Captiva's Heuristic Evaluation Updates

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Key Changes

We read through our Heuristic Evaluation report and responded to the Severity 3-4 violations below. Overall, the changes tend to focus on helping users quickly understand the app's functionality. At the end of this document, we list the technological tools we're using to develop our prototype.

Violations we are addressing:

1. **H8 Aesthetic and Minimalist Design/ Severity 3 / Found by: A, C, D**
   - Violation: Place to enter elements appears cluttered and kind of overwhelming
   - Fix: Maybe less of elements need to be displayed? When adding a new one is it necessary to see all previous ones?
   - Our Answer: We see how a lot of text on one screen could be overwhelming. Thus, we will fade entries significantly as they progress upward, such that the visual focus is primarily centered on the current input.

2. **H1 Visibility of system status/ Severity 4 / Found by: A, B, C, D**
   - Violation: On elements screen, unclear that we're here. The projects screen is more clearly marked with what this page is, but elements screen is not clearly labeled, and it makes it confusing what screen we're currently on.
   - Fix: Label Elements screen as clearly as projects are labeled
   - Our Answer: We realize how it may be confusing that the 'Elements' screen is unlabeled. Hence, we have decided to label our 'Elements' screen with a clear text label that says 'Unsorted' to indicate to the user that those items must be placed under a project.

3. **H3 User control and freedom/ Severity 4 / Found by: A, C**
   - Violation: I'm very confused how to assign an element to a project. Where does the user do this? My intuition says i should click on the element and see if it's assigned to a project or not, and then have the option to assign it to a project, but it's not there.
   - Fix: Add a more clear button to add an element to a project
   - Our Answer: We understand that it is not at all clear how to assign elements to projects. Hence, in the elements screen, we will have a clear project assignment option for each idea, as well as the option to create a new project based on an idea. We already provide

the user with a 'Batch Edit' mode (which is analogous to a Ctrl-A action), but we realize that this is not at all clear to first-time users.

4. **H3 User control and freedom/ Severity 3 / Found by: C, B**
   - <u>Violation:</u> Is there any way to add tags or remove them? Or can you only have tags that the AI generates? Would be nice to give the user more agency in choosing these tags and having a clear + button as well as remove button.
   - <u>Fix:</u> Add a "add" button and "remove" button to give the user choice about these tags. Also explain what these tags are - are they autogenerated? Can the user edit them?
   - <u>Our Answer:</u> We will add buttons to make it easy to add and remove tags.

5. **H10 Help and documentation/ Severity 3 / Found by: A, B, C**
   - <u>Violation:</u> I'm confused what the numbers in colored circles mean on the "Who to ask" tab. Do these numbers quantify how sure the AI is they'll be helpful? Are they measuring how many contributions they've made to similarly tagged elements? How credible or experienced they are?
   - <u>Fix:</u> Potentially adding a header or a help button for the user to learn about what this system means.
   - <u>Our Answer:</u> We'll add a "help" button on the screen that explains how the ratings are generated and/or how each number was computed (i.e. breaking down each score to show what factors contributed to each displayed score).

6. **H7 Flexibility and efficiency of use / Severity 3 / Found by: B, C**
   - <u>Violation:</u> I know this is just a medium-fi prototype, but it seems like the task of asking someone about a story or element is not quite complete. What happens when you push on someone to ask? Does it automatically send a message to them? How do you know if this worked? This taskflow seems a bit incomplete. Is the user supposed to reach out to them themselves?
   - <u>Fix:</u> Some follow up screen or message to allow the user to actually message the person about the element, or if it does it automatically, some sort of confirmation that this message was sent. If user should contact the person themselves, put a phone icon or something
   - <u>Our Answer:</u> We're going to build a followup screen that allows the user to message the displayed user through the app. Furthermore, there'll be a way to view their other

contact information stored in the app (e.g. phone number) for messages that are more urgent.

7. **H9 Help users recognize, diagnose, and recover from errors/Severity 3/Found by: A, C**
   - Violation: In the "Send to Newsroom" taskflow, after selecting the elements we wish to send and clicking "Add Recipients" there appears to be no way to go back to the previous screen to change the selection. Instead, we have to go all the way back to Projects and can't edit our work of selecting the elements, or proceed with "Sending to the Newsroom"
   - Fix: Add a back button at this step
   - Our Answer: This is a valid observation that we seemed to have overlooked. We will be implementing a back button to allow users to change their element selection after having pressed "Add Recipients".

8. **H2 Match between system and the real world/ Severity 3 / Found by: C, D, B**
   - Violation: I'm confused on the elements view with the "Edit all entries: Project, Flagged" appearing below (opposed to the keyboard), what the down arrows are. I would think they would be to re-order the elements, based upon queue systems I've previously interacted with where you often press and hold on a similar icon and are able to re-order them. However, when I click on this down arrow, I'm brought to a detailed view of the element, either because this feature isn't yet working or it's designed to be a "dropdown" detail view of the element.
   - Fix: If this should be a dropdown view of the element, consider making it a side arrow which we previously know as clicking to expand the dropdown menu, at which point it could switch to a down arrow. If you're looking for this to mean like "move element down one," then I think you're fine, and it's more a limitation of figma / medium-fi prototype.
   - Our Answer: We see how this would be confusing. We're going to change the design of this (potentially to a side arrow as suggested) to address this potential confusion.

9. **H9 Help users recognize, diagnose, and recover from errors/Severity 3/Found by: C, D**
   - Violation: No "back" button in the Who to Ask to go back to the specific project, you can only go back to the general Projects page which is clunky and doesn't help users recover if they decide they don't want to ask any of the people suggested.

- **Fix:** Add a back button to go back one screen to this screen so you don't have to go all the way back to projects and re-find the project you were working on.
- **Our Answer:** We will add a back button in the location described.

10. **H5 Error prevention/ Severity 3 / Found by: C**
   - **Violation:** In the "Send to Newsroom" screen, you're able to click "Prepare for Newsroom" without selecting any of the individual elements and don't get an error message saying you must select one. Since the Prepare for Newsroom seems like it's clickable at this point without selecting any, it's a bit misleading for the user to click it and then just sit there and wonder if the entire set of elements was sent, or nothing.
   - **Fix:** Make it clear the Prepare for Newsroom button can't be clicked until elements are selected, and if this is attempted, send an error message telling the user to select a message.
   - **Our Answer:** We will change the "Prepare for Newsroom" button to a greyed-out "Add Recipients" button, and will be including an option to allow users to select all elements prior to pressing "Add Recipients".

11. **H4 Consistency and standards / Severity 3 / Found by B**
   - **Violation:** Once the user is ready to send a project to a newsroom, there are presented with a list of quotes, facts, and more. The button "prepare for newsroom" simply takes them to a screen called "add recipients" and then there's an option to send to the newsroom.
   - **Fix:** I'd recommend changing the name of the button "prepare for newsroom" to "add recipients"
   - **Our Answer:** This is addressed above. Refer to the above violation.

12. **H5. Error prevention / Severity 3 / Found by: B**
   - **Violation:** When the user is selecting which quotes, facts, recordings, etc, to send to the newsroom, they are not currently given the option to see all of their selections in one place. While in the example in Marvel this is fine (since you can see all the selections), this would be an issue with more items present in a scrollable format.
   - **Fix:** As such, it would be imperative to have a "review all selections" screen before the user decides to send to its recipients. This prevents errors.
   - **Our Answer:** We'll add a "review all selections" screen before the email is sent to the newsroom.

13. **H3. User control and freedom / Severity 3 / Found by: B**
   - Violation: When the user is adding recipients to add a story to a newsroom, there is currently only a radio button group of options. However, it is possible for journalists to be sending this to external or other members, so it is imperative to have the ability for them to add in additional emails/people in this field.
   - Fix: I recommend having an "add" button with a field for emails.
   - Our Answer: We will flesh out the "sending" page, allowing users to add new emails to the list of contacts.

14. **H9 Help users recognize, diagnose, and recover from errors / Severity 3 / Found by: A**
   - Violation: The preview for what sending the information to the newsroom would look like, doesn't allow users to make edits to certain quotes or make changes if reporters made mistakes in documenting information. This prevents users from recovering from mistakes and can be fixed simply by adding an edit button to this page.
   - Fix: Allow the user to edit elements before sending.
   - Our Answer: We believe that allowing users to edit individual entries in the "Send to Newsroom" screen would quickly become unwieldy; users should be editing the project elements in the respective project screens. To address this concern, we will be making it possible for users to add clarifying or additional information when they send information to the newsroom.

Violations we are not planning to address:
15. **H2 Match between system and the real world / Severity 4 / Found by: A, B, C**
   - Violation: Strange to have various modalities and navigation buttons in the bar traditionally used for autocorrect. Makes them hard to find.
   - Fix: Move the modes to the top or bottom of the screen to make them easier to find
   - Our Answer: While we acknowledge the potential confusion this can cause users, our analysis strongly suggests that the benefits of this implementation outweigh the aforementioned drawback:
     i. This is the closest location to thumbs where buttons could be placed. This is important because these buttons need to be accessible as quickly as possible.
     ii. Easy to learn this setup. In practice, such placement has never been shown to be confusing or misleading to users.

iii.   Various platforms with similar input modalities employ similar structure in terms of placing navigation buttons right above the keyboard (e.g. Evernote). We believe this precedent supports our decision.

16. **H3 User control and freedom/ Severity 3 / Found by: A, C, D**

- Violation: It makes sense that clicking "Done" on the elements view with text brings me to a view of elements where I can filter by projects and flagged. However, I don't see why clicking "Done" at this point brings me to a view of Projects, and not just a view of elements with the filters I've specified. I think Done would mean like "opt out" and not that I want to proceed to a view of Projects.

- Fix: Make a button for Done that brings you to just a view of elements, and a different button to then enter into Projects.

- Our Answer: We believe this setup works best given the tasks that users are trying to accomplish. Categorizing a bunch of items signals that you've finished your input session for a while. Hence, it should default to the projects page. Our low-fi testing also suggested this was very intuitive for users trying to accomplish the specific task of feature capture.

17. **H6. Recognition rather than recall/ Severity 3/ Found by: D**

- Violation: When adding a new story, there is an "up arrow" and a "done" button next to one another. Both of these buttons can be used for similar a function, that being sending out the text you just entered. A user could be confused as to which one of these buttons sends out their update.

- Fix: I believe the "done" button is used to put away the keyboard, so maybe use "cancel" instead of "done."

- Our Answer: This is an incorrect interpretation of the function of the "Done" button. Instead, it brings the user to the 'Elements' / 'Unsorted' page. (This is partially due to the our lack of a label on this page, which is addressed above in a different violation.) Hence, the confusion there should be clarified with the addition of a page label which more clearly differentiates the 'Elements' page from the input page.

Technological tools:

We have decided to build an iOS application and so will likely be building in Swift and Objective-C using the Apple iOS SDK. We plan to decide between using React Native and Swift in the upcoming week.

We'd be storing data locally for this prototype, as cloud-based techniques are unnecessary to demonstrate the app's core functionality.

Our stretch goal is to implement a Python-based machine learning to effectively compute similarity between ideas as well as with online sources. This would rely on a variant of Doc2Vec, a natural language processing algorithm that's an industry-standard; we'd be modifying it to work effectively within this context.