Heuristic Evaluation of Journey

1. Problem/Prototype

Yourway is a mobile app that provides personalized activity recommendations to reduce planning efforts for travelers by learning from users' preferences, nearby locations, and friends' activities.

2. Violations Found

1. **H1 Visibility of system status / Severity 3 / Found by: C, D**
   The "top 3 picks" screen has a "start chatting" button that allows a user to get new recommendations. However, after finishing chatting, the user can only press the back button to exit the chat and go back to the "top 3 picks" screen. This can send the wrong message to the user that the changes have been undone.
   Fix: Chatbot should explicitly state that recommendations have been updated before transitioning.

2. **H1 Visibility of System Status / Severity 1 / Found by: D**
   The prototype presents users with the option to link their Facebook and/or Calendar. However, after linking, the prototype quickly transitions to the recommendations screen. There is no feedback that the integration was successful (it is possible that it was unsuccessful due to network or password issues). This can cause uncertainty and confusion.
   Fix: The users need to be informed that the integration was successful or unsuccessful through a pop-up message before moving to the next screen. There should also be Facebook & Calendar buttons in settings that inform the user of the current integration status.

3. **H1 Visibility of System Status / Severity 1 / Found by: D**
   The settings screen allows users to manually remove likes and dislikes that were added using the onboarding survey. However, after updating likes and dislikes in settings, the only way to transition to the next screen is to click on the back button. This can send the wrong message to the user that the changes have been undone.
   Fix: Add a "Save Changes" button at the button so that users get active feedback that their changes have been applied.

4. **H1 Visibility of System Status / Severity 1 / Found by: B**
   There is no indicator of system progress during the wait in the "Customizing my recommendations" screen (after onboarding and connecting outside platforms), presumably while the algorithm is tailoring recommendations. This may make users feel uneasy about a delay, especially if the algorithm gets stuck.
   Fix: Add indicator of system progress to this screen, such as loading indicator. It may be even more advantageous to use this as an opportunity to be transparent about what the algorithm is doing (i.e. "Processing your housing preferences to increase chances of you staying in a hostel…").

5. **H2 Match between System and Real World / Severity 1 / Found by: A**
The informational popup that provide context on how the app makes its selection says "You Value: Frugal." While this is a small detail, it doesn't reflect the natural way people speak- this may be the case for other descriptors too.
Fix: ensure traveller descriptors match the "You Value: x" format, or reformat the copy on the popup.

6. **H2 Match between system and the real world / Severity 1 / Found by: B**
"Picking your next best action now" phrase after the review is ambiguous. Not sure if the user is being prompted to perform some other "action" to review this trip.
Fix: Rephrase to a clearer phrase about adapting to user's feedback

7. **H2 Match between system and the real world / Severity 1 / Found by: B**
The header "Top 3 Picks" makes me think that I picked these activities, not that I got recommended them by some AI.
Fix: Use clearer phrase that indicates what these options are and/or how they were generated.

8. **H2 Match between system and the real world / Severity 1 / Found by: C**
There is no clear input as to how the app calculates how much of a match a location is given your preferences. I was confused as to why the kayaking option had a 98% match, and what differentiated it from the 92% match I had with the loinhead grill option.
Fix: Add accessible details on reasoning or explanation behind matches.

9. **H3 User control and freedom / Severity 2 / Found by: C, D**
After the initialization of the app, there is no way to connect social media and maps to further on in the app after clicking "Later".
Fix: This can be remedied by having the option available later on either inside the settings app, or by recommending the option of connecting users to 3rd party platforms while attempting to use functions dependent on these apps (i.e. opening maps, seeing friend recommendations, etc)

10. **H3 User Control & Freedom / Severity 2 / Found by: D**
After finishing an experience, the prototype prompts the user to rate the experience. After rating the experience, however, there is no way to go back and change the rating in case the user accidentally selected the incorrect rating. This can be a little frustrating to the user.
Fix: Add a back button on the next screen allowing the user to go back and modify their rating. Also, the prototype can have a history tab that has a list of all their past experiences where they can modify the rating.

11. **H3 User Control & Freedom / Severity 1 / Found by: D**
The prototype presents a list of recommendations in the "top 3 picks" screen. However, it is unclear whether recommendations are sorted by match % or location or both. In case it's both, it raises questions as to how does the prototype balance match % and location.

Moreover, it is unclear if location is factored into match % or is it purely calculated using likes and dislikes.
Fix: Add a "sorted by" button that informs the users of the sorting method, and perhaps even allows them to change it according to their preference.

12. **H3 User Control & Freedom / Severity 1 / Found by: D**
After onboarding, the prototype does not allow users to unlink Facebook & Calendar in case they accidentally clicked on them or changed their minds. This can be frustrating for the user, and raise privacy concerns.
Fix: Add Facebook & Calendar buttons to settings (also mentioned above) that allow users to link and unlink Facebook & Calendar.

13. **H3 User control and freedom / Severity 1 / Found by: B**
Clicking the back button from settings always takes the user back to the Top 3 Picks view, even if they went into settings from the globe chat. As a whole, it is a bit odd to be able to go into settings from the chat view as well as the Top 3 Picks view (which I'm assuming is the "Home" page).
Fix: Make sure clicking back takes the user back to the previous page they were on.

14. **H3 User control and freedom / Severity 2 / Found by: B, C, D**
The settings/profile interface only allows the user to remove likes and dislikes but doesn't give an option to update or add more of them. There isn't a more efficient way of updating one's preferences than going through a dialogue with the chatbot. This conflicts with the statement in the prototype that mentions that users can change these settings at any time, and can be frustrating for the user.
Fix: Allow users to both add and likes & dislikes in settings, or add a different option to update these preferences.

15. **H3 User Control and Freedom / Severity 2 / Found by: A**
Users are required to review an experience once it ends and cannot skip the multi-step review process. This limits users ability to voluntarily exit a process before it is completely finished.
Fix: add a "Later" option to the star rating and descriptor-based review screens.

16. **H3 User control and freedom / Severity 1 / Found by: B, D**
The user can't go back in the initial setup tutorial to reread a previous blurb if they accidentally tapped the interface forward.
During the first 4 screens of onboarding as well as the Facebook & Calendar integration screens, users are unable to go back to the previous onboarding screen. This can be frustrating to the user in case they did not read all of the text before going to the next screen.
Fix: Add a back button to the first 4 onboarding screens as well as the Facebook & Calendar integration screens.

17. **H3 User control and freedom / Severity 1 / Found by: B**
There's no way to say a solid no to connecting Facebook or Google Calendar. Users

may want this option, since "Later" implies that the app will inconveniently ping me about it again later.
Fix: Add button to say No

18. **H3 User Control & Freedom / Severity 1 / Found by: D**
Upon clicking on a recommendation, the prototype transitions to a screen with more details on the experience. In order to go back to the "top 3 picks" screen, there is a back button the top-left. However, if a user scrolls down the detailed screen, the back button disappears, making it seem as if the user is unable to go back. This can be potentially frustrating if the user does not see the back button.
Fix: The back button should always be visible on the top-left corner of the screen even if the user scrolls down.

19. **H4 Consistency and Standards / Severity 1 / Found by: B**
"Take me there" button on activity detail view is now pink, while all other buttons in the rest of the app are yellow.
Fix: Stay consistent with button color across app.

20. **H4 Consistency and Standards / Severity 0 / Found by: B**
Globe sometimes speaks in bold (in chat) font and other times in normal weight font (on Top 3 Picks view). It would be good to keep this consistent to indicate that the globe is speaking.
Fix: Stick with a bold or normal weight for all text spoken by the globe.

21. **H4 Consistency and Standards / Severity 1 / Found by: B**
Chat with the globe has no header, but most of the other interaction views do.
Fix: Add a header to globe chat.

22. **H4 Consistency and Standards / Severity 1 / Found by: B**
Very similar yellow rectangular styles are given to the header and the buttons in the flow to onboard users and get their preferences. Because they look so similar, the header blends into the background and my first glance at these screens is towards "Select all that apply", which isn't really helpful in figuring out what this page is doing. A similar thing happens in the flow to connect with outside platforms.
Fix: Make header more prominent with its own style that looks less like a button.

23. **H4 Consistency and standards / Severity 2 / Found by: C**
The settings icon is somewhat misleading, as the landing page when clicking the icon resembles something closer to a profile page. While it was nice seeing likes and dislikes on this screen, I expected the settings section to have accessibility-related options, and things associated with the details of my account (name, email, etc).
Fix: Change settings icon to a profile icon (perhaps current user's photo).

24. **H4 Consistency & Standards / Severity 1 / Found by: D**
Despite the small difference in size, the recommendations box and the chat bubble on

the "top 3 picks" screen appear very similar as they are both grey in color. This can lead a user to believe that the chat bubble is also clickable and part of the recommendations. Fix: The chat bubble should be of a different color to highlight that it is different from the top 3 recommendations. One can also add more space or a horizontal line to demarcate a boundary between the two.

25. **H4 Consistency and Standards / Severity 1 / Found by: B**
In the onboarding flow, the text is placed below the yellow button to describe the function of that button. However, in the flow to connect with outside platforms, the descriptive text is placed within the yellow button. It would be good to stay consistent.
Fix: Consistently place descriptive text within or below the corresponding yellow button.

26. **H4 Consistency and Standards / Severity 1 / Found by: B**
Many fonts are used throughout the interface (I counted at least four), particularly in the flow that asks for users' preferences. It would be good to standardize this. For example,
Fix: Pick one font for the whole interface.

27. **H4 Consistency and Standards / Severity 1 / Found by: B**
One view says "Continue with Facebook" and another says "Connect Google Calendar" as the button to click. It would be good to stay consistent with phrasing since they both do the same type of functionality. Make sure the header question also follows this consistency.
Fix: Stick with using either "connect" or "continue with" across these buttons to link an outside platform, in addition to the header questions that prompt the user to do so.

28. **H4 Consistency and Standards / Severity 0 / Found by: B**
"Great! Help us by connecting Facebook" prompt is missing punctuation at the end. The globe seems to be speaking with punctuations for all other parts of the app, so it would be good to stay consistent.
Fix: Add punctuation at the end of that prompt.

29. **H4 Consistency and Standards / Severity 1 / Found by: B**
Sometimes the globe speaks for the user "Customizing my recommendations" and other times it speaks to the user "Don't like your options?"
Fix: Stay consistent with first person or second person pronoun use.

30. **H4 Consistency & Standards / Severity 0 / Found by: D**
The prototype has tiny buttons on many screens that justify certain features. For example, the Facebook & Calendar integration screens have a "Why do this?" link and the "top 3 picks" screen has tiny information buttons that explain why a certain recommendation was picked. However, there is no explanation as to why a user needs to rate and tag and experience. This can cause the user to half-heartedly fill out the feedback.
Fix: Add an info button the rating and the "add tags" screen that explains that this information is used to provide better recommendations to the user and to also improve recommendations for other users too.

31. **H4 Consistency and Standards / Severity 1 / Found by: A, B**
Introduction screens with Spree use a horizontal row of dots to indicate progress through a series of pages. The user quiz for preference uses a numerical listing (1/4, 2/4, etc.). If this difference is not intentional, it creates different expectations for what advancing through pages will look like in the app.

32. **H4 Consistency and standards / Severity 1 / Found by: A**
Font size differs between different popup types, communicating that these have different levels of importance. The information popup during signup through Facebook or Google ("Why do this?") has smaller header and body font, while the information on how the app uses AI to select recommendations has larger header and body font.
Fix: If this hierarchy of importance is not intentional, standardize font sizes across popups.

33. **H4 Consistency & Standards / Severity 1 / Found by: D**
After the first 4 onboarding screens, the user is guided to the next screen using a blue arrow button. However, that arrow button becomes yellow during the onboarding survey. Users may be confused by the different colors for the same button.
Fix: Use the same color for the arrow button on all screens.

34. **H5 Error Prevention / Severity 0 / Found by: B**
The "How would you spend a free day" question may prompt users to pick options that may tweak their recommendation in ways they don't like. For instance, I'd choose all of the options on this page because there's none I particularly hate to do in my free time. Even though I might really like one option and only moderately like a different option, the prompt to select all that apply would cause both these options to be weighted the same in my recommendations.
Fix: Phrase the question to prompt the user to select their single favorite option, or perhaps give them a spectrum.

35. **H6 Recognition not Recall / Severity 3 / Found by: A**
When users click into a recommendation, there is no way of seeing which of their friends recommended the activity, even though profile pictures are displayed in the summary view of recommendations. If a user recognizes a friend's profile picture in the summary screen, they have to remember which friend it was in the detail view, since this information is not replicated.
Fix: Replicate the profile pictures in the detail view, or remove them from the summary view.

36. **H6 Recognition over Recall / Severity 2 / Found by: C**
There is an inherent reliance on the user keeping track of what preferences he/she has chosen when interacting with the app. I can see this as an issue in the long-term, as one's tastes will invariably change.

Fix: Although there are tags associated with your profile when you go into the settings menu, it would require considerably less effort if there as some way to have a user's "traits" visible on the home screen of the app.

37. **H6 Recognition over Recall / Severity 1 / Found by: A, B, C, D**
The name of the AI ("Spree") is only mentioned once, before the initial setup. This name is not re-iterated or mentioned again, so we have to remember the name.
Fix: Re-iterate the name or remove entirely

38. **H6 Recognition not Recall / Severity 2 / Found by: A**
When chatting with Spree, the pre-set message options (like "Feeling Hungry") don't disappear once the user selects them. The user must remember what they've said already in the chat.
Fix: remove pre-set message options once selected

39. **H6 Recognition not Recall / Severity 3 / Found by: A**
The descriptors in the user profile (like "Water Sports," "BBQ and Grill Food") don't match the descriptors from the onboarding quiz the user takes to describe their preferences (like "Hiking," "Farmer's Market"). The user is told they can edit these descriptors later, but they are not able to recognize the options they initially selected, since they aren't quite the same in the profile.
Fix: Display the user preferences that the AI has learned separately from the user's quiz answers, so that the user can see both what the system has learned about it and what they initially input.

40. **H6 Recognition rather than recall / Severity 2 / Found by: B**
It's unclear why the faces on the Top 3 Picks page are there and who they're referring to on first glance. Are they other people who have looked at this option, or are currently looking at it?
Fix: Clarify who the people are and why they're on the activity card (heart, thumbs up, etc.)

41. **H6 Recognition not Recall / Severity 1 / Found by: D**
Each recommendation on the "top 3 picks" screen shows up to 3 profile pictures of friends that have also experienced it. However, it is possible that the user does not recognize the person in the profile picture due to the small size of the picture or unfamiliarity with the person. This puts the onus on the user to remember profile pictures of their friends on facebook.
Fix: Show the full name of the person in the profile picture upon hovering over it.

42. **H6 Recognition over Recall / Severity 1 / Found by: D**
After finishing an experience, the prototype prompts the user to rate the experience. After rating the experience, the prototype takes the user back to the "top 3 picks" screen. However, the experience that was just finished is still in the top 3 recommendations. This can be confusing to the user as they may think its another similar-looking but different experience.
Fix: After finishing an experience, replace its position with another experience that has a

high match % so that the user gets some feedback that they have just completed an experience.

43. **H7 Flexibility & Efficiency of Use / Severity 2 / Found by: D**
After clicking on a recommendation in the "top 3 picks" screen, the user can click on the "Take Me There" button that opens google maps and helps the user navigate to the location of the experience. However, if the user wants to see other experiences on google maps as well, the user needs to go back and select each recommendation individually, which can be very time-consuming. This can be useful if all the experiences are nearby and the user wants to prioritize those that are on the way.
Fix: Allow users to select multiple experiences and open them in google maps so that they can make a more informed decision.

44. **H7 Flexibility & Efficiency of Use / Severity 1 / Found by: D**
After finishing an experience, the prototype prompts the user to rate the experience on one screen and add tags on another screen. This makes the feedback process take longer. Also, the user is unable to see the feedback on one consolidated screen.
Fix: Combine the rate and the "add tags" screens into one.

45. **H7 Flexibility and Efficiency of Use / Severity 0 / Found by: A**
Users cannot skip the introductory quiz if they want to immediately get recommendations.Though this may be intentional so the user can see tailored recommendations upfront, it can increase flexibility and efficiency to have an option to skip it or get back to it.
Fix: provide option to return to the quiz later.

46. **H7 Flexibility & Efficiency of Use / Severity 2 / Found by: B/D**
The prototype presents the users with the top 3 recommendations based on their preferences. However, it is highly likely that a user is not satisfied with the top 3 recommendations, and needs to go through the whole process of chatting with a chatbot just to get new and better recommendations. This can be very time-consuming for the user.
Fix: Show more than just the top 3 recommendations to the user so that there is less chance the user is not satisfied and therefore does not need to use the chat feature.

47. **H8 Aesthetic & Minimalist Design / Severity 1 / Found by: D**
Every recommendation is accompanied by a match % that is an indicator of how well the experience matches the user's preferences. However, as the recommendations are always sorted via decreasing match %, showing the number itself seems a little redundant.
Fix: Don't show match % so that there is more space for other essential information.

48. **H8 Aesthetic and minimalist design / Severity 1 / Found by: B**
The number of font colors (dark blue-gray header, light blue card header, light gray distance, black globe blurb, white "Start chatting") is a bit overwhelming in the Top 3 Picks view. It's hard to discern what the color is trying to say or distinguish.
Fix: Stick with either black or dark blue-gray for "dark" text, and somehow reduce the number of colors used for text overall on this page.

49. **H9 Help users recognize, diagnose, and recover from errors / Severity 3 / Found by: B, C**
There is no way for the user to say they didn't actually go to the selected activity (what if I opened Google Maps, decided it was too far, then changed my mind) or change their mind after clicking "Take me there."
Fix: Add the option to go back to the app and back up flow after being navigated away to Google Maps.

50. **H10 Help and documentation / Severity 2 / Found by: B**
It's not transparent how the values and preferences I'm divulging to the AI will inform its decisions about the user while I'm being asked to put in my preferences.
Fix: Add option on each preference page to see how this question will be used to inform the AI's decision-making.

51. **H10 Help and documentation / Severity 1 / Found by: B**
The interface uses the information icon (i inside a circle) to indicate getting help instead of getting more details. It seems like a mismatch compared to this icon's traditional meaning. For instance, I expected more details about activity from clicking the information icon on each activity card instead of a "Why this option was picked."
Fix: Use a question mark in a circle icon to indicate help

52. **H10 Help and documentation / Severity 1 / Found by: B**
Upon clicking the information icon on an activity card, the "Why was this option picked?" description doesn't really answer why this option was clicked. It tells me what values were used by the AI, but I'm still unsure how those values relate to the given activity.
Fix: Add a clearer description of why those values were selected by the AI.

53. **H10 Help and documentation / Severity 1 / Found by: C**
There is a separate button inside the settings menu that users are meant to navigate to in order to receive help (it's hard to find).
Fix: It could be advantageous to have the chatbot assist the user in providing help for their needs, whether it is with regards to navigation, accessibility, bug reporting, etc.

3. Summary of Violations

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
H1: Visibility of Status	0	3	0	1	0	**4**
H2: Match Sys & World	0	4	0	0	0	**4**
H3: User Control	0	6	4	0	0	**10**
H4: Consistency	3	11	1	0	0	**15**

H5: Error Prevention	1	0	0	0	0	**1**
H6: Recognition not Recall	0	3	3	2	0	**8**
H7: Efficiency of Use	1	1	2	0	0	**4**
H8: Minimalist Design	0	2	0	0	0	**2**
H9: Help Users with Errors	0	0	0	1	0	**1**
H10: Documentation	0	3	1	0	0	**4**
Total Violations by Severity	**5**	**33**	**11**	**4**	**0**	**53**

4. Evaluation Statistics

Severity / Evaluator	Evaluator A	Evaluator B	Evaluator C	Evaluator D
sev. 0	20%	60%	0%	20%
sev. 1	12.1%	54.5%	12.1%	36.4%
sev. 2	18.2%	36.4%	36.4%	45.5%
sev. 3	50%	25%	50%	25%
sev. 4	0%	0%	0%	0%
total (sev. 3 & 4)	50%	25%	50%	25%
total (all severity levels)	**17.0%**	**49.1%**	**18.9%**	**35.8%**

5. Summary Recommendations

Overall, the experience of using the prototype was clear and intuitive. The system's status is clearly visible at many points, and the app is visually appealing. The app's current value proposition is its personalization and transparency; however, the user's relationship to the conversational agent, Spree, and how the user's information is used to create recommendations is not clear. Our suggestions center around increasing this transparency in:

1. Onboarding
2. Chatbot Interaction
3. Social network information

Onboarding

The biggest space for improvement might be to flesh out the process of updating user preferences more. It seemed like onboarding was the main place the user could personalize their travel experience. It wasn't too clear how the chat could be used to personalize the experience, so offering the user a specific example might be helpful. Since the app intends to make its process transparent (offering information on why recommendations were chosen, displaying preferences in the user's profile, etc.), having displays of information in other areas of the app, like the user profile, match the initial quiz the user takes will help reduce uncertainty about how the app is using the information it is given.

Chatbot Interaction

The avatar was initially presented as the primary navigational tool for using the app; however, the relationship between the user and the chatbot (through pronouns, editing preferences, etc.) is not always clear. The chatbot occasionally switches between second-person and first-person. In addition, preferences can be modified through both the profile and through conversation; it's not clear why a person would choose to speak to the chatbot instead of just editing their recommendations. Could the avatar be used for more than just being a channel for users to provide input, like the avatar is the one making the suggestions? Could it convince the users **why** each of the suggestions would be a good choice? The app has a strong reliance on how personal it is, and this feature should be better emphasized at all stages of the user flow (from choosing places to recommending places to friends, etc).

Social network information

For the moderate task, to "Figure out what your friends have done before", this was hard to understand through the prototype. This task suggests that there's a way to browse activities friends have done, but users can only view friends who had done activities that happened to be recommended. The relationship between friends displayed and the user's own feedback is not clear. How can social feedback be a more central part of the experience?