



Social, technology-guided opera viewing experiences that create points of entry into opera for underserved audiences.

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STATEMENT OF NEED

There is a need to create points of entry into opera for diverse audiences.

Opera is a 400-year-old art form, the development of which represents the synthesis of some of the greatest composers, musicians, theater artists, visual artists, and storytellers in history. It is a medium that, at its best, is capable of expressing profound truths of the human experience with emotional power and aesthetic depth. Everyone could benefit from an engagement with this uniquely multidisciplinary art form.

However, statistics show that huge segments of the U.S. population are effectively **not being included** in this cultural activity, either as audiences or creators. There is a substantial need to create new **points of entry** into opera for the majority of people. The stories and emotions expressed in opera are universal, so all kinds of people should have access to **learning experiences that foster an appreciation of opera**.

The Metropolitan Opera broadcasts **films** of select live performances to movie theaters all across the U.S. at relatively affordable ticket prices. While this program has increased overall accessibility for these performances, in 2008 audiences at the screenings were found to be **84% over the age of 55 and 94% white**, with an **average income of \$103,740**. The majority were also “moderate opera goers” or “frequent opera goers.”¹ Furthermore, overall national attendance at **live** opera has shrunk drastically, **dropping by 40%** during 2000-10.² The cultural perspectives being **represented** on opera stages are also relatively narrow: a large majority of operas produced worldwide were written by composers of the past who were male and white; the most-performed living composers are also male and white.³

1 Shugoll Research. (2008). Metropolitan Opera Live in HD Survey. Prepared for: OPERA America. New York, NY.

2 Attendance at main stage season opera performances dropped from 3.9 million in 2000 to 2.3 million in 2010. I haven't been able to find any more recent statistics. Source: Kushner, R. J., Cohen, R. (2013). National Arts Index 2013: An Annual Measure of the Vitality of Arts and Culture in the United States: 2000-2011. Americans for the Arts.

3 Example statistics from Operabase.com: of the top 30 most-performed opera composers worldwide during 2008-2013, none were living. The most frequently performed opera composer, Giuseppe Verdi, received 39 times more the number of productions than the most-performed living opera composer, Philip Glass, during 2008-2013. Of the top 60 most-performed living opera composers, three were female!

This data suggests that there is substantial room for improvement with regards to not only making opera performances more “accessible” in the most practical sense (determined by location, price, or convenience), but also by creating points of entry for new audiences (and, ultimately, artists) through education.

Target Audience

- Young adults (ages 18-35)
- Living in U.S. metropolitan areas where live opera and/or film screenings are available
- Have little-to-no experience watching and listening to opera
- Are not currently motivated to attend operas
- Especially, but not exclusively, those who are non-white, haven't completed graduate school, or earn less than \$55,000/year.⁴

Learning Goals

- Learners will develop an understanding of the essential musical and theatrical elements of opera (libretto; aria; etc).
- Learners will become familiar with a range of operas, from the Baroque period to the present.
- Learners will discover and identify connections between existing operas and their own life experiences and interests.
- Learners will become aware of opportunities to see live opera in their local area, as well as relevant discount programs and educational programs.

Social Impact Goals

- Members of the target audience will develop an interest in opera sufficient to motivate them to attend live performances and/or films of opera.
- These new audiences will drive demand and support for local opera performances.
- Hopefully, a stronger representation of these segments of the population amongst opera audiences will ultimately drive changes in direction in the field and increase support for producing different kinds of operas and operas by minority composers.

4 These parameters are based on the minority audiences identified in aforementioned Shugoll Research study.

USER INTERVIEWS

Overview

During February 16-17, 2015, I conducted one-on-one interviews (approximately 15 minutes each) with four individuals representative of my target audience (identified as S, M, H, and P). I spoke with two of these individuals over Skype and two in person.

Each of these interview subjects have had little-to-no experience listening to or viewing opera, and little-to-no knowledge of opera in general (familiarity with operas, composers, etc), and stated that they do not currently feel motivated to go an opera performance.

Relevant demographic information about the subjects include:

- Their ages range from mid-20s to 30.
- Three out of four are South Asian and one white/Caucasian.
- They are all full-time graduate students, so they have a relatively high level of education compared with my ideal minority audience (college or less). However, as students they have limited time and money to spend on arts and entertainment, which is an important target audience characteristic.
- Although I am not explicitly targeting audiences from foreign countries, it is worth noting that all of my subjects are originally from outside the U.S. and moved to New York City to pursue school within the last several years.

Key Findings

Inexperienced viewers hold fundamental misconceptions about the conventions of opera performance.

I asked each of my interview subjects to describe how they imagined an opera-going experience. The most notable and prevalent misconceptions or confusions that arose were:

Perceiving language as a barrier: S, M, and H stated that they wouldn't be

able to understand the words being sung in an opera because they are in a foreign language and, therefore, would not be able to follow the story at all. Each were surprised to learn that subtitles or supertitles are typically provided in opera theaters, just like in a foreign language film. I learned that, in the case of S and M, they had previously attended performances without supertitles and had, understandably, assumed that all opera performances were done that way.

Confusion between operatic singing and opera as an entire art form: When asked if she had ever seen an opera, S described a performance that fit the description of a vocal recital. She was not aware that what she had seen was not actually an opera production but a concert of operatic singing. Furthermore, P was unaware that opera was a narrative or theatrical form at all.

Clearly, the above can and should be addressed explicitly in my learning environment. These conversations indicated to me that nothing should be taken for granted with regards to prior knowledge of opera. Mainstream culture in general, and arts venues' marketing, has failed to communicate to many people the conventions of the contemporary opera-going experience.

For some, shared attendance with friends or family plays a key role in determining which arts & entertainment events they'll go to.

S, M, and H each expressed that sharing the experience with friends or family was key to determining which arts & entertainment events they are likely to go to. For M and H, they only go to performances with other people. S and M both described attending events they that they wouldn't normally have thought of going to see because a friend had invited them (and it was free).

For P, this was not a factor. He frequently goes to events by himself and would not be swayed to go to an event he wasn't already interested in if a friend had invited him.

Since these individuals' family and friends are generally not interested in opera, my question is: how might groups of people unfamiliar with opera be motivated to explore it *together*?

Everyone has different sources from which they learn about upcoming arts & entertainment events.

There was a lack of consistency between the four interview subjects with

regards to how or where they find out about upcoming arts & entertainment events. Sources they described included a word-of-mouth recommendations; posters in the subway; Facebook; and a service that recommends upcoming concerts based on the user's Google search history.

For some, theatrical design may be the key point of entry.

M and H professed a strong interest in design and cited that as a major element of their experience going to see plays or musicals.

None of the interview subjects were aware that visual design is a major aspect of opera productions and that some of the greatest theater directors and designers have created oftentimes very elaborate or innovative designs for opera.

If this aspect of opera were explored and highlighted, it could go a long way towards illuminating some of the beauty and excitement of opera at its highest level of production.

Familiarity is attractive.

For S, when going to see a musical or a play, prior familiarity with a story is highly desirable. She finds it is difficult to follow the story of a live performance and expects she will enjoy it more fully when she is already familiar with the characters and plot.

M cited going to see "The Lion King" musical when she was younger as a highly impactful live performance experience, largely because she was intimately familiar with the animated film. Going to the musical was like seeing the film come to life.

In a different but similar case, P only goes to see live performances by electronic artists he already knows he likes from listening to their albums.

The educational challenge that emerges from this observation is, could operas become newly familiar and, therefore, more attractive to learners?

Alternatively, how could aspects of opera that appear elsewhere in popular culture be used as effective entry points for operas? In the case of narrative, the familiar aspects of operas include plots taken from many of the popular

fairy tales; famous novels like "War and Peace"; musicals and movies that have been based on operas, like "Rent"; and the list goes on. In the case of music, opera has been used in countless film soundtracks and many opera arias have been performed by pop singers.

The usual stereotypes persist.

Unsurprisingly, all of the interview subjects had the usual preconceptions about opera: the audience consists only of old, wealthy people; going to an opera is very formal; the music itself is all old; and "it's not for me." None were aware of contemporary operas or alternative, chamber operas. Such preconceptions could easily be altered with exposure to new information.

USER SURVEY

Overview

After completing four one-on-one user interviews, I decided it would be necessary to understand more diverse target user perspectives: especially from people who do have familiarity with opera yet still perceive significant barriers to entry, and/or who were born and raised in the United States.

On February 22, 2015, I published a brief, anonymous online survey, which I distributed through social media and collected via Google Forms. I received 18 responses and eliminated half of them based on irrelevance to my target audience characteristics (some eliminated respondents were evidently already knowledgeable about opera).

Of the remaining nine respondents, the following was true:

- The group was evenly split between young adults (under 35) and middle-aged adults (35-55).
- The group was evenly split between those with an annual income above \$55,000 and those who earn less.
- Six had previously attended at least one live production of an opera.

- Seven had at least heard a recording or watched a film of opera.
- All but one were born and raised in the United States.
- All but one identified themselves as white/Caucasian.

Key Findings

Barriers to Entry: Language, Cost, Social Context

Echoing the previous user interviews, three survey respondents mentioned **foreign language** as a concern (*“The ones I have enjoyed were in English so I could understand them”; “I prefer to understand the lyrics.”*) Two respondents also felt opera tickets were **too expensive** for them. Additionally, two respondents explained that the actual **experience** of going to see an opera was alienating or unpleasant and cited frustration with social interactions or social environment (*“I’ve gotten shushed for laughing at Donizetti and my wife was shushed for crying as a result of an aria from La Traviata.”; “Opera probably has the most “involved” concert-going process.”*).

Motivations, Interests, and Prior Knowledge

Eight out of nine respondents attend a wide variety of other **arts & entertainment events** at least once per year, ranging from concerts to sports. When describing what motivates them to attend these events, factors described included **shared interests and experiences with friends**; having a **special occasion**; having a **unique** experience; **supporting a friend** involved in a performance; broadening their **perspective**; and having a mystical or emotionally **uplifting** experience.

When provided with a list of theatrical and narrative elements that commonly appear in opera, five or more respondents stated a strong interest in **instrumental music**; **design** (sets, costumes, lighting); **“period pieces”** (stories that take place in an historical setting); **mythology**; and **songs**.

When asked to define opera, eight of the respondents clearly understood that it consists of theater and narrative communicated through singing and music, with little-to-no speech. Four respondents additionally made references to a specific singing style and overall style of performance (*“heightened”; “campy”*).

Comparisons and Takeaways

Most of the information acquired through this survey echoes my findings from the one-on-one interviews. All of this research points to the importance of explicitly addressing the social factors and foreign language barrier in my design. Additionally, there will be benefits to building on the audience’s existing interests in instrumental music and theatrical design, in particular, as well as other narrative and musical elements.

The survey respondents differed most notably from my interview subjects in that, on the whole, they were much more familiar with opera as a genre and have certain expectations about opera performances. Accordingly, Opera Connect needs to incorporate scaffolding that addresses **opera novices** while providing sufficient complexity and engagement for **informed users** who are more familiar with opera.

LITERATURE REVIEW

Belcher, D. (2014, October 29). Opera Companies Reach Out to Young People in New Ways. The New York Times. Retrieved from <http://www.nytimes.com/2014/10/30/arts/international/opera-companies-reach-out-to-young-people-in-new-ways.html>

This article surveys a number of efforts underway in Britain to engage young people with opera (primarily teens) through creative, participatory projects: making a mobile app inspired by an opera, bringing in young composers to write music for performances, children's opera productions, etc. Young people need to have an opportunity to develop a sense of ownership of opera in order to want to spend time and money going to see it. Creative participation is put forth as a primary form of potential engagement for teens, specifically.

Bloume-Kohout, M.E., Leonard, S.R., & Novak-Leonard, J.L. (2015). When Going Gets Tough: Barriers and Motivations Affecting Arts Attendance. National Endowment for the Arts. Retrieved from <http://arts.gov/publications/when-going-gets-tough-barriers-and-motivations-affecting-arts-attendance>

This extensive report examines motivations and barriers currently impacting adults' art attendance. There are several findings in this report that are highly relevant to this project, including common motivations for attending performing arts events; barriers to attendance; and how arts attendance has been found to interact with factors related to socioeconomic status, race and ethnicity, and life stages. Many of these findings confirm my observations in the aforementioned user interviews and surveys.

Frasier, P., & Frasier, I. (2013). Creating the Opera Habit: Marketing and the experience of opera. In D. O'Reilly, R. Rentschler, & T. A. Kirchner (Eds.), The Routledge Companion to Arts Marketing (pp. 393– 404). Routledge.

This chapter examines the landscape with regards to opera marketing and educational efforts and surveys the many issues around creating new audiences. The authors conclude that a change in general public perception of opera is much needed, along with an examination and adoption of marketing strategies from other competing events (film, concerts, etc).

Shugoll Research. (2008). Metropolitan Opera Live in HD Survey. Prepared for: OPERA America. New York, NY.

This detailed report of attendance at Live in HD (as of 2008) provides important demographic information, showing that attendees at HD are not substantially different from live opera-goers. Their data suggests that there is substantial room for improvement with regards to not only making opera performances more "accessible" in the most practical sense, but also by creating points of entry for new audiences.

LANDSCAPE AUDIT

The Metropolitan Opera Live in HD

<http://www.metopera.org/metopera/liveinhd>

What is it?

An ongoing series of HD broadcasts to movie theaters across the country, and the world, of selected live performances at The Metropolitan Opera.

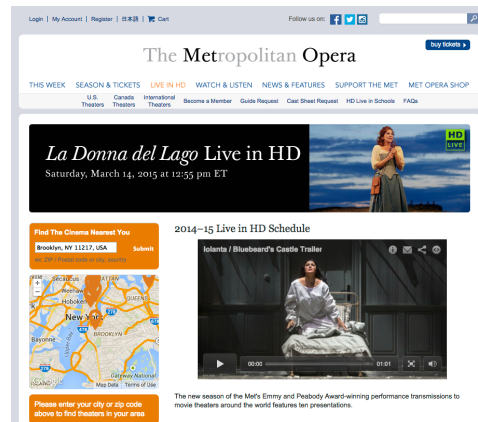
What's working?

Tickets are relatively affordable (usually \$15-\$30) and screenings can be accessed across the country in commercial theaters, schools, and community centers. Additionally, the movie theater environment, complete with popcorn, inherently strips away some of the potential discomfort new audiences might feel about the formality of the traditional opera-going experience.

What could be improved or built upon?

It doesn't appear to be drawing in younger or more diverse audiences. The vast majority of attendees are retirement-aged, white, high-income, highly educated, and are already moderate or frequent opera-goers.¹

How can new audiences find out about these screenings? What would make these events more appealing or attractive to them? How might Met HD act as a springboard for an audience member's future, ongoing engagement with opera?



San Francisco Opera: Opera at the Ballpark

<http://sfopera.com/Season-Tickets/Opera-at-the-Ballpark-2015.aspx>

What is it?

A free annual event presented by the San Francisco Opera at the SF Giants' Ballpark, with corporate sponsorship. SF Opera screens one live simulcast of an opera performance.

What's working?

I've attended this event twice in recent years and it was truly incredible to see the sheer number (26,000 in 2014) and diversity of people who showed up. Furthermore, the audience was completely engrossed in the performance, willing to sit for hours in the cold San Francisco summer weather, in relative silence, and even "boo" when the villain comes onscreen. These programs are clearly attracting audiences that are new to the SF Opera.¹



Even though Met HD tickets are relatively affordable (under \$30), the allure of a "free" event for the general public appears to be substantial even if it demands people's time. Additionally, experiencing opera in a fun, friendly, lively environment like a sports stadium is likely a major draw, especially for families and mixed-age groups.

What could be improved or built upon?

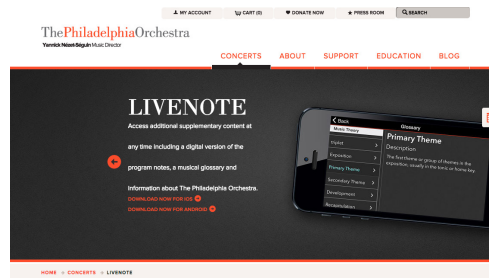
It is not clear to me whether this program leads to further engagement with opera. There may be untapped potential for attendees to get "drawn in" after they leave the ballpark. Additionally, the works are presented with little context or guidance, so audiences may not actually be improving their interpretive skills or understanding of opera on the whole.

Philadelphia Orchestra: Live Note

<https://www.philorch.org/introducing-livenote%E2%84%A2-nights>

What is it?

What is it? This mobile app sends real-time information about the music being performed to the audience's phones during concerts. It's specially coordinated with selected Philadelphia Orchestra concerts and designed for minimal impact and interruption of the live experience.



What's working?

The real-time aspect of this app is fascinating and potentially very beneficial. Even when concertgoers bother to read program notes (which is often not the case), it can be very difficult to connect what was read to what is being seen/heard in the moment. In the best case scenario, this app might help newcomers to classical music (or even experienced listeners) engage more fully with the context and content of the work they are hearing.

What could be improved or built upon?

There are many ways in which something like this could fail¹: distracting from the performance, or simply not being compelling enough for people to actually bother with it. Without experiencing myself (and I haven't found any research around these issues), it's unclear whether or not this app has been successful. At the moment, this program only exists for orchestra performances, not operas.

Could a product like this be successful at drawing in new audiences, instead of just informing audiences once they're already in the concert hall?

San Francisco Opera: Learn (Website)

<http://sfopera.com/Learn.aspx>

What is it?

Several opera companies provide publicly accessible educational materials. The SF Opera appears to be one of the best, in this regard. They offer a large library of curricular materials for K-12 connecting themes across disciplines to a wide range of opera repertoire, including specific activities and themes relevant to different grade-levels and classroom subjects (following state standards). Additionally, SF Opera provides general information introducing opera to beginners.



What's working?

They are explicitly aiming to engage audiences that might be intimidated or confused about opera: e.g., there's a page dispelling "opera myths."

What could be improved or built upon?

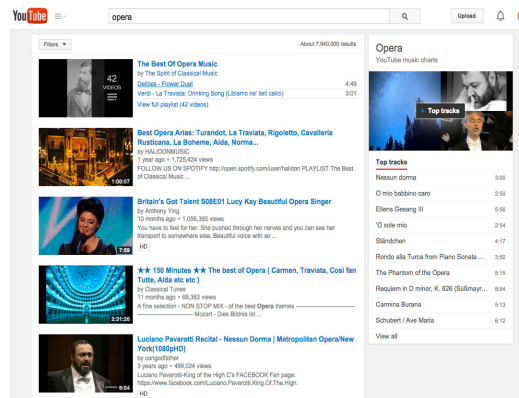
The content on this website would likely only be used by educators and/or people who are already interested in opera. Furthermore, the curricular guides are envisioned only for K-12. I aim to design a "consumer-facing" product for adult learners who may not already be engaged in the subject matter.

Additionally, all of the aforementioned content is entirely text-based, with little-to-no multimedia components (surprising, since opera is a visual and aural art form!). Clearly, this website has not been envisioned as a learning environment unto itself but rather a library of materials that can be drawn from by educators.

YouTube Clips of Singers

What is it?

A YouTube search serves as a relatively good indicator of what people are watching, listening to, and sharing online. A search for "opera" reveals the popularity of video clips falling into two categories: 1) clips from reality TV talent competitions featuring vocalists singing operatic arias, and 2) compilations of arias and/or mixed-repertoire performances by famous singers.



What's working?

Opera can draw thousands, if not millions, of online views, when it depicts singing prowess and virtuosity and/or demonstrates a connection to "song" more generally.

What could be improved or built upon?

Clips of isolated arias are a very superficial experience of everything that opera is and has to offer. The fact they attract so much interest, though, suggests that my learning environment might be effective if it taps into the inherent appeal of vocal performance aspect of opera.

How could individual arias and the novelty of vocal virtuosity be used as an entry point? How can these isolated performances be contextualized musically, dramatically, and historically?

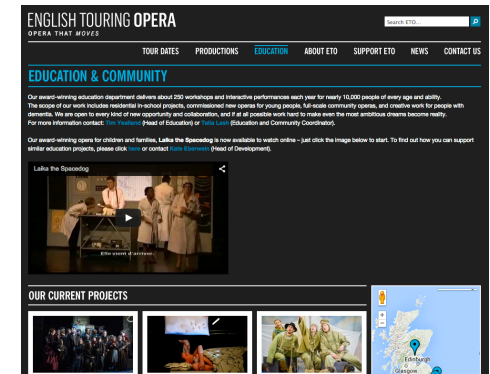
It is interesting to note that the popularity of decontextualized arias on YouTube may be an indicator of the fact that most popular association with "opera" is the singing style, rather than the entire theatrical form.

English Touring Opera

<http://englishtouringopera.org.uk/education/>

What is it?

A long-standing touring company in the UK that develops and performs brand new operas in collaboration with diverse communities, especially youth. Their education department produces workshops and performances on a large scale.



What's working?

ETO has had a large impact in engaging many people of mixed ages and abilities opera as co-creators and participants in opera, in addition to producing performances of standard repertoire.

What could be improved or built upon?

This opera company touches the people it interacts with directly (a large number, but inherently limited). How could technology amplify this kind of impact? Additionally, how might a similar program appeal more specifically to young adults rather than children?

PRIMARY PERSONA

The Social Arts Attender

"I'm not a music or theater buff, but I enjoy trying out new things."

Alicia Williams

- 28 years old
- Lives in Oakland, CA
- Graduate student
- Part-time job¹



Image source: Flickr

Alicia is studying to become certified as a teacher. She also works part-time at a nonprofit supporting youth literacy. While she finds it rewarding, it doesn't pay well and leaves her with limited time.

Alicia has a close network of friends and family: when she finds the time to go out and do something fun (which isn't very often), she makes it a social occasion.

When going to see a performance or a film, Alicia responds most strongly to exciting visual design (sets, costumes, and lighting). She also likes stories that have fantasy, mythology, and historical settings.²

¹ Audiences at The Met Live in HD screenings in 2008 were found to be 84% over the age of 55 and 94% white, with an average income of \$103,740 (Shugoll, 2013). Young, racial minorities, with a low income are the critical audience for this project.

² Over half of respondents in my user survey noted an interest in each of these features.

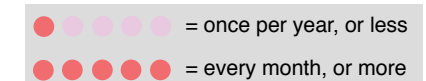
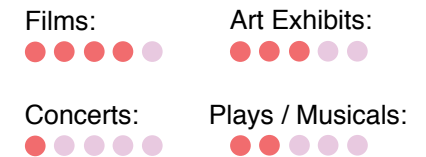
Arts Events Attendance

Motivations for Attendance

- Socializing with friends or family¹
- Free or cheap tickets²
- Relaxation
- Already knows and likes artist/work

Barriers to Attendance

- Lack of time or scheduling conflicts
- Ticket cost³
- Not familiar with the artist / work



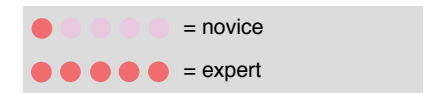
Prior Knowledge & Experience

Impressions of Opera

- Can't understand foreign languages⁴
- Stuffy, uptight performance atmosphere

Technologies Used

- iPhone
- Laptop
- TV (shared)



¹ In 2012, this was the most common motivation for attending performing arts events (73%), as cited by U.S. adults who attended events in the last year (Bloume-Kohout, et al, 2015, p. 12). Additionally, younger adults were more likely to cite socializing as a motive for attendance than adults 65 and older (p. 26). This information was supported by my target user research.

² Adults between 25 and 34 are more motivated than other age groups to attend arts events that have low cost or free admission (Bloume-Kohout, et al, 2015, p. 26).

³ Over 70% of adults surveyed by Bloume-Kohout, et al, who wanted to attend arts event but didn't, cited high ticket costs or lack of time (including work-related conflicts) as their primary barriers to attending arts events (2015, p. 26).

⁴ Several interview subjects and survey respondents in my user research identified the foreign language of opera as a perceived barrier (in some cases, unaware that subtitles are normally provided).

Opera Connect produces social, technology-guided opera viewing experiences that create points of entry into opera for underserved audiences.

Opera Connect audiences attend **public events** organized and hosted by nearby bars, schools, museums, theaters, etc, or download their own “**Party Kit**” to enjoy at home with friends. Both experiences include:

Opera Films in Familiar Venues - A beautifully produced, **full-length film** (with subtitles) of a live performance by a major opera company is streamed directly to the user’s home TV or provided as a DVD for institutional use. Opera Connect’s website guides users in selecting a title from Opera Connect’s library (approximately 5-10 titles) based on their interests.

Social Contexts - Party activities tailored to the selected opera include drinking games, opera bingo, and thematic food and drink menus.

Real-Time Expert Guidance - A “second-screen” **mobile app** with illuminating annotations is updated in real-time and synched to the film. Users can toggle between three “channels” of annotations, depending on their interests:

The **Story** channel helps the user keep track of the action, with live-updating plot summaries and an interactive character glossary, so the user always knows what’s going on.

The **Design** channel displays behind-the-scenes concept art and details on the opera’s theatrical design and compares the production onscreen with other productions of the same opera.

Last but not least, the **Music** channel provides a wealth of context for what the user hears—from musical influences to singing technique.

Extended Impact

Additional features extend Opera Connect’s impact to live opera attendance. Users will be provided with a **calendar** of local performances, accompanied by a “**primer**” on what to expect from live opera-going experiences. Additionally, generous **discount coupons** for tickets will be provided for all first-time users.

“Opera is the stuff of life...Storytelling is a fundamental human need, and there is nothing that can beat opera as a way of telling the stories that need telling, the stories that help us to understand what it is to be human. The combination of music, singing and drama creates a full experience with unparalleled power to move. At its best it is truly exhilarating... it's important that we who make opera take every opportunity to reduce barriers, demythologise, and demystify what it's all about.”

Alex Reedijk, general director, Scottish Opera ([Source](#))

Need - Everyone could benefit from an engagement with this powerful, multidisciplinary art form. However, statistics show that huge segments of the U.S. population are effectively **not being included** in this cultural activity, either as audiences or creators. There is a substantial need to create new **points of entry** into opera for the majority of people. The stories and emotions expressed in opera are universal: all kinds of people should have access to **learning experiences that foster an appreciation of opera**.

Target Audience - Young adults (ages 18-35) living in U.S. metropolitan areas, who have little-to-no experience watching or listening to opera; especially racial and ethnic minorities and/or those who earn less than \$55,000/year.

Learning & Impact Goals - Users will be able to **interpret** what they are seeing and hearing; **draw connections** between opera and their interests; and become familiar with the **essential musical and theatrical elements** of opera. Additionally, if the user watches the *full* Opera Connect library, they’ll be exposed to a **range of operas** from the Baroque period to the present.

Theory - Opera Connect’s mobile app provides extensive “just-in-time” **scaffolding** (Bruner). It also embodies **Cognitive Apprenticeship** (Collins), acting as a mentor for opera interpretation. The screenings and parties also enable **Social Learning** (Bandura).

Technology - Opera Connect’s **website** enables users to find and participate in the program. With **streaming media**, viewers can access opera performances easily through their home entertainment systems or project them in public spaces. Annotations take place on a second-screen **mobile app** so that viewers can decide for themselves *when* they want to see supplementary content, *which* content they prefer (see description of “channels”), or whether they just want to sit back and watch the opera without interruption.

CONTEXT SCENARIO

Having an Opera Connect home party

Preparing the party

After having seen an attention-grabbing trailer for Antonin Dvorak's opera "Rusalka" on Opera Connect at a movie the week before, Alicia, her roommates, and a couple of her friends have decided to stream "Rusalka" and throw an Opera Connect party at her apartment on a Friday night. Everyone downloaded the lightweight **Opera Connect mobile app** onto his or her phones after they got to Alicia's apartment. As part of the **party kit** she got from Opera Connect's **website**, Alicia downloaded **PDFs for party games** and a **thematic menu** of snacks and drinks. Alicia didn't bother to prepare every item on the menu, but she decided to try out a couple and read aloud from the menu to explain the foods' symbolic connection to the story of the opera.

Using the app to learn about design & social learning

After the first intermission, everyone has refreshed their drinks and the second act of the **film** of "Rusalka" begins **streaming on the TV**. The curtains are drawn onscreen and a grand stage set appears: it is the exterior of the palace. Alicia notices the stately design is a bit different from the usual fairy tale castle, and checks the Opera Connect **app** to see if it can tell her anything interesting about the setting. Her phone doesn't produce too much glare in the dimmed living room, since the app has a **dark background with light text**, and the app's display **automatically dims** based on light levels.

Alicia quickly navigates to the "**Design**" channel on the app and reads onscreen: "Act II. Scene 1. For the exterior of the prince's palace, Set Designer Günther Schneider-Siemssen chose to recreate the style of an aristocratic building that would have been contemporary with Dvorák's own time and place (Bohemia, now part of the Czech Republic, in the late 19th to early 20th century). Other designers have chosen more abstract or fantastical settings." (Underlines indicate hyperlinks to terms in the glossary.)

Three **thumbnail images** of other designs for the same scene are displayed beneath the text. Intrigued by the contrasting styles of these other productions, Alicia starts clicking through the thumbnails to see **fullscreen images**. She wants to share this with her friends, especially her friend Lila, who has a thing for beautiful old European buildings. She clicks the "**Share**" icon at the bottom

of the screen, to see if it will let her send the annotation to Lila. This prompts a dialog to appear: "Would you like to share this annotation with everyone watching 'Rusalka'?" Alicia taps "yes," and everyone else in the room receives push **notifications** on their phones.

Lila, who had not been actively looking at the app at the time, receives a vibration on her phone. She picks it up and is intrigued by images of an antique European palace. "Hey, who shared this?" she asks. Alicia responds, and they begin a brief conversation about the set design of the opera.

Engaging with the opera through play

Onscreen, two of the prince's servants gossip about Rusalka, the prince's strange new bride. One of them mentions that there must be some witchcraft at work. Remember the cue from their **drinking game**, Alicia announces: "Hey, he mentioned witchcraft! Drink!" The friends giggle and take a sip from their glass of "Jezibaba's Brew": a slightly spicy, muddy green-colored, lightly alcoholic cocktail that represents the witch Jezibaba's magic potion from the first act.

Following the plot

A new character appears onscreen and is speaking to the Prince. After a few minutes, Alicia is still confused as to who this character is and where she came from. "Who's she?" Her neighbors respond, "I have no idea!" "Yeah, I was wondering that, too!"

Alicia checks the Opera Connect app again to get on track with what's happening. As she looks away from the screen and navigates to the "**Story**" channel, **subtitles appear at the bottom of her phone's screen** so she can continue to follow the libretto as she reads from the **real-time synopsis**: "Act II. Scene 1. A foreign princess, who has come for the wedding, mocks Rusalka's muteness and reproaches the Prince for ignoring his guests."¹

Alicia finds this somewhat vague (why is the princess there? Why is she so mean-spirited?). Because the character's title isn't linked, Alicia realizes there's no additional information about her available. She assumes that more will be revealed as the story unfolds and resumes watching the TV.

¹ Excerpted from <http://www.metopera.org/metopera/season/synopsis/rusalka?customid=790>

LIST OF REQUIREMENTS

1. Initial Engagement

- a. Closely targeted advertisements across platforms market the product while initiating a learning experience, connecting opera to audience's interests and prior experiences (familiar stories; musical styles; visual design; etc) as a "hook"; meeting them in relevant spaces (YouTube videos of singing; other kinds of interactive live events; etc)
- i. **Trailers** for YouTube and theaters (a couple of alternative trailers for each opera based on advertising context)
- ii. **Web ads** for entertainment and social media websites (also tailored to each opera/ad context)

2. Website

- a. **Listing of upcoming Opera Connect public events**, viewable by location
- b. **Library** of Opera Connect titles
 - i. Summaries, historical information, and trailers for all operas
- c. **"Choose an Opera" wizard**, matching users with operas based on their taste
- d. **Calendar of recommended live opera performances**, based on user's location
 - i. **"Primer"** on what to expect from live opera-going (depending on the type of theater/performance)
- e. **Signup to download Party Kit**, free for individuals; details below
- f. **Signup to download Screening Kit**, for both commercial and non-profit venues (licensing fees would apply); details below

3. Opera Party Kit / Screening Kit

- a. For each opera title: **a full-length film (with subtitles)** of a live performance by a first-class opera company, which can be streamed to the user's home TV via a **streaming TV app** for Roku, Amazon, et al, OR provided as a DVD for institutional use.
- b. **A mobile app for Android & iPhone** (same app for all opera titles; download individual titles within the app); details below
- c. For each opera title: **party activities** tailored to the selected opera. Could include drinking games, opera bingo, and thematic food and drink menus relevant to the story or context of the opera

4. Mobile App

- a. **Device pairing**, enabling user to sync their phone to a screening of an opera by entering a unique, randomly-generated device pairing code identifying an individual screening of an opera (whether at home or at a public venue)
 - i. When sync'd for the first time, mobile app will begin downloading all of the annotations for the selected opera (since this will contain mostly text and very little images, it should be fairly small)
 - ii. If the opera film is paused, rewind, etc, synced mobile devices will follow timing exactly so that only the timing-specific information is displayed in the channels
 - iii. Annotations can be "shared" via push notifications between devices that are paired with the same code; details below
- b. **Automatic display dimming** (can be disabled or customized) built into app to minimize phone glare in dark rooms during screenings. Additionally, dark background with white text enables legibility. Settings menu enables customization.
- c. **In-app subtitles** continually appear at the bottom of the screen (synced precisely to the film), so that viewers won't miss any of the libretto when they're looking away from the TV or film screen to use the app.

d. **Settings** menu enables customization of display dimming settings, in-app subtitles, font size, and notifications.

e. **Channels of annotations**, synced to opera film

i. Story

1. **Real-time plot summaries** of what is currently happening onscreen, in 1-2 sentences; most likely, will need to change only a few times per scene.

2. **Interactive character glossary**, with “avatar” photograph and 1-2 sentences about the character (without spoilers!). The glossary is perpetually accessible as a list of names linked to a “pop-up” of their character description; additionally, every time a character is mentioned in the plot text their name is linked.

ii. Design

1. **Text and images illuminating the theatrical design**, including (but not limited to):

- a. Concept art for scenic and costume design of the featured production, synced to the sets and costumes currently appearing in the film.
- b. Photographs of other companies’ productions of the same opera, for comparison (synced to the comparable scene/character currently being performed).
- c. Brief illuminating “behind-the-scenes” text from the director and designers describing their intentions behind design decisions (a la DVD commentary)

iii. Music

1. **Text and images describing salient information about the music**, including (but not limited to):

- a. Description of voice types as characters appear onstage (e.g., “Susannah, Figaro’s wife, is a lyric soprano.”)

b. Context regarding musical styles (“The upbeat dance you’re listening to now was influenced by Romanian folk music recorded by ethnomusicologists in the 18th century.”)

c. Guidance in perceiving and understanding the most important musical formal elements, especially as they pertain to the story (“The heroic melody in the trumpets is a leitmotiv representing Siegfried’s victory over Wotan. It was first heard during Scene One, when it was played at a slower tempo by the cellos.”)

2. All of the above includes an **interactive opera terminology glossary** for further illumination of opera-specific terminology (linked within the text, e.g. see underlining above), similar to the character glossary in the “Story” channel.

f. Local sharing

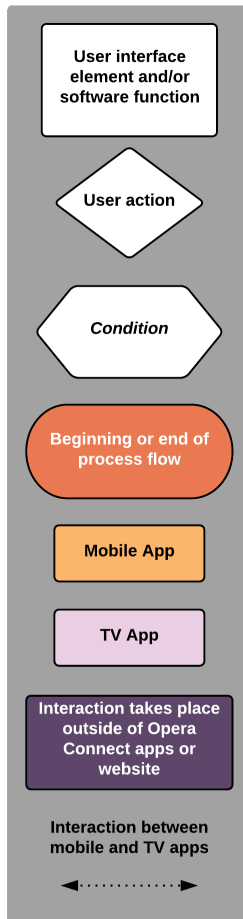
i. A “**share**” icon appears on each annotation enabling the user to share that annotation, via a push notification, to everyone who is currently paired with the same opera screening. This feature will automatically be hidden/disabled in situations where the number of people paired to a screening is very high (above approximately 20) and there is the potential for “shares” and resulting notifications to over-accumulate, e.g. at a movie theater.

g. “Saved” annotations, categorized by opera title

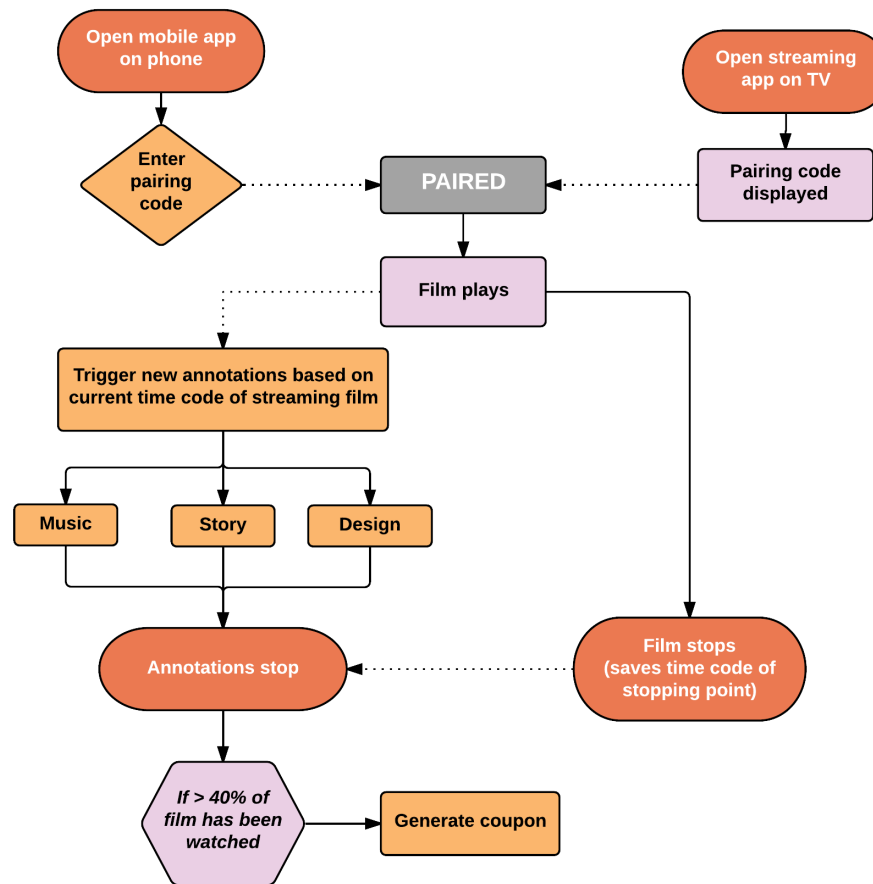
i. Each annotation has a “**save**” button, which downloads the annotation into an archived list for future (out-of-sync) viewing; saved annotations can be directly shared on social media, outside the context of the mobile app.

h. **Coupons**: Using film sync timing as an indicator of when the user has completed viewing an opera, the app will generate and offer a coupon (or multiple coupons) for tickets to a local live performance of opera, based on the user’s location. This coupon can be accessed any time through the app, but can only be redeemed once.

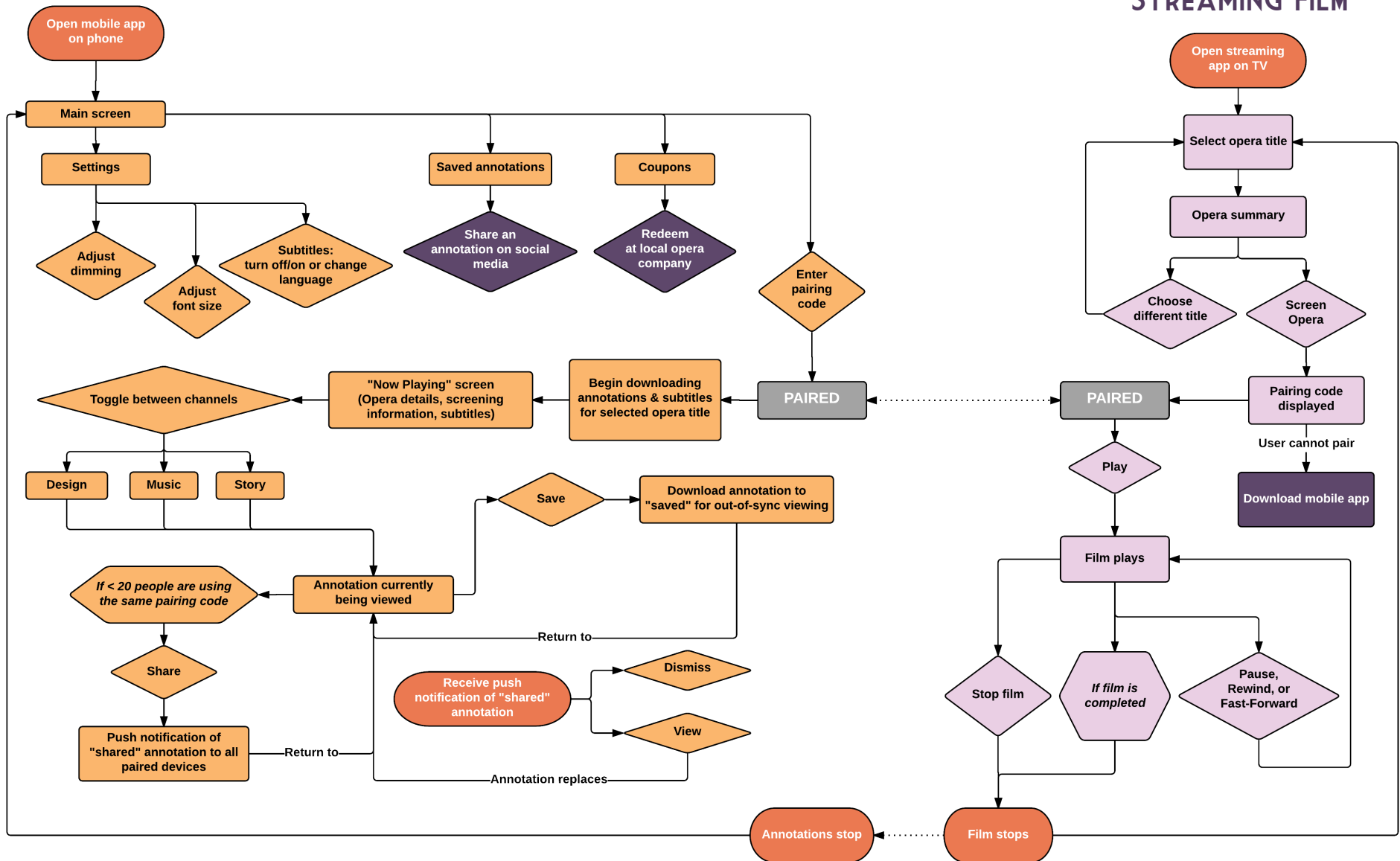
KEY



MOBILE/STREAMING FILM INTERACTION FLOW

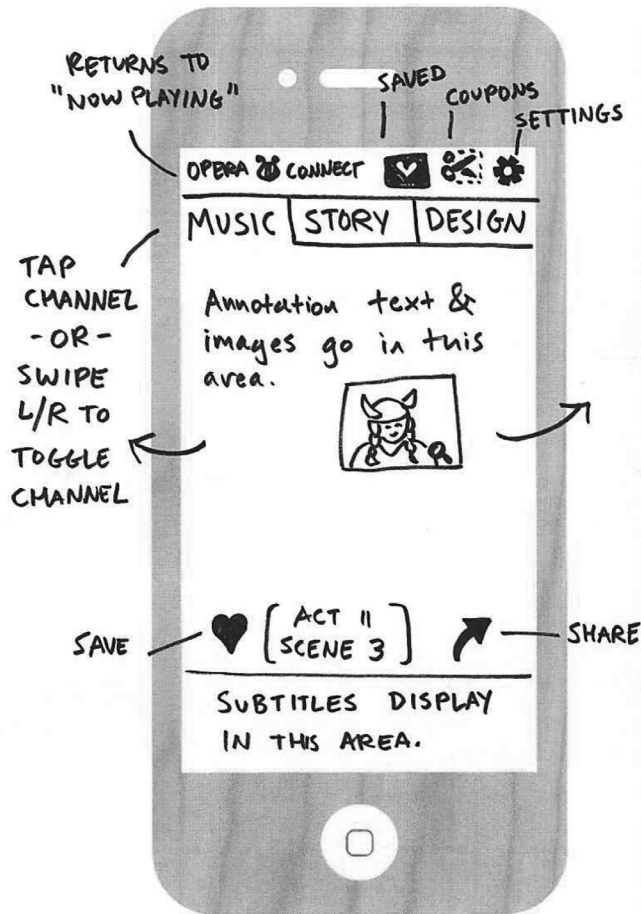


MOBILE

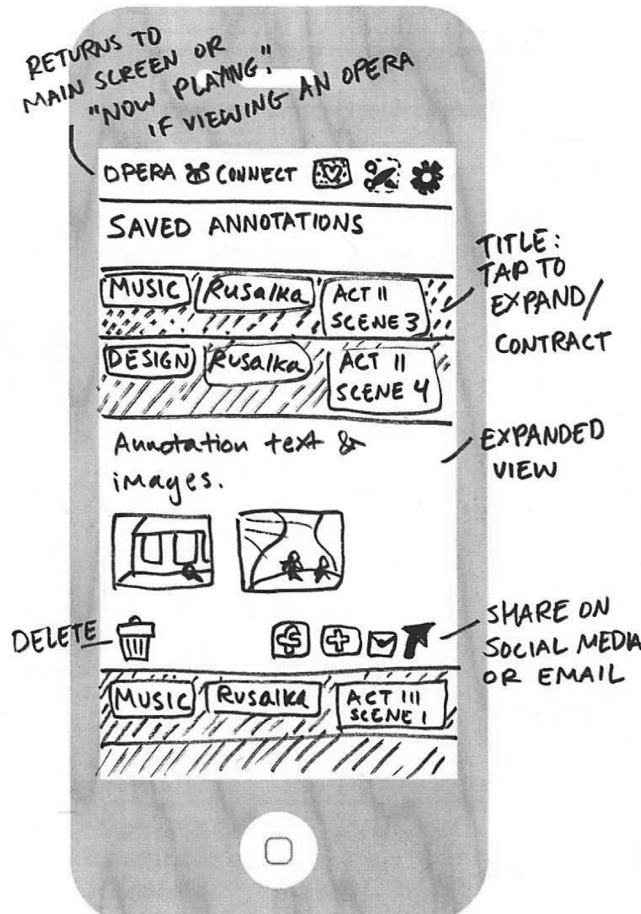


STREAMING FILM

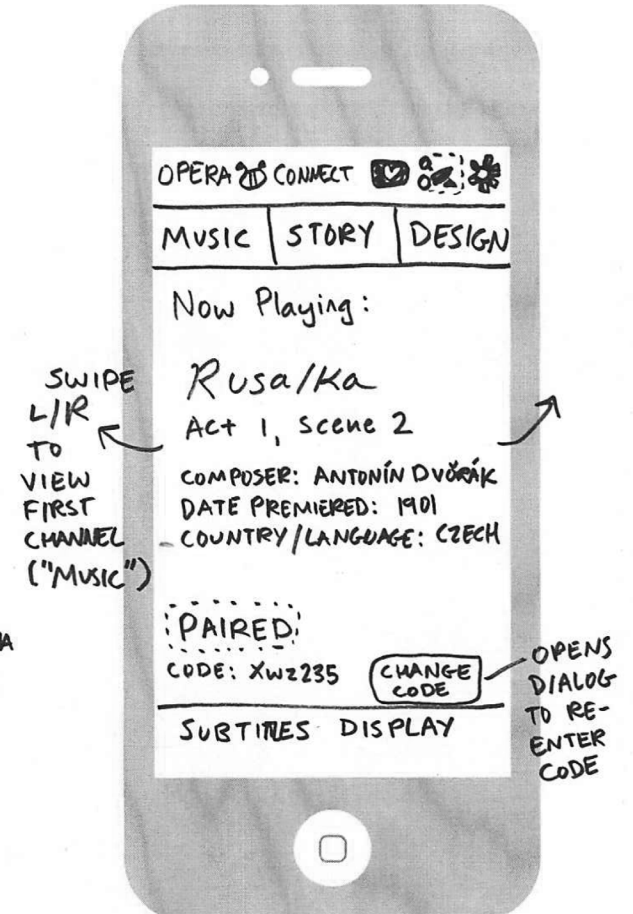
WIREFRAMES: SAMPLE MOBILE SCREENS



VIEWING AN ANNOTATION DURING STREAMING FILM.



VIEWING SAVED ANNOTATIONS



"NOW PLAYING" SCREEN

PROTOTYPE TESTING

Goals & Risks

The primary **social impact goal** of Opera Connect is to create accessible and appealing points of entry into opera for people who've not had sufficient prior opportunities to experience and learn about opera.

The core of the Opera Connect design concept is screenings of films of live opera performances, accompanied by an educational mobile app that streams annotations providing insightful commentary about the opera. The annotations act as a scaffold for the viewing experience.

Because the interaction between app use and opera viewing is central to achieving the project's impact and educational goals, the **biggest risk** in this design is whether the combined app/viewing experience will be enjoyable, appealing, and effective at increasing users' interest in, knowledge about, and engagement with opera.

Research Questions

1. Do the mobile app's annotations enhance users' understanding and enjoyment of the opera they are currently viewing?

- a. Are users inclined to look at the annotations during film viewing? Or, are they more likely to just watch the film and forget about them?
- b. Does the availability of additional information and interactive elements enhance viewing?
 - i. Are the annotations too engaging? Do they distract from the film?
 - ii. Are the annotations not engaging enough? Does the added information feel relevant, and helpful?

2. Does the scaffolded viewing experience contribute to increased interest and learning about opera in general, and motivate the user to seek out other opera viewing experiences (if they are made readily available)?

User Testing Participants

The Opera Connect prototype was tested with two individuals in Brooklyn, New York: S.P., a 23-year-old male graduate student who has no prior experience with opera, and J.R., a 31-year-old male professional, who is an intermediate opera viewer. These two participants served as representatives of the upper and lower limits of expertise and interest in opera envisioned for the target audience for Opera Connect.

This prototype and test focused exclusively on the **annotation** component of the design to help me determine whether the second-screen format and the supplementary app content are effective.

In the future, I hope to test the **social** aspects of the design by gathering together a small group (at least three people) and prototyping the party activities as well as the app "share annotation" feature, which is intended to stimulate greater engagement, conversation, and social learning.

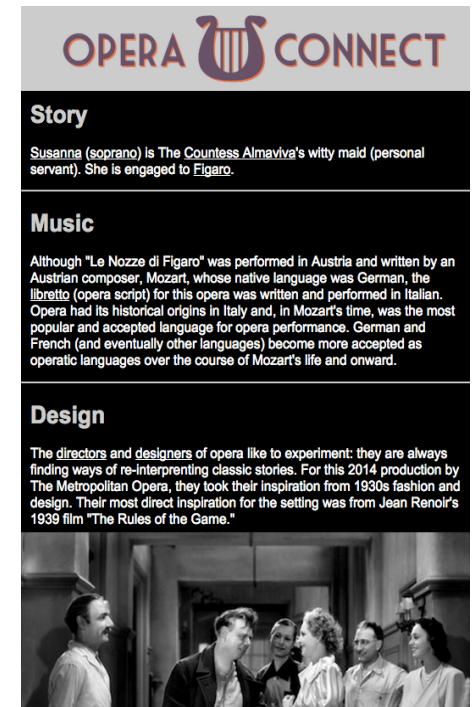
Method

Mobile Prototype

Although the app design includes several different features, the prototype focuses on only the most essential aspect of the mobile app: the real-time annotations that comment upon and provide context for the action onscreen.

The prototype is a **mobile web app** (see **Additional Materials**, below), which was constructed with **HTML/CSS** and **open source Javascript library Popcorn.js**.

Popcorn.js injects new content into the page based on an internal timer. Each annotation is associated with its own timecode, which is synchronized to the



opera clip that was selected for testing. In the testing session, the user was instructed to press "play" on my count, in order to synch the starting point for the annotation playback on their mobile device with the film that was screened.

There are three separate channels of annotations displaying topics in "Music," "Story," and "Design." For the prototype, a representative range of sample annotations were prepared from across these categories (see appendix for text, images, and approximation timings of these annotations in relation to the opera film).

In the fully implemented app, these channels would be viewed individually. For the purpose of keeping the technical complexity of constructing the prototype to a reasonable level, I combined annotations within all three categories onto one page.

I. Pre-Test Online Survey

Participants completed a pre-test online survey assessing baseline knowledge about opera, as well as current attitudes towards opera. (See **Appendix**.)

II. Prototype Testing

Participants were shown an excerpt from an **HD film of Mozart's *Le Nozze di Figaro* (*The Marriage of Figaro*)** streaming from my laptop via [Met HD on Demand](#), projected onto a large screen via HDMI. Approximately 20 minutes of the film were shown, which I believed would be sufficiently long to serve as an indicator of the effectiveness of the design.

The testing session itself consisted of the following steps:

1. Participants were informed they'd be watching an excerpt from a film of a live opera and that annotations would periodically become available on the Opera Connect prototype web app, telling them more about what they are seeing. They are free to consult their phones as frequently as they wish and to discuss what they see and read during the film.
2. Participants were instructed to turn off the automatic display sleep function on their phones, in order to avoid interruption of the prototype's timer.
3. Participants were instructed to visit the online mobile prototype and to press



The Metropolitan Opera's 2014 production of *Le Nozze di Figaro* (*The Marriage of Figaro*)

"play" in the web app on the count of three, at which time I began playback of the film excerpt. The film was projected onto a large screen from my laptop.

4. I was in the same room as the participants during the session, sitting a few chairs behind them so that I could observe their phone usage at a comfortable distance. I noted the frequency with which they looked at their phones, the quality of their body language, and any verbal responses.

III. Interview

After viewing is completed, participants were **interviewed** briefly in order to gain qualitative information about their experience.

IV. Post-Test Online Survey

Finally, an online post-test survey was sent to participants after the test (see **Appendix**). Responses were compared to the pre-test screening survey in order to determine whether gains occurred with regard to participants' knowledge of, and interest in, opera.

Results

Overall, both S.P. and J.R. felt they would enjoy using the Opera Connect app while viewing opera in the future. Based on their experience, there are several aspects of how annotations are presented in the app that could be improved in future iterations.

Ultimately, some questions about the design's effectiveness may only be answered through more comprehensive testing with more participants, a longer opera excerpt, and a higher-fidelity, multi-featured prototype.

What's Working

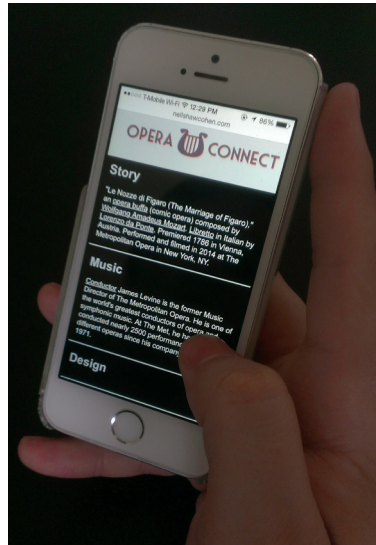
Information presented in the annotations was, for the most part, compelling, illuminating, and helpful for S.P. and J.R. These participants were most interested by the annotations that addressed conventions of the operatic form that they weren't familiar with (e.g., character archetypes and musical forms such as aria and recitative), as well as the larger historical context of the opera (e.g., the French play on which the opera is based helped to support the cause of the French Revolution by showing a hero who was insubordinate to his aristocratic master).

The selection of the opera and film excerpt itself was also effective. Both viewers were actively engaged during the screening and said they found the film relatively modern and relatable. S.P., who had no experience with watching or listening to opera, was particularly visibly responsive to the film and was very involved with what he was watching.

Pre- and Post-Test Survey Comparison

Declarative Knowledge

While J.R. had already demonstrated a fairly strong understanding of the basics of opera presented in the pre-test survey (e.g. definitions for the terms "libretto" and "mezzo-soprano," and a description of the art form as a whole), S.P.



came to the testing session with little-to-no knowledge about opera. However, the post-test survey detected only a small degree of visible improvement in S.P.'s knowledge. I hypothesize that this may be due to a number of factors, considered below.

First of all, a more technologically seamless testing experience might have led to greater increases in declarative knowledge. There were some initial technical hiccups with the use of the prototype: we had to stop and restart mid-way through the session to re-synch the film, because the timer had stopped running on participants' phones. (We weren't able to definitively determine the cause of the error: possibly, it was due to an interruption in Internet connection.) However, S.P. had difficulty synching his phone to the film correctly thereafter and I believe that, as a result, he may have missed the relevancy of a number of annotations because he had accidentally been watching out-of-synch for a considerable period of the test.

Additionally, it is to be expected that S.P. and many other users will be inclined to "skim" annotations and therefore not comprehend or retain certain pieces of factual information. While minimizing onscreen text to one-liners that can then be "expanded" may help with this issue (see Recommendations, below), that wouldn't guarantee that the user would be any more inclined to actually expand and read the annotations containing information they don't already think they're interested in. Therefore, it may not be possible to consistently accomplish specific declarative knowledge learning goals through the open-ended, self-guided learning experience that Opera Connect seeks to provide.

Motivation and Interest

Additionally, participants did not rate substantially higher motivation to see live opera or higher perceived relevancy of opera to their life and interests in the post-test survey. In retrospect, I hypothesize that this was due both to the brevity of the test - not enough time to engage fully with the art form - as well as the design of the survey questions themselves.

While the survey questions were drawn directly from my underlying research questions, ultimately the relevancy of some of the questions to the testing experience may have been over-extended. Questions such as "How relevant is opera to your life and experiences?" may have been more effective in a context in which users are exposed to a variety of operas, or learned about the art form as a whole, rather than in the context of an isolated excerpt.

Recommendations for Future Iterations

Embed Annotations in Questions

Participants felt that many of the annotations contained too much text (the longest annotations were one paragraph, which occupied roughly 1/3 of the phone screen). S.P. had a very interesting idea of presenting these annotations in the form of single-line questions that invite the user to click to "expand" and view the complete text, rather than presenting complete text from the get-go. Rather than explaining what an overture is, for example, the user would be presented with a question like: "What is the long piece of instrumental music that opens this opera?"

This question-based format for annotations would have the function of enabling the user to 1) ignore annotations based on interest; 2) satisfy their curiosity, rather than receive information that wasn't explicitly asked for; and 3) "get the point" more quickly, enabling at-a-glance comprehension of the primary subject for each annotation. Furthermore, because they are very brief, these one-line questions could potentially stay perpetually accessible in the app (or at least, for the length of several scenes), moving to the bottom of a list rather than disappearing when they are no longer relevant to onscreen action.

If this design revision were implemented, it would have various implications affecting other aspects of the design: particularly the "share annotation" feature, which might be articulated more effectively as something akin an "upvote" rather than a notification.

Delay the Appearance of Annotations

The participants also noticed that annotations tended to change at the moment in which action in the opera is changing: a new character enters, a new song begins, the plot takes a turn. Since these are the moments at which the viewer wants to pay closest attention to the film, participants felt "torn" between the two screens. They suggested that a delay of the appearance of new information in the app would improve this situation, encouraging the user to first interpret for their own what is happening onscreen and then to consult their phones *only* when they become confused, bored, or curious.

Glossary Links Only After Initial Definitions

Participants felt that the glossary hyperlinks embedded in the text of the annotations (which were not functional in the prototype) felt like too much content and that they would be unlikely to click these links. I explained that, in a full-length Opera Connect experience, the in-line definitions of terms such as "libretto" and "mezzo-soprano" would appear only in the very first mention of these terms but would thereafter be summarized via pop-up glossary definitions that are linked to in the text.

We agreed that removing the glossary links in the first references to terms and character names, but having them available for reference in the later, briefer annotations, would be most effective. This would minimize the potential overload of links in concurrence with the densest annotations, while provide necessary scaffolding to help users remember terms and names as they appear later on. This function would effectively "fade" the textual scaffolding.

A Single Stream of Annotations

Interestingly, neither participant seemed particularly interested in the idea of the three "Channels" (story, music, and design), suggesting that perhaps combining all three subjects into a single stream may ultimately be equally or more effective - especially since there is likely to be far more frequent updates to "Story" and "Music" than there would be to "Design."

ADDITIONAL MATERIALS

Mobile prototype used in testing:

<http://nellshawcohen.com/dmdl/operaconnect>

Mobile prototype with embedded opera video, for reference:

<http://nellshawcohen.com/dmdl/operaconnect/indexvideo.html>

Presentation Slides: https://docs.google.com/presentation/d/1zXrQ-rxHQQZ50Z33kLuzo4Fik93wNju_ffx8lhM92-No/edit?usp=sharing

See Appendix for the pre- and post-test surveys distributed to user participants, as well as a complete draft of annotations used in the prototype.

Frasier, P., & Frasier, I. (2013). Creating the Opera Habit: Marketing and the experience of opera. In D. O'Reilly, R. Rentschler, & T. A. Kirchner (Eds.), *The Routledge Companion to Arts Marketing* (pp. 393– 404). Routledge.

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Thanks to Professor Emily Reardon at New York University for her feedback and guidance throughout this design project.

Thanks also to my peers at NYU for their insightful feedback during every step of the process.

Last but certainly not least, many thanks to the anonymous participants who donated their time to my user research and prototype testing.

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Bloume-Kohout, M.E., Leonard, S.R., & Novak-Leonard, J.L. (2015). When Going Gets Tough: Barriers and Motivations Affecting Arts Attendance. *National Endowment for the Arts*. Retrieved from <http://arts.gov/publications/when-going-gets-tough-barriers-and-motivations-affecting-arts-attendance>

Opera Connect: Draft of Annotations for Prototype

Nell Shaw Cohen

Film to be screened from <http://www.metopera.org/ondemand>

1. Trailer (1 minute long)

1. **INTRO:** *Le Nozze di Figaro* (The Marriage of Figaro), an opera buffa (comic opera) composed by Wolfgang Amadeus Mozart. Libretto in Italian by Lorenzo da Ponte. Premiered 1786 in Vienna, Austria. Performed and filmed in 2014 at The Metropolitan Opera in New York, NY.

Skipping ahead...

3. Overture (5 minutes long)

1. **MUSIC:** Conductor James Levine is the former Music Director of the Metropolitan Opera. He is one of the world's greatest conductors of opera and symphonic music. At The Met, he has conducted nearly 2500 performances of 85 different operas since his company debut in 1971.
2. **DESIGN:** The Director of this production, Richard Eyre, writes: "Designer Rob Howell's set is a beautiful solution to what I wanted...to be able to seamlessly move from one place to another—store-room, great hall, bedroom, garden...We've staged an overture that gives you a glimpse through all of the locations."
3. **MUSIC:** This is the overture of the opera: an instrumental introduction containing excerpts of the opera's themes, which will be heard later. It sets the mood for the story to come. This famous piece of music is sometimes performed in concert as a stand-alone piece of music without the full, staged opera.

4. Act I (Cinque...) (3 1/2 minutes)

1. **STORY:** The opera begins in a room in the castle of Count Almaviva near Seville, Spain, 1778. Figaro (bass-baritone) is a barber who is a servant to the Count. Today is Figaro's wedding day. Here he is measuring the room his master has given to Figaro and his fiancée, Susanna, to use as their bedroom.
2. **MUSIC:** Although *Le Nozze di Figaro* was performed in Austria and written by an Austrian composer whose native language was German, the libretto (opera script) for this opera was written and performed in Italian. Opera had its historical origins in Italy and, in Mozart's time, was the most popular and accepted language for opera performance. German and French (and eventually other languages) become more accepted as operatic languages over the course of Mozart's life and onward.
3. **STORY:** Susanna (soprano) is The Countess Almaviva's witty maid (personal servant). She is engaged to Figaro.

5. Act I (Se a caso...) (2 1/2 minutes)

1. **DESIGN:** The directors and designers of opera like to experiment: they are always finding ways of re-interpreting classic stories. For this 2014 production by The Metropolitan Opera, they took their inspiration from 1930s fashion and design. Their most direct inspiration for the setting was from Jean Renoir's 1939 film *La Règle du Jeu*. [ATTACH PHOTO]



Photo from Jean Renoir's 1939 film *La Règle du Jeu*

2. **DESIGN:** "The opera was written on the eve of the French Revolution, in 1786, so I've set it on the eve of the Second World War. It's a society on the cusp of collapsing," says Director Richard Eyre. Compare his concept to this photo from a much more traditional production The Met presented in 2012, set in the time when the opera was originally written and performed. [ATTACH PHOTO]



Photo: The Metropolitan Opera

6. *Act I (Or bene...) (2 1/2)*

1. **MUSIC:** The music you are hearing now is called recitative: sections of "sung dialogue" that exist primarily to advance the plot. You can recognize recitative by its rapid, "speech-like" singing style, as well as a minimal instrumental accompaniment (in this case, simple chords played on the harpsichord).
2. **STORY:** The libretto of this opera, written by Lorenzo da Ponte, was adapted from a 1778 play of the same name by French playwright Pierre Beaumarchais. "The way in which the men in the play treat the women demonstrates how society treated women in Beaumarchais' time. Women faced great inequality and were often subject to the whims of their husbands or guardians. The Count happily and casually engaged in extramarital affairs, yet his wife cannot be forgiven for doing the same thing. Women were perceived as objects that belonged to their lovers."¹

7. *Act I (Se vuol ballare...) (2 1/2)*

1. **MUSIC:** This cavatina (short dramatic song) sung by Figaro is in the style of a minuet, a French style of dance music in 3/4 (triple meter). The style is deceptively lighthearted: Figaro's insistent repeated notes, accompanied by a French horn in the orchestra, suggest the threat behind his words.
2. **STORY:** The libretto of this opera, written by Lorenzo da Ponte, was adapted from a 1778 play of the same name by French playwright Pierre Beaumarchais. "During the time of the play, members of the aristocracy in France were put into positions of power, even if they did not earn it, and people born into the middle or lower classes were not allowed to move up. Figaro's plot against his master is an act of complete rebellion. This play foreshadowed, and actually helped to create, the French Revolution which brought the downfall of France's class system."²

Skipping ahead...

10. *Act I (Va la...) (2 min)*

1. **STORY:** Cherubino (mezzo-soprano) is the Count's young page (personal servant). A flirtatious teenaged boy, he is in love with both Barbarina (who we haven't seen yet) and the Countess Almaviva.
2. **MUSIC:** Although Cherubino is a teenaged boy, an adult woman usually plays his role. She is a mezzo-soprano: the female voice type that is lower than a soprano (for example, Susanna). It is relatively common for mezzo-sopranos to portray boys in opera. These are usually called a "trouser" or "pants" role.

11. *Act I (Non so piu cosa son...) (3 1/2)*

1. **MUSIC:** This is a well-known aria: a song for solo voice with instrumental accompaniment. Contrasting with recitative, arias do not substantially advance the plot but exist primarily to develop the character and to explore their emotions and motives. Arias are often sung on concerts and vocal recitals, separate from the opera that they had first appeared in.

¹ Text adapted from http://www.anoisewithin.org/wp-content/uploads/downloads/2015/03/Figaro_StudyGuide_with-Prod-Photos.pdf

² Text adapted from http://www.anoisewithin.org/wp-content/uploads/downloads/2015/03/Figaro_StudyGuide_with-Prod-Photos.pdf

Opera Connect: Pre-Test Survey

The following survey will inform my testing and assessment of a prototype for an opera education project, "Opera Connect," and help me to determine whether you would be well-suited to participate in my upcoming user testing session at NYU.

I'm looking for participants with the following characteristics:

- You're willing and able to donate your time for a 30 minute session at NYU MAGNET at the Metrotech Center in Brooklyn, during which time you'll watch an excerpt of a film and use the Opera Connect prototype.
- You are in your twenties to mid-thirties.
- You own a smartphone and are comfortable reading onscreen text.
- You're a relative novice of opera viewing (don't know very much about the content or history of the genre and the elements of opera performance).
- You don't feel strongly motivated to watch live or film operas.

If this sounds like you, then please continue onto the survey!

* Required

Background Information

Remember: there are no wrong answers! Your responses may be included in my user testing documentation and described in my design document. If so, your name and responses will remain completely anonymous.

1. What is your name? *

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2. What is your age? *

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3. **Have you heard anything about the Opera Connect project already? If so, describe what you know.**

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4. **Briefly describe any prior experiences with opera. Have you seen performances or films of operas before? ***

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5. **How motivated are you to go see a live opera performance? ***

Mark only one oval.

	1	2	3	4	5	
Not at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Highly motivated

6. **How relevant is opera to your life and interests? ***

Mark only one oval.

	1	2	3	4	5	
Not at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Highly relevant

Opera Knowledge

Here are a few questions to assess your familiarity with some of the elements of opera. Please don't research any of these terms or questions any time before completing this survey, the testing session, and the post-test survey.

Again, there are no wrong answers. These questions will help me understand whether Opera Connect is effective.

7. What kind of performance does the word “opera” describe? *

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8. What is a libretto? *

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9. What is a mezzo-soprano? *

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10. What is an overture? *

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11. What kinds of artists/professionals are involved in putting on an opera performance? Name as many as you can think of. *

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Testing Session Logistics

12. **Which of these times would you be able to come to MAGNET for a user testing session? Check all that apply.** *

Once I know you're availability, you'll only need to come at ONE of these times.
Check all that apply.

☐ Tuesday, May 12, 3:45-4:15pm

☐ Tuesday, May 12, 8:00-8:30pm

☐ Other:

13. **I'm planning to bring some treats to the testing session. Please let me know if you have any dietary restrictions (especially chocolate, nut, dairy, or gluten allergies).**

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14. **What is your email address?** *

Let me know so I can contact you with further details. I won't share this information with anyone.

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Opera Connect: Post-Test Survey

THANK YOU so much for participating in Opera Connect user testing. Your contributions are extremely helpful to me!

To help me assess how effective my design is, please respond to the following questions (no wrong answers!). As with the pre-test survey, your responses will remain anonymous in my testing documentation.

* Required

1. What is your name? *

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2. What kind of performance does the word “opera” describe? *

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3. What is a libretto? *

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4. What is a mezzo-soprano? *

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5. What is an overture? *

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6. What kinds of artists/professionals are involved in putting on an opera performance? Name as many as you can think of. *

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7. Is there anything you remember about the Opera Connect test screening that was especially interesting or changed your perspective on opera?

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8. Is there anything else you'd like to tell me about your experience with the Opera Connect testing session?

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9. How relevant is opera to your life and interests? *

Mark only one oval.

	1	2	3	4	5	
Not at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Highly relevant

10. **How motivated are you to go see a live opera performance?** *

Mark only one oval.

	1	2	3	4	5	
Not at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Highly motivated

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