in the case the user shared a bed with someone else. (see Figure 4.)
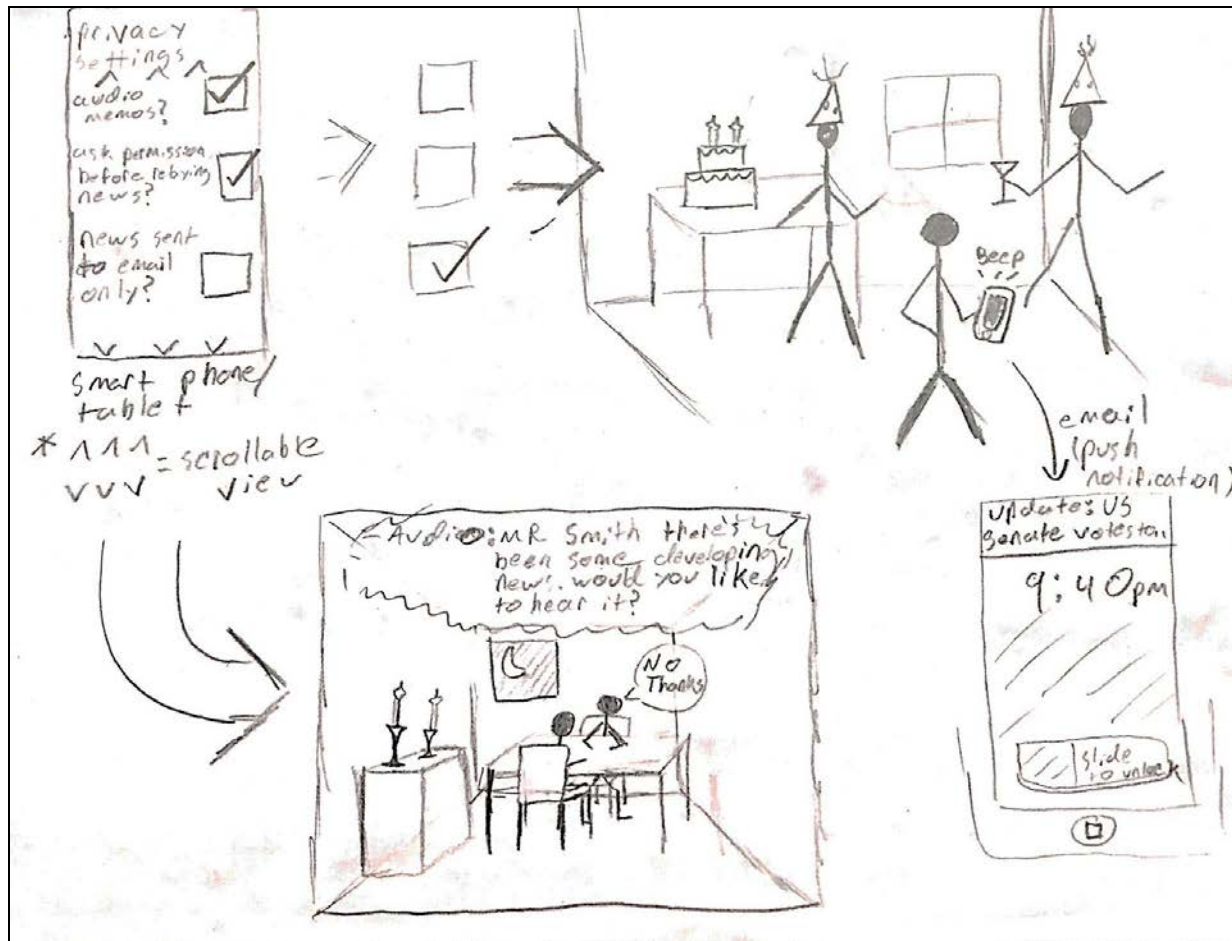

Figure 4. User can toggle the privacy settings on a contextual basis. Displayed are two scenarios, a private dinner and a party, where the user may wish to exercise moderate and high privacy, respectively.

Design 3: Phone App

Through our contextual inquiries we learned that many people want to learn more about the news, but find it a bit overwhelming to sift through multiple news outlets. Our target audience would like an easy solution for receiving the news in one place, so we propose a standalone app that would encompass all of our tasks. We designed the app for a smartphone because our inquiries revealed that people generally read the news during downtime or times of passing (for example, as they walk to class, drive to work, etc.). A smartphone is something that most people in our target audience already own and have on hand most of the day. Additionally, many smartphone apps have users already signed in when they unlock their phone, unlike many sites on web browsers. Inquiry participants suggested that the fast access was something they preferred over a multi-step login process (e.g., logging into their computer and then onto a website).

Socializing With Friends, Both Online and Offline:

People indicated that they didn't care about reading about all political news topics, but only those that their friends were interested in, so that they could know the background behind the topics that came up in conversation. To address this, we integrated friends' activities (e.g., likes, dislikes, comments) to show up on a dashboard, as well as a separate search page that allows users to search user profiles in order to see the topics those friends follow. In the case that some people don't want to know the interests of all of their friends, a dashboard setting would exist to toggle viewing friends' activity as well as listing exceptions to the toggle (i.e., toggling you want to see all friends' activity except a certain list of people). There might also exist a chat function on the app for users to message friends and/or strangers online versus talking in person. (see Figure 5, and Figure 6.)
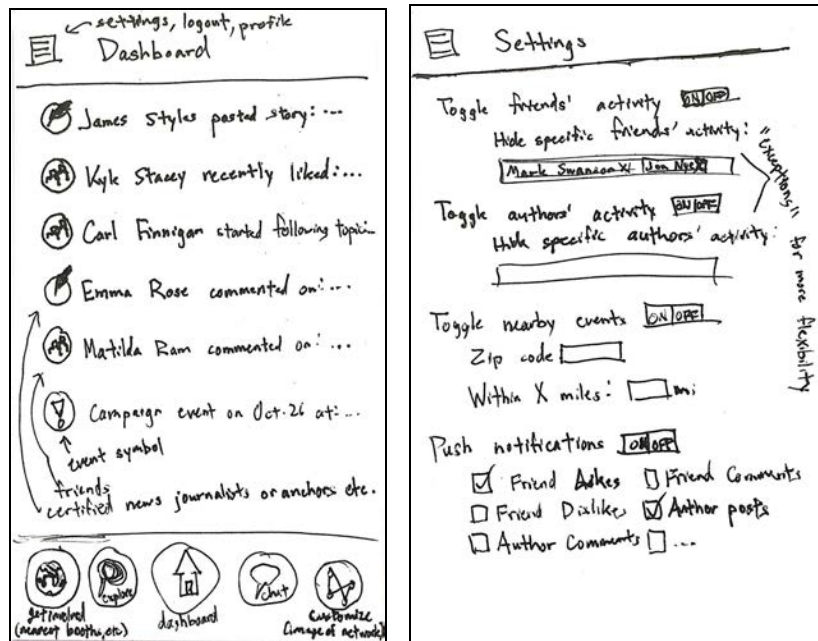
Left to right: Figure 5. A dashboard home screen to see all your app content in one place.
Figure 6. Settings page to customize what you see on the app.

Following the Development of News Stories:

Through our inquiries we found that people generally stuck to one platform to access their political news since they didn't like switching back and forth between multiple, disparate news sources. We want to allow users to follow/subscribe to topics via tags so that they can see news about that topic from multiple sources all in their dash/news feed. Users could also unsubscribe from a particular topic at any time if they lose interest in said topic.

Maintaining Privacy:

There was a desire for maintaining the privacy of what news sources or news topics people follow in case any of them were embarrassing or conflicted with the opinions held by their family or friends. We would give users the option of toggling topics they follow to public or private, and allow them the option to write in exceptions (i.e., people they don't want to see that they follow a specific topic if the toggle is set to public). The same design of toggling for privacy would apply to other things such as the things they like or dislike, and their profile sections. (see Figure 7.)
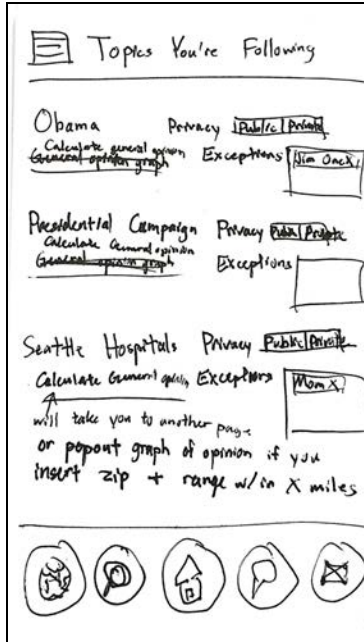
Figure 7. Page within the app to customize the news topics you follow and who can see them.

**Comparing Different Perspectives On News Topics:**

Our participants showed interest in reading opposing or differing viewpoints on the same subject in order to get a broader understanding of other people's opinions. We thought that at the end of each article, we would give users the option to either continue reading articles on the topic of similar opinions or to read different opinions on the topic if they wanted; for example, a user reading an article written by a left-leaning news outlet, like NPR, could be given the option to read about the same topic on a right-leaning news outlet, like Fox News, or an article from another left wing media source, like The New York Times. (see Figure 8.)

Figure 8. Article brought up within the app with a section on the page to further direct users to articles of a similar viewpoint on the same topic, as well as articles of a different/contrasting viewpoint.

Personalizing News Consumption:

      To tailor news to the user's interest, users can choose what topic tags or people to follow via a search/explore page. They will also get suggestions of articles they may be interested in on the explore page based on their history of likes and dislikes, in the way Pandora tailors music. Users could go to their likes and dislikes pages and remove/undo any activity if they find their news has been tailored in a way that doesn't fit their interests. (see Figure 9, FIgure 10, Figure 11.)
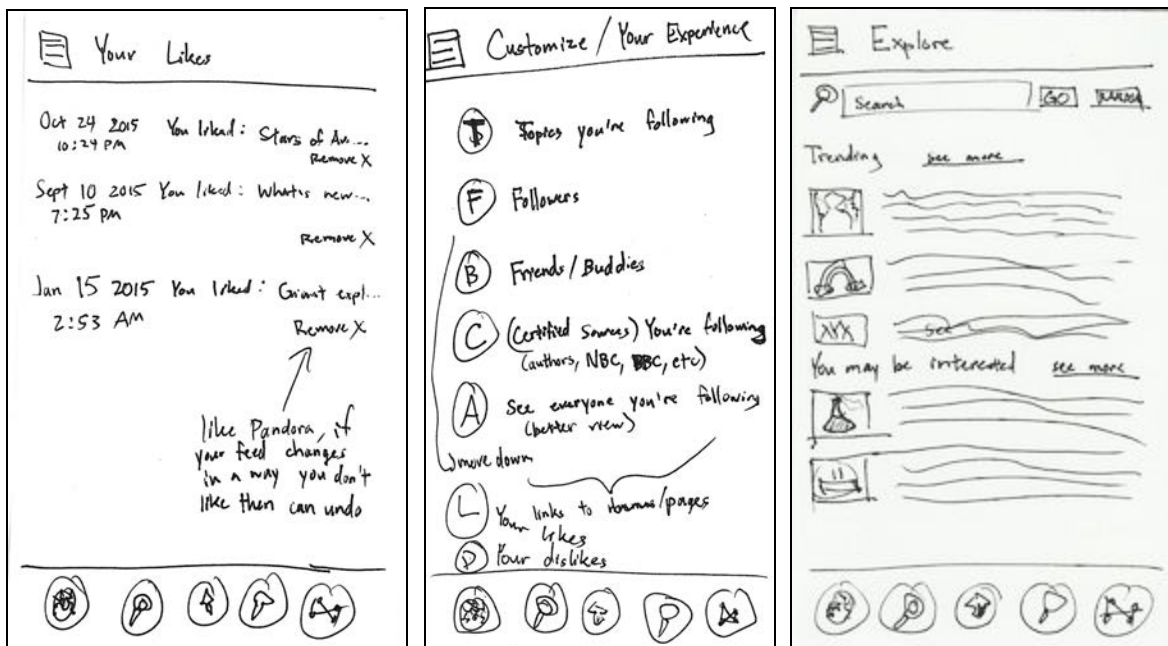
Left to right: Figure 9. Page to see your history of likes, with the ability to remove any of them if your news becomes tailored in a way that no longer matches your interests based on a past like. Figure 10. Hub within the app to customize the topics you follow, the people you follow (friends, other users, certified authors and sources), and your history of likes and dislikes. Figure 11. Explore page to search for topics and users, see articles on trending topics on a local or national scale, and see recommended articles based on your history of likes and dislikes and the topics you follow.

Gauging the General Opinion of a Group of People or a Region On a Topic:

      There is a tension between maintaining personal privacy but wanting to know what other people's opinions are. In order to remedy this tension, we have a button (the "Earth" button) that leads to a worldview page where users can not only see where nearby political events are taking place, but can also enter a zip code and a range (within x miles of the zip code) to see a graph or map of the opinions of people in that region in general on the basis of the topic searched.

<u>Why we chose this design:</u>

      Through our contextual inquiries, we discovered that many people want to learn more about current political news, but find it a bit overwhelming to sift through multiple news outlets. Our target audience would like an easy solution for receiving the news in one place. We chose a standalone phone application because a smartphone is something that most people in our target audience already own and have on their person throughout the day. Our contextual inquiry participants revealed that they generally read the news during downtime or times of passing (for example, as they walk to class, drive to work, etc.); using a mobile device to listen to podcasts or read news stories enabled our participants to get their news while they accomplish other tasks. During the day, our phone app has the ability to send the user instant push notifications to alert them of ongoing news development. The individuals we're designing for are college students, and our contextual inquiry participants revealed that smartphone use is a popular and familiar medium for news consumption amongst their peers. The phone app design would therefore require a minimal learning curve for new users. Our target audience wants to become informed in the most efficient, seamless manner possible, and we believe that the "focused" nature of mobile app layouts will aid this goal (when we say "focused," we are referring to comments made by our contextual inquiries participants about how they like that mobile devices focus on one process at a time, unlike a multi

window desktop of a computer). A mobile app will allow us to provide our users with an easily parsable interface that aggregates news stories into a single endpoint.

Although our "smart house" design enabled users to receive their news in a passive manner, we recognize that this is a "future" design that is not plausible to implement in the near future. The "smart house" also introduces privacy concerns because a user's news stories would be deeply embedded in their private space. It would also create an invasive environment when users are in the company of others. We also prefer the smartphone application over the social media extension/add-on because we don't want to limit what users see to just what people they are friends with or follow post. However, we recognize the importance of social media to our users, and we will incorporate said social media (Facebook, Twitter, etc.) into our smartphone application designs going forward.

Why we chose these tasks:

The first task that we decided to focus on was "Socializing with Friends, Both Online and Offline" because our contextual inquiries found that one of the most important parts of learning about political news is being able to talk about it with friends. Knowledge of current political issues is transferred between individuals through conversation, as well as in passing through posts on social media. Individuals emphasized that in social situations, it is important to be able to keep up with what their friends are talking about. Additionally, friends tend to influence the type of news that individuals are interested in.

The second task that we chose to focus on was "Personalizing News Consumption." We found through our contextual inquiries that individuals are more motivated to learn about political news when it has personal relevance to their own lives. (Relating to the previous task, what an individual's friends are interested in also counts as being personally relevant.) One of the current issues with the task of finding political news is that there is too much information to wade through in order to find personally relevant and interesting posts.

These tasks are more compelling than the other tasks (following development of stories, comparing different perspectives, privacy, gauging general opinion of a region on a topic) because our other four tasks are subcategories of "Personalizing News Consumption" and "Socializing with Friends, Both Online and Offline"; our other four tasks augment these two core features. We believe that our two main tasks - "Personalizing News Consumption" and "Socializing with Friends, Both Online and Offline" - provide the motivation for engaging in our other four tasks; without "Personalizing News Consumption" and "Socializing with Friends, Both Online and Offline," our other four tasks would not exist.

Written Scenarios:

Scenario 1: Socializing with Friends, Both Online and Offline

Caitlin's best friend Kristen is an avid political news reader, and she loves discussing what she has learned. However, Caitlin has no idea what Kristen is talking about half of the time; she is not as well informed as Kristen and doesn't devote the same amount of energy to reading the news. However, Caitlin can use Poliscope to explore the articles that Kristen has shared by visiting Kristen's profile. Poliscope also enables Caitlin to scroll through topics that Kristen is following, and click on corresponding news media. If Caitlin is interested in further educating herself about a topic, each article has links to additional similar stories, and even stories that offer a different perspective of the topic. Kristen can also directly share an article with Caitlin, so that Caitlin can understand what she is referencing. Caitlin can use all of these resources to make meaningful contributions to the conversations she has with Kristen. (See Figure 12)

Scenario 2: Personalizing News Consumption

Michael is interested in learning about the 2016 presidential race candidates, but finds himself having to switch between multiple different websites. He also has to sift through articles he isn't interested in; for example, he does not care about reading the "10 Most Outrageous Trump Quotes from the Debate!" even though he is interested in learning about Republican candidates. Michael is frustrated by the abundance of irrelevant articles. Fortunately, Michael has Poliscope, which allows him to customize what shows up on his news feed, including specific news outlets, topics, authors, and friends' posts. He is able to access his preferences in the app, and select what he would like to see, as well as up-vote or down-vote articles on his feed. When Michael visits his dashboard, he now only sees articles he is interested in. (See Figure 13)
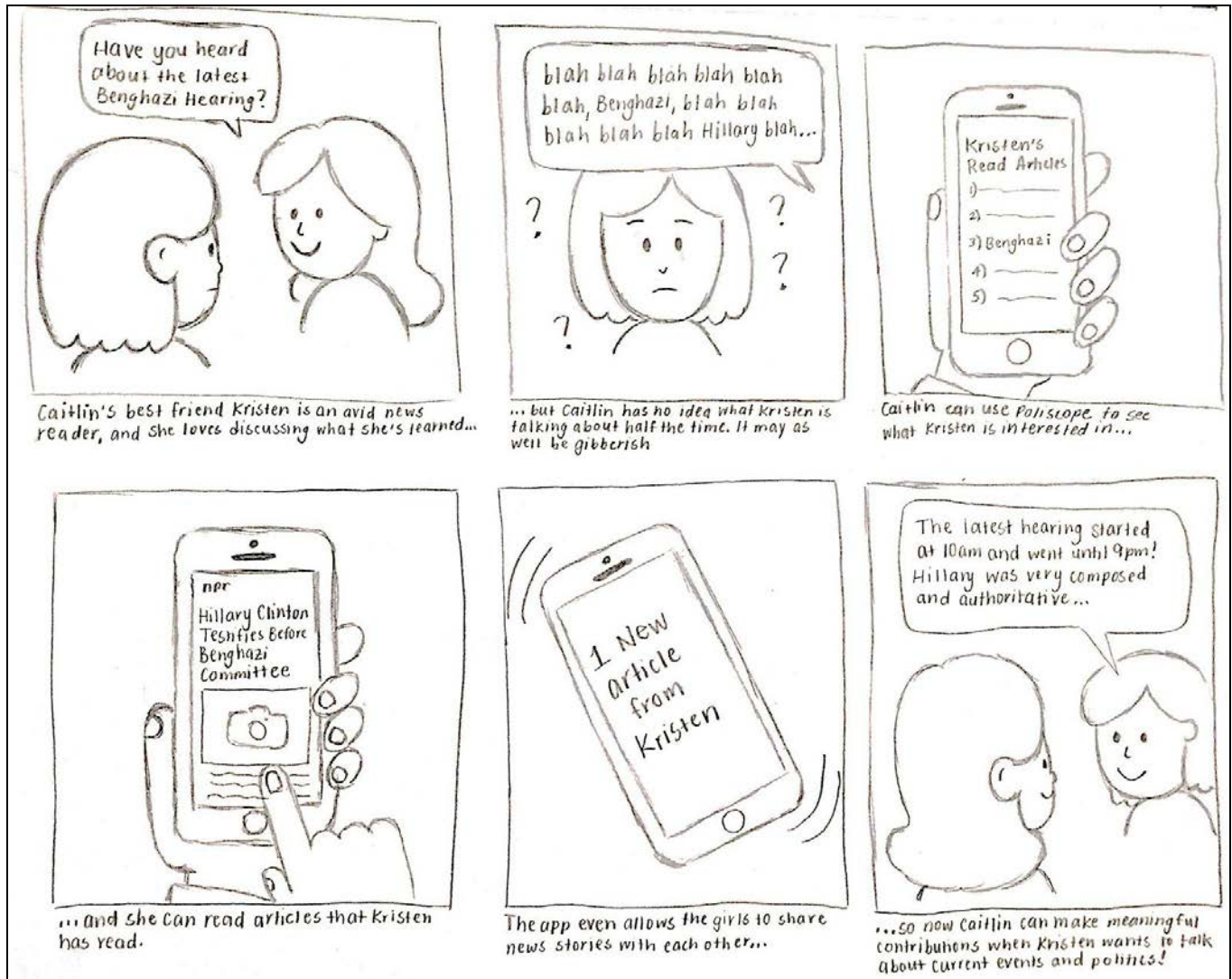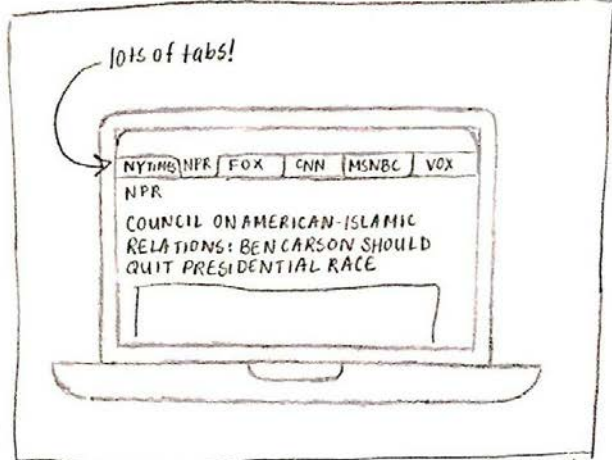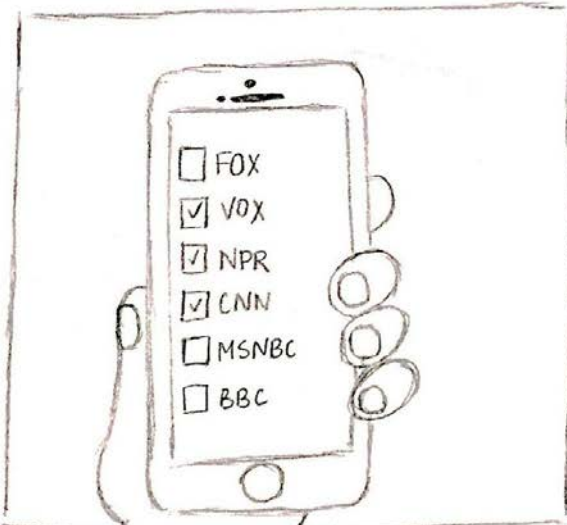
Storyboards of the Selected Design:

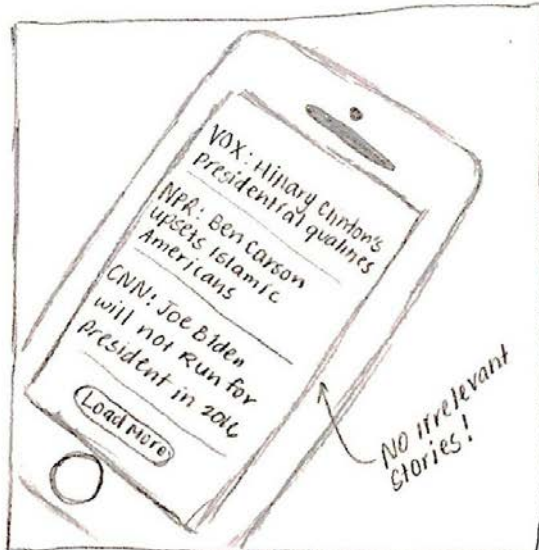Figure 12. Socializing with Friends, Both Online and Offline

Figure 13. Personalizing News Consumption