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“You have to give yourself credit, but not too much because that would be bragging.”

— Frank McCourt

We would like to thank our advisor, Steven Weber, for guiding us through this project as well as all of the willing interviewees and subjects we had tested. The design process of Sidebar has been an immense learning experience for each member of our group, and we hope that our prototypes will allow an interesting exploration for possibilities in the domain of online dating.
1. Executive Summary

“You’ve got to make sure certain people don’t get all the attention. In a bar, it’s self-correcting. You see ten guys standing around one woman, maybe you don’t walk over and try to introduce yourself. Online, people have no idea how ‘surrounded’ a person is.”

—Christian Rudder (OkCupid Founder)

1.1 The Problem

While technology and the rise of online dating sites has enabled more information sharing than ever, today’s online dating sites do not accurately reflect how people actually meet and interact face-to-face in the physical world. Online dating sites encourage people to share as much as they can about themselves upfront in a structured profile; the reality is that people do not automatically disclose an abundance of personal information when they first meet someone, nor do they wait for the other person to review that information for “red flags”. Instead, information about oneself is shared over time and varies by conversation. Interactions are more fluid in real life, and a user posting a profile should not have to broadcast every detail about themselves to others in advance of getting to know them. Many prefer instead to reveal personal information over time with others they are interested in pursuing a relationship with. Furthermore, people in the real world often meet partners by engaging in common activities and interests without being overly biased about the other’s physical attributes. Online daters, however, use filters to exclude daters based on attributes that are often idealized of their perfect physical traits. Based on research, this approach does not yield a good outcome. Instead of naturally bringing people together through common interests or experiences, as in real life, dating sites use rigid matching on keywords that users self-select and may not necessarily be truthful. Finally, online dating sites are motivated to keep user interactions on their website, but this is not optimal because real dating and experiences should happen offline.
1.2 The Approach

A variety of methods were employed for our research of online dating behaviors and the design of Sidebar. We began our research with a competitive analysis of the online dating market, most notably, OkCupid and Tinder, outlining their general design features and problems. Second, we conducted over twenty user interviews over the course of one month and analyzed this data by coding and sorting our observations in Affinity Diagrams. The main findings of our research revealed key insights on profile creation, messaging, and “real life” interactions on online dating platforms. Additionally, we reviewed various articles and behavioral economic theories, most notably Judith Donath’s “Data Portraits” and Kahneman’s “Thinking Fast and Slow”. Third, we used an iterative design process to guide our prototyping, which included low, medium, and high fidelity prototypes. All prominent design features of Sidebar are discussed in this report. Lastly, we conducted usability testing on these prototypes to improve upon Sidebar’s designs and developed a fully functional prototype.

1.3 The Solution

Sidebar is a Chrome Extension that allows people to bump into each other and interact while browsing the Internet. We designed it to offer three main solutions to the domain of online dating. First, we strived to bring a more organic experience to users by enhancing “real world interactions” within the platform. We accomplished this by opening the online dating landscape to the entire Internet, where users can meet other users while browsing the web. Our goal was create a sense of “designed serendipity” for Sidebar’s users. Second, we focused on creating effective “data portraits” for Sidebar’s users by generating relevant categories of interests based on their browsing history. Combined with the user’s ability to tailor and curate his or her data portraits, we believe these visualizations allow for a more accurate and up-to-date depiction of the user. Third, based on fundamental behavioral economic theories, we implemented constraints around choice architecture and the cognitive limitations of our System 2 (Kahneman, 2011) mode of thought. By adding careful constraints on messaging and search, we believe that users can make quicker decisions and have more substantial conversations that lead to offline dates.
2. Research

“A communication system should make a positive contribution
to the discovery and arousal of interests”
— Joseph Licklider

2.1 Online Dating Landscape

As part of our research, we identified two primary platforms that deliver very different online dating experiences. The incumbent platform, OkCupid, is an example of a legacy system where users create information-dense profiles, complete essays and forms outlining physical attributes, and spend a great deal of time “filtering” the user base to find an idealized match. With almost an opposite approach, Tinder has emerged as a popular platform that instead focuses on first impressions and very simple interactions without the complexity of profiles and statistical matching.

The OkCupid Model

OkCupid allows its users to browse a near limitless number of profiles using two different features. The first feature is Matches, where the user is presented with a variety of short profiles in a grid-like fashion. Users can filter their Matches into various categories, including height, education, and income. Members who pay extra may access “A-List features”, allowing them to filter “Body Type” and “Attractiveness”. The second feature that users may use to search is Quickmatch. The user interface of Quickmatch is simpler than that of Matches, presenting the user with only one profile that includes a single photo, “match percentage”, age, and location. Here, the user may either “like” or “pass” the profile, at which point another profile is presented to the user. The user experience of OkCupid emphasizes two things. The first is the “profile”; the user is encouraged to fill out a handful of sections introducing themselves, such as “The six things I could never do without” and “On a typical Friday night I am”. To further such emphasis on self-description, OkCupid prompts users to answer “Questions”, which maps their personality on a multi-directional scale. Users who answer Questions in a similar manner have higher
“Match Percentages”, which is often used by users as a guideline for filtering and searching potential dates. OkCupid is provided as a mobile app and website, and is used heavily by users in their 20’s and early 30’s.

We have identified a few major problems with OkCupid through research and interviews. Heavy emphasis is placed on crafting an “attractive” profile, leaving many users unsure of whether profiles accurately portray themselves or other individuals in real life. Additionally, considerable effort is required in curating one’s profile to attract certain types of matches; some users we have talked to admitted to changing their profile information frequently to attract certain types, and many have complained of the stressful burden of having to design an “image” for themselves online. Due to this emphasis on profile creation, OkCupid is often “gamed” to provide seemingly ideal scenarios for users. Some users dishonestly answer and skip polarizing Questions as a means to increase their feed of high “match percentages”. Another major problem with OkCupid’s user experience is the cognitive overload associated with its choice architecture. Women often find themselves sifting through an extensive list of sometimes crude messages from men. Alternatively, men end up sending a proportionally higher amount of messages than they receive. Both of these online behaviors have been reported to be cognitively depleting and unnatural.

The Tinder Model

Tinder is the second major competitor in the market of online dating and employs a noticeably simpler and more minimal user experience and interface than OkCupid. In short, users input search preferences and are presented with a single profile at once, at which point users must select to “pass” or “like” someone, similar to OkCupid’s Quickmatch. If two users have “liked” each other, they are both notified and may proceed to message each other. Users may not message each other until they have both mutually liked one another. Tinder is only offered as a mobile application and has gained notable traction amongst younger users, from college students to users in their late twenties.

One problem with Tinder’s user experience is that because so much emphasis is placed on a user’s single photo and not much else, many users have complained of Tinder being superficial. While more
physically attractive users can easily attain a plethora of “likes” and therefore the ability to message, less attractive users are more often “passed” and fail to reach any stage of communication with other users. Further, men often “game” the system by “liking” every user that comes up to provide themselves with as many communication channels, and therefore potential dates, as possible. Consequently, women experience an information overload of “gamed” likes from men and must then proceed to curate a highly saturated list of users. In all, Tinder has been reported to be too superficial for emphasizing singular profile pictures, and the lines between “like” and “pass” have been blurred by gamification.

2.2 Interviews

Background

22 user interviews were conducted in the Bay Area from February 6th to February 23rd, 2014. For our interviews, we created a user interview template. This template included questions regarding user’s basic information, general online dating behaviors, specific dating platforms, user experience, privacy, and user interface features.

We selected a mix of women and men, all of whom have personal experiences with an online dating platform. We recruited more women than men - 4 men and 18 women - because we wanted to emphasize and conduct research on the female experience of online dating; our preliminary research findings had indicated a generally more negative experience for women than that of men. We did not select any one sexual orientation for interviewees. The ages of the users interviewed ranged from early twenties to early 50’s, with the majority of them in their middle to late 20’s.

We recorded interviews using both screen and audio recording equipment. The audio recording equipment was an app called Phone Recorder that comes pre-installed on an Android LG phone. To record videos of our remote interviews, we used Quicktime’s Screen Capture.
**Data Analysis**

We began our data analysis process after conducting interviews and utilized the process of Affinity Diagramming to code and sort the information gathered from our user research. As a result, we organized the data gathered into relevant categories and scales of emotion, including pain points and moments of enjoyment. Further, we created a category of user suggestions to aid in the process of concept ideation. Our affinity diagrams are shown below in Figure A.

*Figure A*
2.3 Key Findings

Our research resulted in a broad range of results, behaviors, and opinions on the experience of online dating. However, a few important patterns shared amongst multiple interviewees arose from our interviews, which we then proceeded to group into major themes.

Profile Creation

One important finding regards the idea of “profile creation” in online dating platforms. Various users mentioned how they prioritized reading other users’ profiles; the most important thing to check was the physical attraction of the user, which was done by browsing the profile pictures and photos of the user. The second thing most users tended to do was to browse through the user’s profile to find “red flags”. Multiple users also discussed curating their own profiles to specifically attract different types of users. Additionally, embellishing one’s own profile, for example - to not seem boring, appeared to be a major part of profile creation. Another finding regarding online dating profiles is that interest developing between two users is heavily dependent on the platform’s design. For example, the manner in which interest is developed between users on Coffee Meets Bagel is notably different from how it develops on Tinder. Lastly, humor seemed to be a widely favored trait that users mentioned as important. One user noted that humor, communication, and maturity levels were more important than perspectives on “morality”, but were harder to gauge by viewing a user’s answers on OkCupid’s “Questions”.

Messaging Users

Another major theme that was surfaced through our interviews is the general behaviors regarding messaging users. Our findings show that women, on average, receive a disproportionately higher number of messages than men do. While women are taking a more passive stance in the ritual of online dating, they receive many more first messages. Alternatively, men tend to take a more active stance, sending many more first messages to many more women, but receive far less first messages from women overall. As a result, many of our female users noted their experiences of receiving an “overload” of initial messages from men, including but not limited to the all-too-familiar “Hey” and “How’s it going?”. One of our interviewed users notes that it “takes over your life”, stating that she couldn’t
escape the constant barrage of OkCupid’s notifications via email even when she logged off. These messaging practices appear to be rooted in deeper social and gender norms regarding “courting”; men tend to, and are expected to, make the “first moves” on women, a remnant of social tradition that has been passed onto the digital realm. These cultural norms drastically change the experience of online dating for men and women. One of our female interviewees represented such an experience quite accurately by noting how she spends most of her time on OkCupid; because she is receiving so many messages, she generally first checks messages, then opens the profiles of senders she finds interesting. If she likes the sender’s profile, then she would proceed to craft a message for that user. While a large portion of her experience was composed of curating and choosing amongst a list of interested users, a male interviewee demonstrated a very different experience. He mentioned spending most of his time on OkCupid by using their search interface to browse through pools of female users, opening a number of tabs of interesting profiles, then personally crafting messages for them after researching their profiles. For him, an average week of online dating comprised of sending out 40 to 50 personal first messages and receiving 4 to 6 messages. Therefore, while most of our female interviewees emphasized spending more time on reviewing an overload of messages as well as the profiles of its senders, our male interviewees emphasized spending more time on “search” and crafting initial messages. For men, online dating is often a numbers game of messaging as many women as possible in the hopes of receiving a handful of replies. For women, online dating is an exercise of curation, a game of picking and choosing from a vast list of senders.

Enhancing Real World Interactions

Another major theme that arose from our user research is that of “real world” interactions in dating. Through affinity diagramming, we organized user feedback into more granular categories regarding “real life”. The first category involves meeting in real life, as a number of users showed interest in taking the interaction online to offline as soon as possible. Users mentioned that their experience of online dating is most effective when the platform moves them from the digital space to physically meeting them in the real world as soon as possible. One interviewee stated that “The longer I’m on online dating, the more frustrated I get because I’m not getting what I want”. Almost all users added that they would have to meet the person offline to really understand if it will work, with one user noting that it is “best to just
meet in person and skip messaging”. Interestingly, another user preferred Tinder over OkCupid because it moved in-app messaging more quickly to mobile phone texting, which she felt was more “real” than messaging on the application.

The second category involves making the online interactions more “realistic” and similar to “real world” interactions for dating. One user noted that he would like to see a more real-life environment on online dating to recreate better “meeting” environments. He mentions that when asked how he met his ex-girlfriend, whom he had met on OkCupid, his experience is generally awkward and can be solved if the platform had created for more interesting moments of “meeting” in the digital realm. This same user recommended an online experience that would simulate “real life” with games, tasks, or creativity instead of more rigid self-created profiles. Other interviewees had compared their experiences using Tinder and OkCupid, many of them opting for Tinder because it felt more “real” than the more artificial experience of promoting an image on OkCupid. For example, one user noted that OkCupid was too “online-y” by placing too much emphasis on crafting a profile for oneself and instead preferred Tinder. A couple of users mentioned that they preferred more real-time interactions, such as Google Chat, to get a better sense of the other’s personality. Through affinity diagramming, we organized user feedback into more granular categories regarding “real life”. The takeaway: many users showed interest in aligning real world dating principles with online dating practices.

2.4 Literature Review

Data Portraits
In an effort to fully comprehend the theoretical domains of online dating, our group turned to reviewing relevant academic articles. Our goal was to digest theoretical concepts to inform our practical design choices and concept generation. One of the more helpful papers we read was Judith Donath’s “Data Portraits”. She notes that “living in an era of unprecedented archiving and recording, our identities are inevitably entwined with depictions of our accumulated data” (Donath 2010, p. 382). Here, Donath emphasizes how data portraits are “subjective renderings that mediate between the artist’s vision, the subject’s self-presentation, and the audience’s interest” (Donath 2010, p. 375). Donath defines a “data
portrait” as a visual presentation of a subject’s accumulated data as opposed to their faces, which we found highly relevant to Sidebar’s feature of collecting browsing histories. Further, she distinguishes data portraits from visualizations by stressing that data portraits are inherently subjective, while the goal of information visualizations strive to be as objective as possible. We discovered this idea in our usability tests, where one user noted that she wanted the subjectivity and flexibility of painting her public image on OkCupid.

Donath raises important questions regarding the visualization of accumulated data. First, she asks whether the subject or artist is in control of the data portrayed; this idea is important to Sidebar for two main reasons. Our tests showed that users wanted more control over the Tree Map, but our research for competitive analysis demonstrated that sometimes too much control over one’s profile, as is the case with OkCupid, can be overwhelming. Therefore, striking a balance in the control of self presentation remains a critical domain that should be further explored in future iterations of Sidebar. She sums it up elegantly by stating that “Privacy and control are closely intertwined: having a relatively innocuous piece of information revealed without your consent may feel like a violation, while freely displaying personal information of your own volition can be empowering” (Donath 2010, p. 382). A second major question Donath raises is how “representation” should look like and how it should be designed to make intuitive sense. Applying this question to Sidebar, we asked ourselves, “How can we visually express a user’s personality based on his browsing history?”. This question helped us generate various ideas for the user’s profile.

**Applying Behavioral Economics**

Reviewing behavioral economic theories has informed our research on online dating and guided our design of Sidebar. Our user research has demonstrated a common problem in the experience of online dating; women are receiving an overload of messages while men are spending a significant amount of time crafting initial messages, most of which will not be replied. Applying the concepts of behavioral economics, both men and women experience “choice paralysis” in the selection stage when presented with “information overload”. In most online dating platforms, there is simply an overabundance of options and choices, from the plethora of messages to the seemingly limitless number of profiles to
browse. Dan Slater’s “A Million First Dates” makes note of how information overload results in users becoming “cognitively overwhelmed”, which then results in lazy comparison strategies and a failure to examine cues. He elaborates on this idea by discussing how psychologists say that people are “more likely to make careless decisions than they would be if they had fewer options, and this potentially leads to less compatible matches” (Slater, “A Million First Dates”). Further, Slater writes of a simple but relevant experiment; a chocolate chosen from an array of six was believed to taste better than that found in 30. In a similar vein, Julie Downs notes how more information is often not better than less information; in “Strategies for Promoting Healthier Food Choices”, she demonstrates how some smokers were discouraged to quit upon learning that the health risks had been exaggerated (Downs, “Strategies for Promoting Healthier Food Choices”).

For men, the same information overload is presented when deciding whom to message; most online dating platforms do not carefully and strategically implement constraints on how many and with whom one can message. Therefore, choosing whom to message can be a daunting task for, in the language of Kahneman, a user’s “System 2” when presented with hundreds or thousands of “matches” (Kahneman 2011). As a means to combat such cognitive depletion and choice paralysis in this information overload of profiles, some men resort to messaging or liking most anyone, lowering their “standards” and sacrificing careful selection in hopes of receiving more messages. In light of Kahneman’s “Thinking Fast and Slow”, we explored the idea that an increase in choice may be related to an increase in mental effort and cognitive strain; by creating constraints on information consumed by Sidebar’s users, we hoped to reduce cognitive strain in the experience of online dating.
3. User Interface Design

“Design can be art. Design can be aesthetics.

Design is so simple, that's why it is so complicated”

— Paul Rand

3.1 Online Dating as a Browser Extension

Based on numerous findings in our user research regarding “real world” behaviors in relation to online dating, we decided to design a platform that would open the online dating landscape to the entire Internet for our project. First, we were interested in the idea of designed serendipity. Offline dating often, and perhaps more traditionally, materializes after a chance encounter in physical spaces, such as bars, cafes, and classrooms. Further, some of the subjects we interviewed -- particularly those who were opposed to and never took part in online dating -- felt that online dating was “inorganic” and that they preferred meeting a potential date in a more “organic” manner. Therefore, we decided to apply the spontaneity and serendipity of offline dating into our design in hopes of creating a more authentic and organic experience for meeting other people. Our design comes in the form of a browser extension, and explanations of our design process are outlined below.

3.2 Scoping

Our team conceptualized the following features before our first round of designs. First, our project would utilize the browser’s extension as a tool to serendipitously meet other people on the Internet. This tool would come in the form of a “sidebar”, easily opened and minimized while living on edge of the browser. Second, users would allow access to their browsing histories to generate visualizations, or “data portraits”, based on their online behaviors. With these “data portraits”, users may learn about their own online behaviors as well as those of their potential matches. Third, users may use Sidebar to communicate with other users anywhere on the Internet, as opposed to a centralized website or application like OkCupid.
3.3 Paper Prototypes

Upon agreeing on our general concept, each member of our team developed visions of interaction and flow through the use of paper prototype sketches. Most of our early sketches included the use of a tool icon on the browser’s extension, which would allow the user to click and activate Sidebar as shown below in Figure 1:

![Paper Prototype Sketch](image)

*Figure 1*

Early sketches of Sidebar included “Matches”, a feed of users that have watched or viewed the same pages as you, showing up on the homepage, but was later scrapped. Visualizations were included early in the design process, as our entire team agreed they be an integral part of Sidebar. As shown in Figure 2, mutually viewed digital artifacts between two users were also envisioned. Additionally, all of our sketches included messaging and user profiles.
After we had consolidated concepts for design by comparing paper prototypes, our team had proceeded to higher fidelity Balsamiq prototypes. Our goal was to further develop our ideas regarding flow and navigation for the intended user as well as use these wireframes for usability testing. The following are explanations of our design process for each feature in Sidebar.

3.4 Wireframes

Sidebar’s Interface

To simulate the chance encounter in offline interactions, we designed Sidebar to allow users to “bump into” other Sidebar users on the same page. We decided that the interface of a “sidebar” was fitting in that it was sleek enough to activate by both pulling out and hiding in the browser. The user may open Sidebar by clicking on the left arrow tab, or hide by clicking the right arrow tab (Figure 3).
Onboarding

Sidebar’s first stage of onboarding “What are you looking for?” includes standard questions for the user, such as birthday, gender, and location. Initially, we added a section “What makes you interesting?” that comes pre-populated with categories that Sidebar has generated based on the user’s browsing history. However, upon further discussion we decided to remove this feature on our later prototype. In the second stage of onboarding “What are you looking for?”, the user is asked to input specific traits of users he would like to meet such as gender, age range, and distance. The user is then quickly briefed on various features of Sidebar, including the Dance Card (discussed below) and the list of users viewing the same page, or “Crowd List”. An example of such onboarding interfaces are shown below in Figure 4 and 5.
**Crowd List**

The Crowd List, shown in Figure 6, is a list of user profiles who are viewing the same page as you are. It includes their photo, name, age, and location. We have designed the crowd list to only show a maximum number of users at once to avoid cognitive overload. Additionally, profiles that do not quite fit the main user’s interest but are viewing the same page will be visually faded. We have named these types of profiles as belonging to the “outer circle”, while those of the “inner circle” match the user’s interests more closely. The user can add any of these profiles onto his or her Dance Card if not already full.

**Figure 6**

**Dance Card**

To combat choice overload, one idea that our group generated is to implement constraints as a design element in our prototype. The idea of interacting amongst a small group of individuals on an online dating platform seems to be more effective than browsing thousands of users on a seemingly unlimited list of matches. One user we interviewed shared this sentiment, stating that he would like to see a limit
to the amount of messages men can send. Setting constraints to how many users one can interact with at a given time thus results in two solutions. First, women will not experience information overload because there is a limit to how many messages can be sent. Second, men are alleviated from the “numbers game” of messaging as many women as possible because of the designed constraints imposed on messaging. With this concept of constraints, we hope to level the “playing field” of both men and women, rooted in the traditional social norms of courting. Our hope is to design a more egalitarian online dating platform that gives women more power and autonomy while offering men greater cognitive ease by reducing the amount of “initial” messages they must send. Our idea of constraints takes form in our feature of Dance Card; any user can only message five specific users at any given time. There are two requirements before a user is allowed to speak with another user. First, the user must add him or her to the Dance Card. Second, the user must also be added to the other user’s Dance Card so that they are on each others’ at the same time. A closer look at the Dance Card can be seen in Figure 7.

![Figure 7](image.png)

**Main Profile**

All users’ main profiles are comprised of a number of features. First, all users can upload photos of themselves, which are displayed in a carousel interface on the top of the user’s profile. Additional features include the user’s name, age, location, and a short “About Me” section. The user’s Dance Card, as well as the number of spots available and filled, are also shown. Other user interface specs include a messaging icon and a button to remove the user from your Dance Card. All of these features are shown in Figure 8.
Visualizations

Visualizations play an integral part in Sidebar. Our initial designs had included a “Viewed in the last 7 days” feature that would show which articles, videos, or songs were accessed by the user. We also designed a “tree map” style visualization that would generate interests based on the user’s browsing behavior, placing such interests into relevant categories and, within those categories, sub-categories. The sizing of the boxes in the Tree Map is dependent on how much the user browses within that category; for example, if the user browses mostly jazz articles, videos, or songs, then “Jazz” will have a larger presence on his Tree Map than other categories.

Additionally, the extent to which information on a user’s Tree Map is available to other users is dependent on whether they have added each other to their respective Dance Cards. If they have not added one another, then users can only see broader categories on their Tree Map, for example “Alcohol”. If the users have added each other, then the users have gained access to sub-categories of main categories, for example “Microbrews” in “Alcohol”.

Mutually added users can drill in further within the Tree Map by clicking on such sub-categories. By clicking on “Microbrews”, the Tree Map is replaced with a layout that features a list of titled links to articles, photos, or videos relevant to microbrewery that the user accessed. All of the aforementioned designs are shown in Figures 9, 10, and 11.
Figure 9

Figure 10
Messaging

We designed our messaging interface to be visually simple and accessible. The user can see a stream of his conversation with another user in the body of the sidebar. Messages are time-stamped as well. To send the user a message, one would input into the dialog box on the bottom of the sidebar and click “send”. Figure 12 shows our messaging interface.
Feedback Survey

If one decides to remove a user from his or her Dance Card, that person is asked to elaborate why it didn’t work out in the Feedback Survey (Figure 13). Questions come in two parts; first, the user is asked to fill out a checkbox form-field with various questions. Second, the user can elaborate by filling out a free-form message in a dialog box. Once submitted, the removed user is then notified via message of the other user’s comments. The main reason for including a Feedback Survey is to incorporate suggestions from user research; one user noted that her biggest problem of online dating is “inconsistency” and “intent”. She furthered that she would often get messages from users she liked, at which point she would message them back, but nothing would materialize. She added that figuring out what the other user is actually thinking and wanting --what their intent is-- was perhaps the most troubling thing about online dating. As a result, our Feedback Survey was designed to serve as a vehicle for getting closer to understanding user intent.
3.5 Iterating

As a part of our iterative design process, we conducted usability tests to test our Balsamiq prototypes. There were two main findings that we uncovered through user testing - the first relating to the “Viewed in the Last 7 Days” feature, the second about the “Mutual Map” feature that we had designed during the iterative process.

Overall, users had negative reactions to the “Last 7 Days” feature. One user commented that it was “kind of creepy” and that it “tracks too much” of your personal history to exhibit to other users. Another user noted that he would want to the ability to remove things from his “Last 7 Days” because he feels like there would be things that he wouldn’t want other users to see. He also elaborated that he would probably spend a lot more time removing things from his profile as a means to curate it than actually adding things to his profile. As a result, we decided that users felt uncomfortable with their most recent activity being publicized, and scrapped the feature altogether.

A few of the users we had tested noted wanting to see an intersection between their own and other user’s maps, a comparison of sorts. With this idea of “comparing profiles” in mind, we designed the Mutual Map (Figure 14) in the midst of our usability tests. Here, the user is presented with a visualization that shows the user’s interests, the other user’s interests, and their shared interests. Upon testing this feature with users, however, we discovered that users did not seem to care as much about seeing their own interests in the Mutual Map, with one user noting that “I already know myself”.
After user testing, we decided that the Mutual Map presented too much unnecessary information to the user. Instead, we brought back the Tree Map, which more and more users we tested seemed to like, and we created another iteration of the mutual map - Mutual Interests - where only mutual interests are shown. During testing, users seemed to enjoy seeing mutually browsed articles and media on other users’ profiles.

### 3.6 Visual Design

We had a variety of ideas for the visual design of Sidebar’s logo and interface, and many of our first ideas stuck. We settled with a geometric logo and clean typeface that alluded to the meeting place of two users online, shown by two hearts intertwined in two chat icons. While designing the browser extension’s interface, we were drawn to cooler, darker colors such as Evernote’s browser extension and Spotify’s web application. As a result, we decided to design our browser extension with gradients of darker grays and teal. The relative darkness of the browser extension allows it to, from a usability standpoint, remain relatively sleek and not overpowering when juxtaposed with the actual content on the browser. Figures 15 and 16 show our two version of Sidebar’s logo, one for use in lighter contexts and the other for darker.
4. Final Product Walkthrough

“People think focus means saying yes to the thing you’ve got to focus on. But that’s not what it means at all. It means saying no to the hundred other good ideas.” — Steve Jobs

4.1 User Signup

To experience Sidebar a user must first create an account. Below is the account creation process. Only basic information is requested about the user and their stated preferences.
Based on this criteria and your browsing behavior, we'll show you like-minded people for you to connect with.
4.2 Onboarding

To orient the user we have included an onboarding tutorial. The tutorial is quick and outlines the vocabulary and layout of the sidebar design.
4.3 Browsing and Profiles

Users browse other users while browsing the internet. When curious they can investigate which other Sidebar users have visited the page they are on or similar pages. A maximum list of ten users is presented in the Sidebar area including a few users outside of their stated preferences to make things interesting.
The profiles include the basic information provided at sign up as well as a treemap visualization created based on the users browsing history. In the bottom section the user is presented with articles and other internet resources they have in common with the person they are viewing.
4.4 “Dance Card” and Messaging

The dance card is a metaphor we employ to make decisions more salient. A Dance Card in the late 19th century was a way for a woman to keep track of her partners at a dance or social event. We hypothesize that the constraint will force users to engage with other users faster. While limiting the number of users presented at time helps reduce cognitive load, limiting the number of users one can communicate with limits the deluge of unnecessary interactions with people a user is not interested in.
4.5 Notification Center

The notification center allows the user to navigate activity relating to them. It also acts as a place to review their recent history on the site. Those who they have added to their dance card and then have been removed can be found only through past notifications. As time passes though those users become harder to find and fade into history.
4.6 Feedback Survey

Below represents our attempt to prompt a conversation about why things didn’t work out with a user. Many online dating interactions fade into oblivion without either party acknowledging the other. Those whose calls go unanswered are left wondering. The feedback survey creates a space for closure.

I’d love to hang out again but I’m just feeling the friend vibe.
5. Conclusion

The creation of Sidebar has led us to a number of discoveries about user behaviors, user interfaces, and
design solutions for online dating platforms. By applying HCI and behavioral economic theories to online
dating, we learned two important lessons. First, choice architecture is a critical component of online
dating in that the majority of current platforms create various levels of cognitive strain in its users.
Second, the concept of “data portraits” has informed our design decisions in creating Sidebar’s Profiles
by raising important questions that touch upon information visualization, control, privacy, and
subjectivity.
6. Appendices

“The dating world makes me feel incredibly vulnerable. You put yourself out there earnestly as available only to encounter some of the most disingenuous people. There seems to be no formula. Just a boat load of anxiety. Did I do this right? Will he call? If I just say I like him, will it backfire because he will know he doesn't have to earn my time and attention anymore? How do people do this......Seriously.....how?”

— Alafia Stewart

6.1 User Interview Template

Date: 
Time: 

○ The purpose of our study is to learn about what online dating sites/apps people are using, how they are using them and what their experience is with them. We will use this information to inform the design of a new online dating app.
○ We'll start with asking a few basic questions about you, your recent experience, and what you’d thought about fixing. Tell us what is on your mind at any time.
○ Participation is completely voluntary, and you can stop the interview at any time.

● Basic info
  ○ When did you first start online dating?
  ○ What Dating sites/apps have you used?
    ▪ Do you use your mobile phone for online dating?
  ○ How did you find out about the sites?
  ○ How frequently did/do you login/use the dating site(s)?

● Site Questions
  ○ How did you spend your time on the sites?
  ○ How did you search for people?
    ▪ What if any frustrations did you have with searching?
    ▪ What would you change?
  ○ How honest do you feel you were when constructing your profile?
    ▪ Was their information you purposefully withheld from putting in your profile?
    ▪ How do you feel about the way your profile is presented to others?
  ○ When would you feel comfortable meeting the person in real life?
  ○ How much time did that typically take?
  ○ When meeting someone for the first time: did you ever feel like the person was different than how they presented themselves online?
    ▪ How?
      ● More abstractly?
      ● Physically?
○ What would you change about your online dating experience?

UX
- When and where do you typically access online dating sites?
- How much weight do you put on match percentages? Do you trust it?
- What are some frustrations you have with messaging?
- On average, how many messages do you send a week and how many messages do you receive?

Privacy
- How do you feel about your profile being discovered by people you know

UI Features
- What do you think of using video in online dating? What is the pain point of doing videos? What if you were given prompts that were fun?
- What do you think of “self-destructing” media in the context of online dating, like photographs and videos that disappear after 10 seconds?
- What do you think of sharing information from connected services that you already subscribe to: like netflix, spotify, fitbit? What if that information was raw versus aggregated into groups?

6.2 Usability Testing Template

Introduction:
Briefly introduce Sidebar and talk about its purpose. Mention that it is an early low-fidelity prototype and that not all features have been fully fleshed out.

Draft of Script:
“The goal of Sidebar is to create an experience of “designed serendipity” in the domain of online dating. While most traditional dating sites limit user interactions within the website or application, Sidebar opens up the online dating landscape to the entire Web through a browser extension. This browser extension accumulates data to paint for each user a “data portrait”. These portraits include tailored profiles and visualizations based on the types of articles, music, movies, etc. consumed by the user on the Internet.

Sidebar is currently in the early stage of low-fidelity prototype. Therefore, there will be times when the prototype does not offer all of its intended features. Additionally, we do not want you to feel as if you are the one being tested. Instead, it is the design we are testing in hopes of improving upon Sidebar’s functionality. Lastly, If something in our design is not intuitive, it is important to let us know.”

Start:
“We will now have you perform specific tasks within the prototype. During this time, we want you to talk us through what is going through your mind as you’re using the app.”

Key User Tasks:
1. Sign up for a Sidebar account.
2. Find your own profile.
3. Add John to your “dance card”.
4. Check for notifications if John also added you to his Dance Card
5. Explore John’s profile and visualization (Microbrews).
7. Remove John from your dance card.

Specific Questions:
- What do you think about the side bar layout?
- Tell me about your experience finding your own profile; was it intuitive?
- What are your thoughts on the dance card? (Was it intuitive? Was it useful?)
  - Tell me about the UI to add someone to a dance card; did it function well and as expected?
- What about viewing user profiles? (Is that intuitive?)
- What did you think about writing messages to other users?
- When you removed a user, did it function as you expected?
  - How do you feel about the feedback questions, after removing a user?
    - Any suggestions for helpful feedback questions?
- Are the visualizations easy to read? Do you think it can be improved?

General Questions:
- What did you think about the organization of design layout?
- Were you frustrated at any point using the tool? If so, when?
- How did you feel about your privacy while using Sidebar?
- What do you think about the learning curve for using this tool?
- In light of Sidebar, is there any other information you feel you need?
- Do you have any suggestions for other functions Sidebar could perform?

Conclusion:
- Have you ever used a tool that performed a similar purpose as Sidebar?
- Given the right circumstances, would you use Sidebar?
- Any other final remarks or questions?

Conclude the usability test and thank user for his or her time.

6.3 Works Cited


