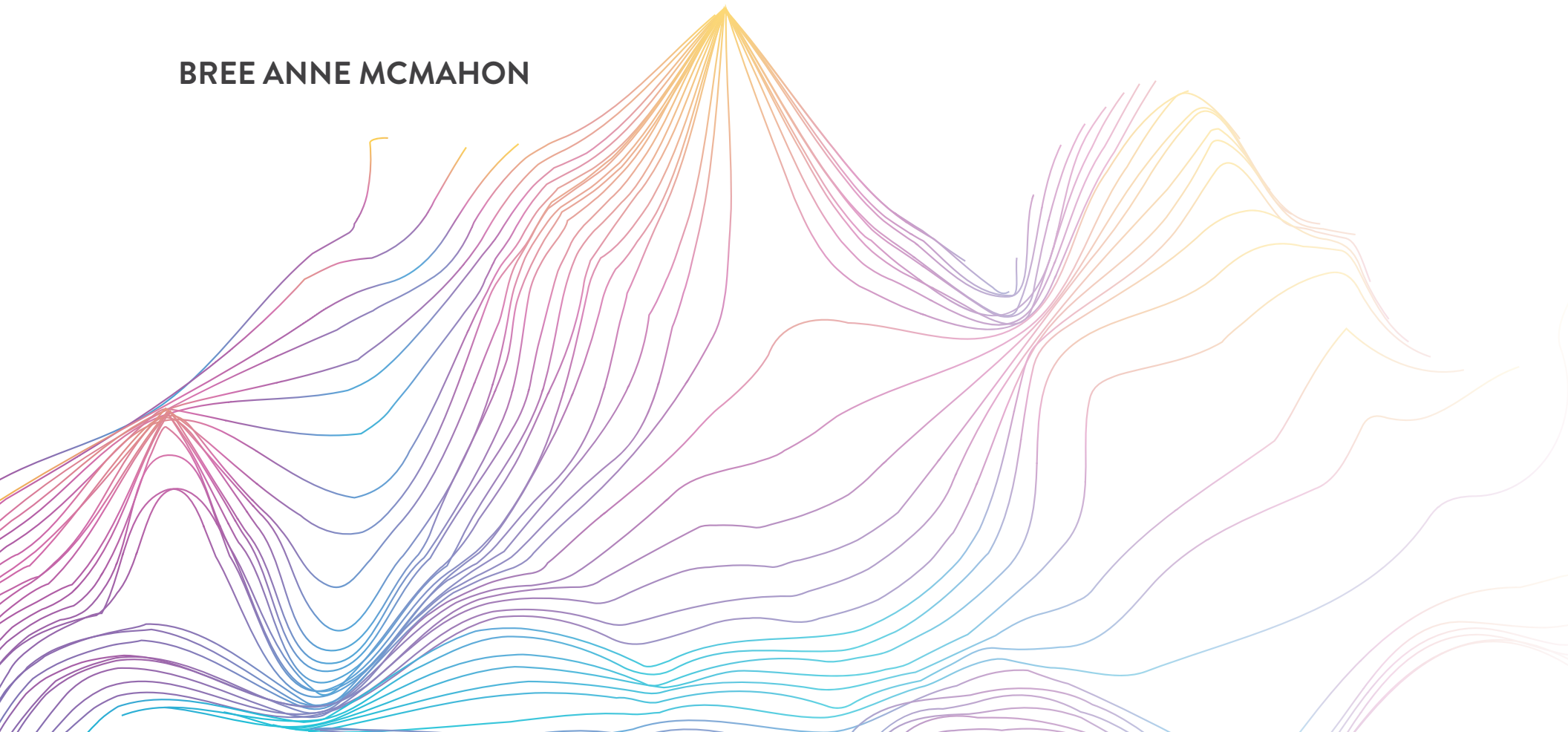


Designing Computer Supported Collaborative Conversations

*For online design communities to prompt tangible action
toward advocacy goals*

BREE ANNE MCMAHON



Designing Computer Supported Collaborative Conversations

For online design communities to prompt tangible action toward advocacy goals

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Submitted in partial fulfillment for the degree of Master of Graphic Design

DEPARTMENT OF GRAPHIC DESIGN AND INDUSTRIAL DESIGN
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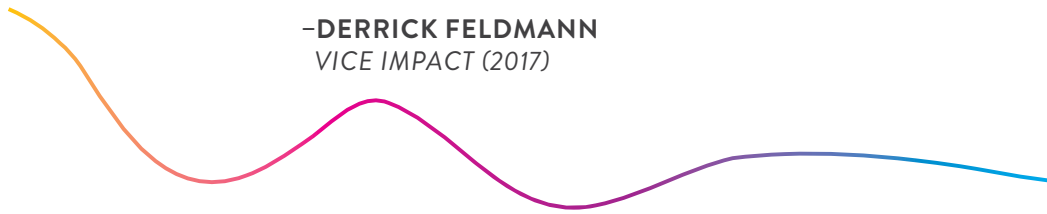
Thank you Dajana, Rachael, Amber, Mac, Clément and Grace Anne. You are all individually unique and wonderful humans. I am sincerely grateful to have spent the last two years learning, working, and growing together. You all inspire me.

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“Millennials possess the ability to organize, drive awareness and influence the behavior of other generations through vast social media networks, with an ease and to a degree this country has never seen.””

—DERRICK FELDMANN
VICE IMPACT (2017)



ABSTRACT

According to the Center for Work-Life Policy, Generation Y—the generation born between 1980-2000, also known as “millennials”— is especially eager to give back to communities through their profession. Another study from the Millennial Impact Project reports more than half of millennials believe in their actions and their ability to cause positive change.

My research aims to create conditions for young designers within this group to not only pursue advocacy goals but to make plans that lead to tangible results.

Several proponents of socially conscious design, or “design for good,” publish case studies and resources that embolden young designers to initiate projects in topics they care about. Additionally, online repositories and educational programming offer information and principles for practicing socially responsible design strategies. However, the typical design-for-good ‘showcase’ model lacks effective tools that invite and engage optimistic, young designers seeking involvement in socially responsible projects.

According to Hugh Dubberly and Paul Pangaro, conversation directly affects a person’s ability to take action. Online platforms are logical spaces for designers to engage in conversations with like-minded individuals to foster relationships and encourage participation. My final project investigates the potential for conversation to build online communities that share values and goals. The project proposes the design of an active social space wherein interested designers learn and converse, with the goal of becoming motivated to act. A variety of design visualizations, guided by specific frameworks (including Elizabeth Tunstall’s “Five Dimensions of Online Communities” and Étienne Wenger, Nancy White and John D. Smith’s nine community orientations) explores possibilities for online platforms to support conversation and collaboration, and engage contributors in ongoing exchanges that lead to actionable plans.

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“It is imagined because the members of even the smallest nation will never know most of their fellow-members, meet them, or even hear of them, yet in the minds of each lives the image of their communion.”

—BENEDICT ANDERSON
IMAGINED COMMUNITIES (1983)



DEFINING THE PROBLEM

Introduction

In his book *Imagined Communities*, political scientist and historian Benedict Anderson explores nationalism as a process necessary for members of communities to feel solidarity, especially towards strangers. He writes that the common belief of such imagined communities “will never know most of their fellow-members, meet them, or even hear them, yet the minds of each lives in the image of their communion” (*Anderson, 6*). Anderson’s perspective is especially relevant for online communities, wherein participants are often separated geographically and may never meet in person. Communities are sustained broadly through participation and therefore through motivated members (*Tunstall 2008*). Fostering participation through passion for one’s peers can be a driving force to encourage participants to finally make tentative plans and turn them into tangible actions.

Leading up to the 2016 presidential election, researchers, the media, and social commentary asserted that Generation Y (the generation born 1980-2000, also known as “millennials”) felt high levels of apathy and would likely vote in low numbers. Surprisingly, one study showed that 65 percent of millennials voted in the election, a more significant percentage than the American public (55 percent) (*Feldmann*). Additionally, more than half of millennials “believe in the power of their actions and the abilities of organizations they support to create positive change (*Feldmann*).” Generation Y is passionate, eager to participate and get involved with various forms of activism. Categorized as “the world’s first digital generation” millennials are comfortable with digital tools and social media networks that allow them to easily connect with and organize their communities.

According to the Center for Work-Life Policy, Generation Y is particularly likely to have concern for social welfare, as well as high levels of ambition and dedication. Over 80 percent of Generation Y men and women place importance on the ability to give back to the community through their work (*Hewlett*). As a teaching assistant at North Carolina State University, I observed a similar sentiment. A senior undergraduate student expressed concerns with the work she would do following graduation. The student conveyed a particular concern for finding work that is ethical and has a positive impact. As a class, students demonstrated passion for specific social issues and wondered how they would use their education to address them.

Students hoped to find work that aligned with their values. For one student, that meant finding ways to use the skills gained through college education to support the LGBT community. While that might not be a possibility in her formal career, she wanted to pursue outside opportunities to give back in ways other than signing petitions and sharing information through social media. Instead, she was interested in how design might raise awareness and address complex social problems. Another student sought to participate in specific organizations and communities to further her goals through her work. For example, she was a member of the local AIGA and attended conferences that aligned with her interests, intending to make connections and discover opportunities to contribute to society through design.

The type of work these students described is currently accomplished using socially responsible design strategies, sometimes deemed ‘design for social good.’ Veteran graphic designer Milton Glaser has often said that “good design is good citizenship.” If the designer’s goal is to be a good citizen who contributes positively to her communities, then her design must do the same. Every citizen should be held responsible for their actions, and therefore designers interested in good will also be held responsible for their design. According to Steven Heller, design for good considers the impact of a designer’s work measured by its ability to contribute towards social, sustainable, and collective good (*Heller and Vienne, Introduction*).

Socially conscious design is not a new approach. In 2001 Milton Glaser wrote *The Road to Hell*, an essay that examined the kind of questions designers should ask themselves about their work to determine if it has the potential to cause harm to users and stakeholders. Design history also offers historical precedent of design that seeks to influence socio-political climates (*Glaser 5*). In 1925, for instance, Theo Van Doesburg and Kurt Schwitters (De Stijl and Dada artists-designers, respectively) collaborated to write and design *Die Scheuche* (The Scarecrow), a typographic children’s book. *Die Scheuche* was not only creatively and revolutionary but also exposed children to radical ideas of the politically-motivated De Stijl and Dada movements: embrace the future, reject high culture, and leave the past behind (*Atzmon 14*). In 1964, Ken Garland, who has made significant contributions to the graphic design discipline over the last 50 years, wrote the *First Things First Manifesto*. This document famously addressed the relationship between ethics and design and was subsequently signed by twenty-one photographers, students, and designers. More recently, in 2000 the *First Things First Manifesto* (known as FTF2000), was reprised and revised for the twenty-first century. Signed by thirty-three designers, the manifesto was published in journals and magazines including *Adbusters*, *Émigre*, *AIGA Journal* in North America, and *Eye* magazine in Britain. Since FTF 2000’s circulation, designers and authors helped to define, expand, and guide design for social good in dozens of books, many published essays, blogs, and conference presentations.

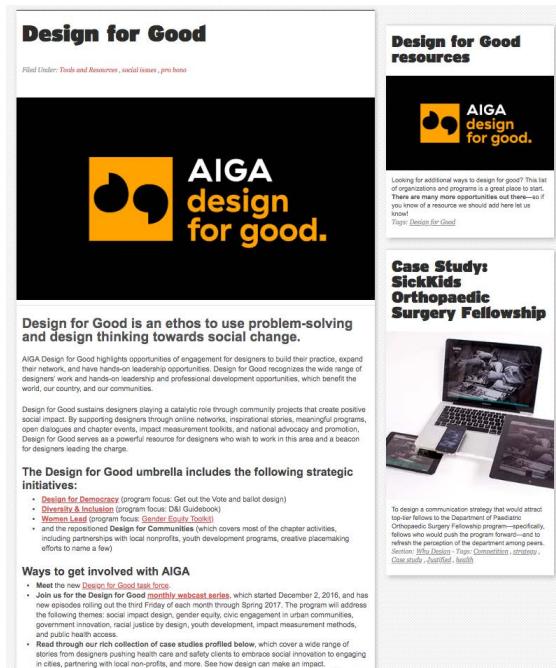


FIGURE 1: Screenshot of the AIGA Design for Good website

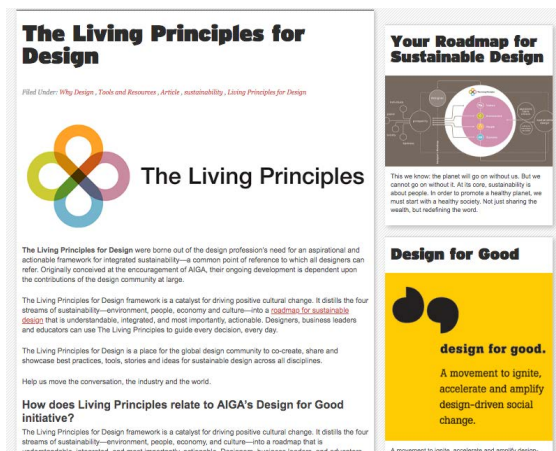


FIGURE 1.2: Screenshot of the AIGA Living Principles of Design website

Today, designers who are interested in designing for social good take action in different ways, by using sustainable materials, for example, and providing ethical services. They might design pro bono work for charitable nonprofits with slim budgets or work with companies like Ben and Jerry's, which gives a percentage of profits to charity and social causes. Designers can also pursue self-directed projects and solutions that address social and global problems, or initiatives committed to effect positive change. For example, in 2010 Sabrina and Daniel Schutzsmith collaborated with Greener Media to design Instant Oil Spill, an online participatory website to raise awareness about the oil spill in the Gulf of Mexico. Instant Oil Spill allowed users to digitally “spill oil” over any website without actually destroying the website (Scalin 96).

Further examples of projects concerned with social good are typically located, highlighted, and circulated as case studies via books, online platforms, or educational programming. For example, Noah Scalin, professor at Virginia Commonwealth University and author of *The Design Activist's Handbook*, teaches a class called “Design Rebels: Socially Conscious Graphic Design in Theory and Practice.” Each year, students propose socially conscious design projects that benefit their community. In Fall 2009, they chose Project Winterfood, which educated the community about the benefits of eating in-season produce and buying locally produced goods (Shea 42).

In 2011, AIGA, the professional association for design, responded with its own website dedicated to the rising interest in social good. There, a designer finds two primary sections, “Design for Good” and “Living Principles of Design”. Design for Good highlights three strategic initiatives, including Design for Democracy, Diversity & Inclusion, and Women Lead—as well as strategies for engaging with individual communities. Most importantly, the section provides an exhaustive resource list of organizations, schools, programs, training, and fundraising opportunities for designers (Figure 1). The Living Principles of Design section is a reference for designers who are particularly interested in sustainability (Figure 1.2). Broadly, this section provides a framework for designers who aim to “drive positive and cultural change.” While both platforms provide designers with tools and resources relating to their interests, they do not offer a space to have engaging conversation with like-minded community members.

This thesis investigation explores the potential for online community platforms to incorporate opportunities for collaborative conversations. I posit that conversation will help move users to initiate and participate in projects concerned with social good. Conversation offers participants opportunities to learn and provides the chance to coordinate and collaborate with others (Dubberly, Pangaro 33). Conversation also serves as a tool through which online platforms establish a sense of community among users. Online communities in particular are logical sites for individuals to participate in conversations with like-minded colleagues, and they serve as a mechanism to foster collaboration and share with others.

Justification

According to Hugh Dubberly and Paul Pangaro (2015), conversations have a direct effect on a person's ability to take action. For graphic designers, conversation is a natural part of the design process. Designers interact with clients, businesses, and collaborators through tools such as email, conference calls, in-person meetings, and team collaboration tools like Slack, Google Drive, Trello, or Microsoft Teams—all of which supports collaborative conversations. To put it another way, for designers to understand, agree, collaborate and take action, they need conversation and access to tools that facilitate successful exchanges. Designers interested in socially responsible design strategies desire to participate in conversations that support learning, sharing ideas, and planning to take action.

Optimistic young designers who are just beginning their professional careers and who seek to be involved with social good projects have few mechanisms to help facilitate conversations with other like-minded individuals. Online communities are a logical place for individuals to tap into these communities; they serve as a digital space for conversation, and enable designers to engage and share with others. As Elizabeth Tunstall, a design anthropologist, and Étienne Wenger, educational theorist, posit, online communities inherently form as a result of their shared interests, goals and values. Tunstall's research identifies five aspects through which members experience their community: establishing agency, articulating life goals, expressing historical consciousness, determining an organizational structure, and developing relationships. Wenger considers the process of collective learning as a means of forming communities that share concerns and passions. An online community for socially conscious designers would provide opportunities for sharing, but also would serve as a network for support. An online platform might lower barriers for designers who want to take action, but who do not necessarily know “how” or “where” to start.

The ability to hold collaborative conversations is crucial to supporting sustainable and diverse communities – whether physical or virtual – including effective real-time and ongoing conversations that result in accomplishing shared goals. Communities provide a sense of belonging through connections, and are an important sociological characteristic of human existence (*Anderson, 122*). Designers seeking direction or chances to contribute would benefit from a community that provides opportunities to establish individual and collective goals. Determining goals together, the community successfully cultivates shared values, and thrives. Conversation assists negotiations that lead to shared understanding of why the community exists. A successful community also motivates users to continue active membership, which leads to collective growth and rich relationships. Designers have a role to play in designing tools that “raise or widen the circle of participation,” which fosters the growth and survival of any community (*Putnam*).

Designers interested in socially responsible design strategies may turn to a variety of resources, including literature, industry leaders, education and organizations. The common strategy in each of these resources is a single channel of communication that simply delivers information. For example, the shared goal of the AIGA Design for Good platform is to encourage designers to take action, yet it overlooks the fact that shared goals are effectively reached through individual participation in the process of negotiating community goals. Furthermore – in an online space where members are constrained by physical and real life obligations (e.g., geographic location, time zone, work life, etc.) – online communities need conversations to be sustainable and persist over time. Unfortunately, few online platforms exist for designers to participate, share, or have conversations about their goals. Motivated designers might consume information, but may have difficulty contributing in equal and collaborative ways. These ‘showcase’ models of supplying resources such as literature, case studies, and online repositories, lack tools that invite and engage designers to be a part of socially conscious projects. Bypassing the designer who doesn’t know how to get involved, risks missed potential, ideas, actions, and conversations. Resources for designers interested in social good abound, however, resources that provide opportunities to take action and encourage and motivate young designers to engage in action, are few. My study seeks to bridge this gap and create a space by which young people new to advocacy are empowered to act.

Conversation is an important component for building communities that have specific values and goals. Conversation is also a catalyst for action. Participants who learn together through collaborative conversation will also act together. Providing designers with a community platform that focuses on socially responsible design will likely increase the probability that members will share, participate, and have conversations. Additionally, the more a participant is involved within her community, the more likely it is that she will continue to share, give, and donate as social connections inherently foster giving (*Putnam*).

Conversation as a method for designing a community network focused on socially responsible design strategies is an appropriate context to create a truly social space for interested designers to share, learn, and become motivated to act. Designing for conversation not only results in successful and active communities, but also encourages collaboration amongst designers, stakeholders, and participants. Suppositionally, an online community platform designed for conversation could be cross-disciplinary to facilitate action in a variety of contexts. This model is particularly transferable for communities that require opportunities for collaboration and conversation among a diverse group of participants. For example, Crunchet’s iOs app addresses the nature of passive social network posting by encouraging participants to contribute and collaborate with their community to create meaningful stories and content. Using Crunchet, the Women’s March Alliance and Chicago March compiled social media stories from a variety of existing platforms into a single story. Users are invited to collaborate and contribute (*Constine*). Still, Crunchet lacks a conversational element that allows users to communicate and develop shared ideas and relationships to build lasting communities.

Another example of transferability is observed in the recent popularity of workplace collaboration tools such as Slack, Basecamp, Evernote, and Microsoft Teams. These platforms are necessary during a time when employees may be geographically dispersed. But they sometimes fail to create conditions for employees to develop trusting relationships and communities. For companies to be successful, employees must not only be dedicated but also share similar goals. While workplace collaboration tools provide a space for teams to work together productively, genuinely collaborative employees require workplace unity and possibilities to share (*Anderson*).

The AIGA houses a plethora of resources for the graphic design community. While this research focuses on design for social good, the study could also apply to the Design Educators Community. With an expected launch in the summer of 2018, the AIGA is developing an online peer-populated platform for design educators to share resources, foster connections, encourage discussion and support designers of all levels working in academia. Ideally, this platform will sustain a diverse community and provide a space for conversations that inspire educators to make actionable plans (*AIGA*).

RESEARCH QUESTIONS

How can the design of an online community platform incorporate opportunities for collaborative conversation between recent graduates who are interested in socially responsible design strategies to address goals and coordinate actions?

SUBQUESTION #1

How can a collaborative workspace interface visualize multiple levels of activity when numerous participants are simultaneously working together?

SUBQUESTION #2

How can a conversational interface engage users as co-creators through visualizations that represent the community's concurrent contributions?

SUBQUESTION #3

How can visual schemas of collaborative conversations encourage user exploration of ideas during ongoing community exchanges?

*“...the domain of design has expanded
from giving form to creating systems
that support human interactions.”*

–HUGH DUBBERLY AND PAUL PANGARO
CYBERNETICS AND DESIGN (2015)



Key Terms

CONVERSATION

At its simplest, conversation occurs when people perform the following tasks: Open a channel, commit to engage, construct meaning, evolve, converge on agreement, act or transact (*Dubberly*).

COMMUNITY

A “deep, horizontal comradeship” in which all are equal despite geographical location, and work together to mobilize and organize whatever resources necessary to sustain the group in order to address collective goals (*Anderson 6-7; Turner 191-230*).

ONLINE COMMUNITY PLATFORM

An online discussion space placing parties in touch with one another, and built specifically for discussion and community conversation. In other words, an online experience characterized by feelings of ‘association,’ of natural belonging, and a sense of a ‘collective self’: what Tunstall calls the “we” feeling.

COLLABORATION

Specifically, collaboration for common goals. Meaning, “participants agree to collaborate on the formulation of goals and agree on methods to achieve them (*Dubberly, Pangaro*).”

ACTION

Something done or performed, a deed, an act (“*Action*”).

COLLABORATIVE CONVERSATIONS

Conversations that are collaborative involve making negotiations and agreements that address goals and are manifested through action.

SOCIALLY RESPONSIBLE DESIGN STRATEGIES

Design strategies concerned with the impact of a designer’s work measured by its ability to contribute to social, sustainable, and collective good (*Heller and Vienne, Introduction*).

VISUAL WORKSPACE INTERFACE

A designed human-computer interaction that alludes to collaborative and personal physical spaces for work.

CONVERSATIONAL TOOLS AND INTERACTIONS

Interactions and tools that consider goals, means, or both. Interactions or tools that are controlling, guiding, delegating, or collaborating. Interactions or tools that reflect conversations.

Assumptions and Limitations

Participants are willing to use an online community platform that shares data regarding their name, geographical location, and individual historical factors. Data will also be gathered based on a user's interaction within the online space. The platform collects data when a user becomes a participating member.

The online community platform already maintains a member base, and has established an interchangeable core group, active participants, occasional participants, peripheral participants and transactional participants as outlined in Étienne Wenger's Communities of Practice, Levels of Participation.

This investigation explores the potential of designed interactions in an online community platform, shown through visual prototypes. The interactions are manufactured and speculative and do not reflect spontaneous or organic interaction.

This investigation does not consider the digital location of a platform, or if it would serve as a companion to previously established online communities. Instead it focuses on the features, tools, and visual representations needed to facilitate productive conversations that lead to action.

This investigation considers conversations that take place within or between groups. It does not discuss conversations that are held internally with oneself or conversations that occur between person and machine.

FRAMEWORKS

Elizabeth Tunstall's Dimensions of Online Communities

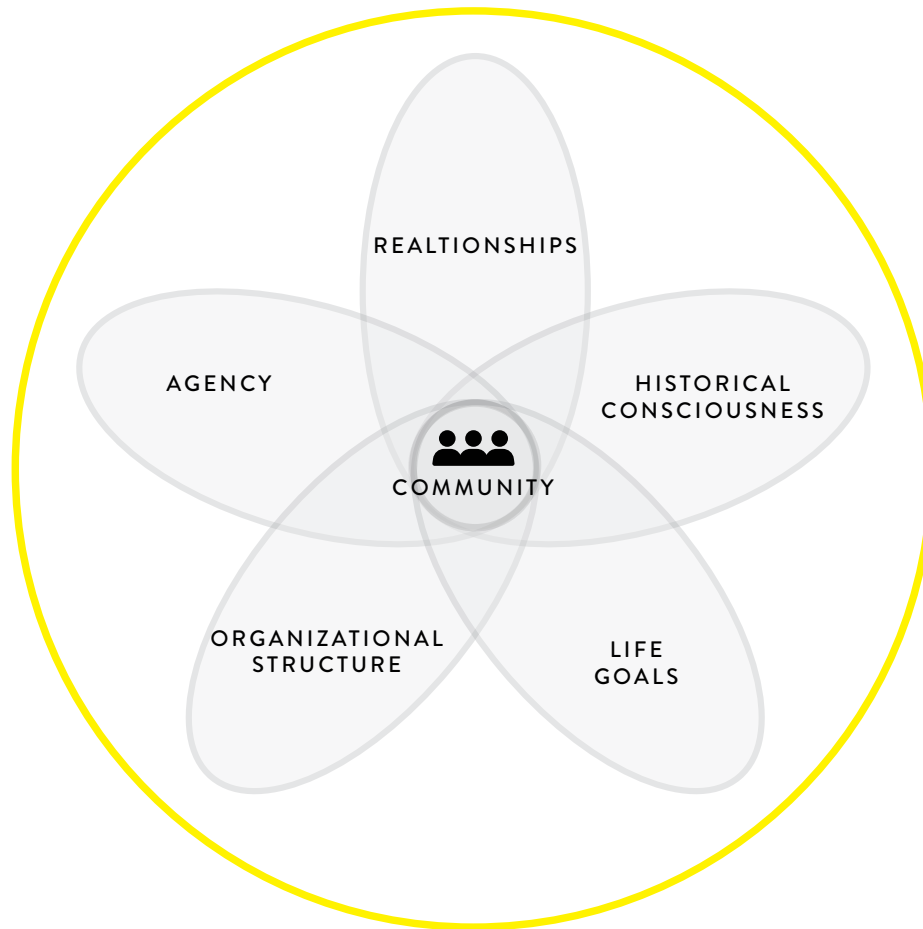


FIGURE 2: Diagram based on Elizabeth Tunstall's *Five Dimensions of Online Communities* (Tunstall, 2008)

Elizabeth Tunstall, a design anthropologist, identified five aspects through which people experience community, in her “Five Dimensions of Online Communities.” Her perspective builds on those of Benedict Anderson. His concept of “imagined communities” suggests how community members might perceive themselves within digital environments. According to Anderson, members may “live in the image of their communion” without knowing, meeting, or hearing fellow-members. Tunstall characterizes community as that which provides agency, supports life goals, bears historical consciousness, shares an organizational structure, and fosters relationships. Agency refers to a person’s ability to control, or at least influence decisions about the things that impact their communities and themselves. Life goals represent the opportunity for people to articulate what matters most to them. Historical consciousness is a person’s ability to openly express his/her history, for instance, where they come from who they are within the community in relation to that history. Organizational structure provides people with an understanding of how they fit into and contribute to the greater whole or the community. Lastly, relationships are the basic units of the community through which people establish trust, understanding, and reliability (**Figure 2**).

Wenger, White and Smith Community Orientations

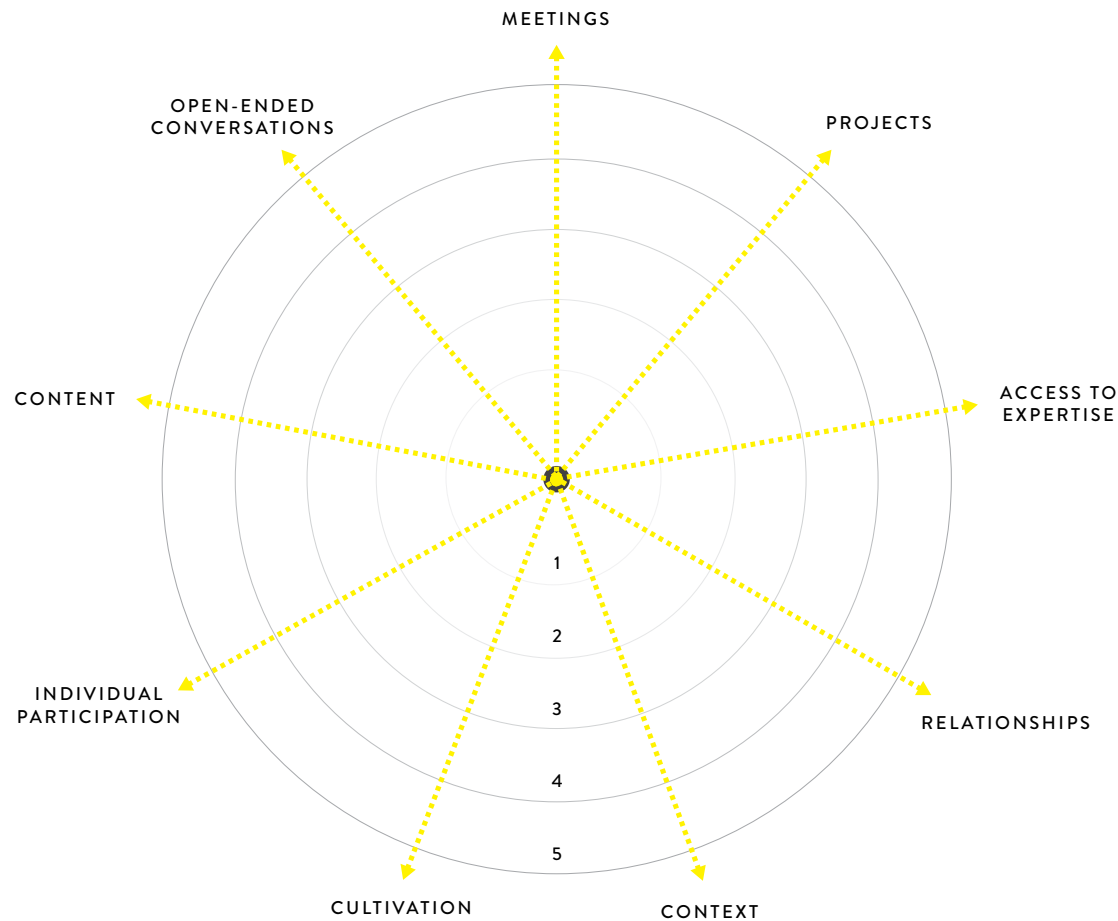


FIGURE 3: Diagram based on Wenger, White and Smith's
Nine Community Orientations (Wenger, White and Smith, 284)

Within digital spaces, participants experience their community in many different ways and engage in a variety of activities. Wenger, White and Smith categorize the activities into nine orientations: meetings, projects, access to expertise, relationships, context, cultivation, individual participation, content, and open-ended conversations (**Figure 3**). Orientations are standard patterns of activity through which members experience the feeling of being a community. Tools serve as the means of support for the orientations and activities. Communities are flourishing when significant orientations complement aligning technologies. Orientations are not mutually exclusive, although communities may have primary or secondary orientations. The varying degrees of orientations contribute to the style and personality and distinction of unique communities. As a community grows and evolves, it is likely that the orientations will change over time, and therefore so will the configuration of the supporting technologies (Wenger, White, Smith, 145).

Conceptual Framework – Tools for Dimensions Matrix

I devised the conceptual framework for this investigation to guide the design and selection of tools for specific online communities (see **Figure 4**). Additionally, the framework provides the means to understand the implications of various tools. The conceptual framework for this research applies Tunstall's "Five Dimensions of Online Communities" and Wenger, White, and Smith's "Nine Community Orientations." Users experience their community through the five dimensions outlined by Tunstall, and participate in a variety of activities (Wenger *et al.*, 145). Digital communities require specific tools that facilitate interactions. Designers are capable of designing tools needed by users, and users needs are understood through community activities, and the dimensions activities supports.

Wenger et al. categorized activities that occur within online communities into nine broad orientations that represent typical patterns of events and connections (Wenger et al., 146-148). Specific tools often found in digital platforms support the activities within each orientation. Activities and supporting tools are not unique to each orientation; rather they can be used across online platforms to accomplish a variety of tasks. For example, messaging tools such as chat and email, can build relationships and facilitate open-ended conversations. In place of using the orientations to guide tool selection and design, I determined supporting tools that represent a broad range of functions across all nine community orientations. The tools facilitate Messaging, Knowledge Sharing, Validation and Input, Searching and Networking functions that are needed to best support all aspects of online communities.

My five tool categories intersect with Tunstall's Dimensions of Community to form a matrix that serves as the basis for my design studies. This framework could be applied to the design of other online communities; however, the selection of tools should also consider the overall function and mission of the community in question. In this case, the tools support the specific needs and possibilities of users participating in the community: agency to contribute, inclusion of life goals, visual representation of community histories, a unique and specific organization structure, and representation of developing relationships.

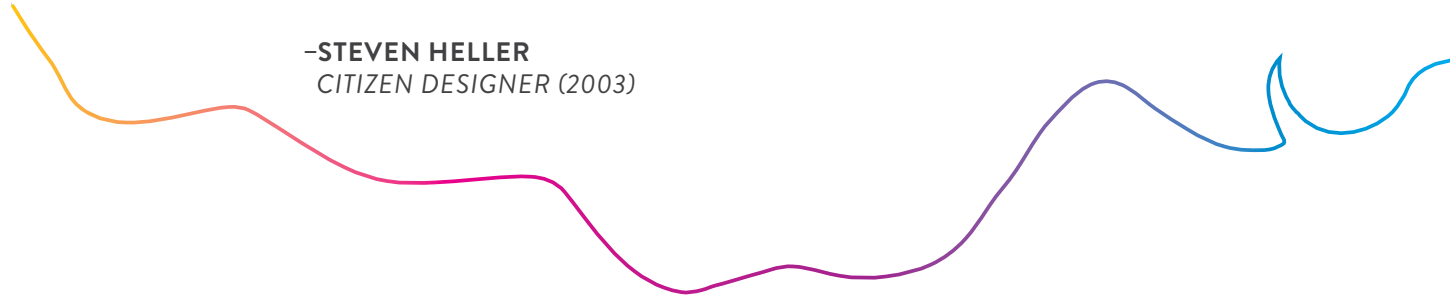
The conceptual framework I developed is particularly important and relevant to this investigation, as it recognizes the many and diverse needs of online communities and their members, but also calls for intentionally designing to meet those needs.



FIGURE 4: *Conceptual framework*

*“A designer must be professionally,
culturally, and socially responsible for the
impact his or her design has on citizenry.”*

—STEVEN HELLER
CITIZEN DESIGNER (2003)



LITERATURE REVIEW

Design for Good

CITIZEN DESIGNER

PERSPECTIVES ON DESIGN RESPONSIBILITY

Steven Heller and Véronique Vienne (2003)

Steven Heller and Véronique Vienne describe “design for good” in their book, *Citizen Designer*, as work that considers the impact of a designer’s work measured by its ability to contribute to social, sustainable, and collective good.

While “good design” is subjective, Heller argues that good design serves citizens and “adds value to society.” Heller believes designers should be held accountable for the work they do, and also must understand the consequences of their actions. Meaning, when design convinces users to partake in harmful activities, designers must take responsibility for the role they assume (Heller, Vienne x). They argue that designers must understand how their decisions impact the behaviors of potential stakeholders. Heller believes that it is easy for designers to create attractive work, but it requires finesse to make responsible choices.

THE ROAD TO HELL

Milton Glaser (2001)

Milton Glaser wrote *The Road to Hell* in 2001; which is a questionnaire that examines his willingness as a designer to lie. Mostly, it is a list of deceptions designers may carry out for the sake of a paycheck. The list includes tasks such as:

- + *Designing a package to look bigger on the shelf*
- + *Designing a medal using steel from the World Trade Center to be sold as a profit-making souvenir of September 11*
- + *Designing an ad for a political candidate whose policies you believe would be harmful to the general public*

Glaser believes that designers should be aware of the impact of their work and that when one is aware, they live in “Purgatory.” A designer is in “Hell,” when they are both aware of their impact but also don’t know how it came to pass. Glaser gave his test to twenty students between the ages of 21 and 28. About 75% of the students were unwilling to compromise their values.

FIRST THINGS FIRST MANIFESTO

Ken Garland (1964)

In 1964 Ken Garland, a famous graphic designer practicing over the last 50 years, wrote the First Things First Manifesto which addressed design ethics. After he penned his manifesto, it was signed by twenty-one other designers, students, and photographers who were committed to similar goals and ideals. The declaration reached a broad audience and was picked up by The Guardian. Eventually, the manifesto was revised as the First Things First Manifesto 2000 (known as FTF2000). The contemporary version of the manifesto was signed by thirty-three designers and initially published in Adbusters, and then reprinted in Émigre, AIGA Journal in North America, and Eye magazine in Britain.

DEVELOPING CITIZEN DESIGNERS

Elizabeth Resnick (2016)

Developing Citizen Designers by Elizabeth Resnick is a collection of essays and case studies that illustrate the effort already made by designers to make meaningful contributions to their communities. The research argues that design is moving from a service model to a content-identifier model where designers work with companies, communities, cities, and governments to help them understand who they are and their role in serving their stakeholders. It creates a call for designers to be community builders, entrepreneurs, and activists. To do so, Developing Citizen Designers presents case studies in the form of class assignments, prompting design educators to incorporate socially responsible design strategies into their classrooms.

DESIGNING FOR SOCIAL CHANGE

STRATEGIES FOR COMMUNITY-BASED GRAPHIC DESIGN

Andrew Shea (2012)

Designing for Social Change by Andrew Shea examines projects focused on “design for social impact,” “human-centered design,” or “design for social change,” as well as designers who seek to work with underrepresented groups and communities opposed to traditional businesses and clients. In particular, Shea investigates methods for designers to approach complex problems not often considered design problems; such as medical disorders, homelessness, and nature conservation. Shea details his journey into design for good and his process for understanding the importance of working with communities. Shea’s experience is shared in Designing for Social Change and serves as a guide for engaging groups of people faced with wicked problems. While described as a “guide,” Shea’s book is better defined as yet another case study showcase, geared toward designing for communities.

THE DESIGN ACTIVIST'S HANDBOOK

HOW TO CHANGE THE WORLD (OR AT LEAST YOUR PART OF IT)

Noah Scalin (2012)

Noah Scalin's book *The Design Activist's Handbook* features case studies but also provides additional resources such as worksheets to help readers define their goals. The reader is asked variety of questions that aid their decision-making process, as well as checklists for designers to establish individual values. The first chapter outlines "The Activist's Toolbox", a method to demonstrate a designer's power and effect on societal issues. Most interesting is Scalin's examination of design history and activism. He presents a timeline that briefly explains design movements related the concurring political, economic, and social issues including the Arts and Crafts movement, Dadaism, Russian Constructivism, Situationism, and the Fluxus movement. The structure of Scalin's book is best described as educational and interactive, which is expected considering he often teaches classes on Design for Good. This research has opportunities for reader interaction and prompts for interested readers, it does not consider a designer that faces financial, geographical or accessibility challenges.

Online Communities

IMAGINED COMMUNITIES

REFLECTIONS ON THE ORIGIN AND SPREAD OF NATIONALISM

Benedict Anderson (1983)

Benedict Anderson is a political scientist and historian; he wrote *Imagined Communities* in 1983 which details "reflections on the origin and spread of nationalism." Anderson's explains nations as "imagined communities," since its members—even in the smallest nations—will never meet each other, yet they will still fight for and believe in one another. His concept of 'nationalism' not a nation's self-consciousness but the ability to build a nation out of nothing through the communion of people. Regardless of inequality or societal issues, nations exist through "deep, horizontal comradeship", so much that citizens are willing to die for their imagined communities. Anderson discusses factors that contribute to establishing these imagining communities including religion, language, political ideologies, and other complex cultural systems. Anderson posits that creating imagined communities not only provide a sense of belonging but is also crucial to human existence.

UNPUBLISHED WORKSHOP

**NORTH CAROLINA STATE UNIVERSITY, COLLEGE OF DESIGN,
DEPARTMENT OF GRAPHIC DESIGN**

Elizabeth Tunstall (2008)

In a workshop held at North Carolina State College of Design, Elizabeth Tunstall utilizes Benedict Anderson's concept of imagined communities to build a framework for analyzing digital communities. Tunstall identifies five dimensions for examining; historical consciousness, life goals, organizational structure, agency, and relationships. These dimensions may also define the characteristics of communities. In particular, Tunstall talks about the feeling of *communitas*, inspired by Victor Turner's *The Center Out There: Pilgrim's Goal*. *Communitas* leads to a sense of solidarity and belonging among members of a group. The research gathered from Tunstall explains how communities are inherently formed and sustained, specifically through shared interests, goals, and values.

COMMUNITIES OF PRACTICE

LEARNING, MEANING, AND IDENTITY

Étienne Wenger (1998)

According to Étienne Wenger, forming prosperous communities requires that members establish shared values and goals. If those goals or values include learning, such groups are considered "communities of practice." Users who come together to learn through interactions that support knowledge sharing form communities of practice. These communities exist through a shared interest of all members, wherein users participate through learning and sharing information with one another. In other words, it is not merely a group of friends who enjoy similar activities but rather a group of people who intend to learn and practice with one another. Communities of practice thrive when new members learn from older members who act as authorities or mentors, and in turn, new members become the guides for eventual newcomers. This research is imperative to this study as it informs the intention of the community being investigated and emphasizes the need for knowledge sharing and learning.

**DIGITAL HABITATS:
STEWARDED TECHNOLOGY FOR COMMUNITIES**

Étienne Wenger, Nancy White, John D. Smith (2009)

Etienne Wenger, Nancy White, and John D. Smith, collaborated to write Digital Habitats: Stewarding Technology for Communities, a book that examines technology relating to digital communities. Through case studies and frameworks, Digital Habitats defines a language for integrating technology into online community spaces, specifically through features and tools. The literature also discusses methods for incorporating technology into online communities and best practices for curating specific digital tools and features. For this research, Wenger, White and Smith's analysis of community orientations provides a framework for designing particular tools that best meet the needs of the community considered in the studies. Orientations refer to regular patterns of activities that occur in digital social spaces. Additionally, Digital Habitats gives examples of various tools that might facilitate the community activities.

**BOWLING ALONE
THE COLLAPSE AND REVIVAL OF AMERICAN COMMUNITY**

Robert Putnam (2000)

In his book Bowling Alone, Robert Putnam discusses disconnection from various people groups and methods for mitigating the growing issue. Putnam investigates the need for social capital, another word for social connections and networks of support. He also considers a massive number of interviews that translates into data on the state of community. For example, more than 80% of Americans say there should be more emphasis on community building. Most relevant to this investigation is Putnam's research into giving. Data collected by Putnam reveals a trend that individuals are more likely to give time, donate resources, and even favors when they are active members of their communities and maintain healthy relationships with others. Social connections foster giving, and people feel generous when they join groups. Additionally, Putnam argues that "involvement in social networks is a stronger predictor of volunteering and philanthropy than altruistic attitudes."

Conversation

WHAT IS CONVERSATION?

HOW CAN WE DESIGN FOR EFFECTIVE CONVERSATION?

Hugh Dubberly and Paul Pangaro (2009)

Dubberly and Pangaro consider conversation a foundation for many design strategies.

They posit that conversation occurs when participants complete the following tasks specific tasks;

- + *A channel opens by sending an initial message.*
- + *The receiver must commit to engage in the conversation.*
- + *The receiver digests the message and attempts to construct the original meaning.*
- + *Both participants perspectives change or evolve.*

Conversation is most effective when a change occurs within participants. The discussion continues until the participants reach an agreement or common understanding, perhaps over a shared belief.

Ideally, the participants will choose to act upon their conversation. Dubberly and Pangaro emphasize the importance of understanding this process to address methods for improving it. Explicitly, they call for designers to “view every user (persona) as a participant in a conversation, and every scenario as a conversation to define or achieve one or more goals.”

DISTINGUISHING BETWEEN CONTROL AND COLLABORATION- AND COMMUNICATION AND COLLABORATION

Hugh Dubberly and Paul Pangaro (2017)

In their article, “Distinguishing Between Control and Collaboration-and Communication and Conversation” Dubberly and Pangaro consider the power of collaboration and how it may be used to solve simple problems that can then apply to more complex, or wicked problems. Wicked problems are those that are “ill-defined” and require political judgment to be solved. Dubberly and Pangaro argue that conversational models need a goal established through participant agreement. This item of literature is relevant to my research as it defines the role of collaboration within conversation and the need for shared goals.

CYBERNETICS AND DESIGN CONVERSATIONS FOR ACTION

Hugh Dubberly and Paul Pangaro (2015)

Much of Paul Pangaro and Hugh Dubberly's research investigating conversation is based off a body of work from Gordon Pask called Conversation Theory, which is grounded in specific concepts – agreement, understanding, and consciousness. Dubberly and Pangaro relate their research to cybernetics, which is a term for “what we can know and how we know it.” Pangaro and Dubberly consider conversation as a method for answering such inquiries. They posit that design has evolved from “giving form to creating systems that support human interactions.” Dubberly and Pangaro assert that contemporary design requires conversation, and that design itself is a conversation. This literature is particularly relevant to my research as it provides a framework for designing for productive conversations between designers.

METHODOLOGIES

Design Precedents – Action

PANGARO, GENERAL CYBERNETICS INC.

Paul Pangaro is the Co-Founder and CEO of General Cybernetics, Inc., a company that focuses on how users have conversations with one another and discover and explore online content. Pangaro and his colleagues believe that conversation is crucial to learning and collaboration, and when software is designed to reflect conversation it provides a strong cultural foundation.

SHARED WHITESPACE

Shared Whitespace creates an opportunity for users to conversationally make plans and organize their action to address their goals. Often, conversational social interfaces are designed for users to send messages to one another, in place of making plans and reaching agreements. But, conversations inherently exist for participants to converge upon agreement. Shared Whitespace works by allowing users to form suggestions and counter-suggestions visually until reaching an agreement.

This precedent considers alternative ways for users to coordinate actions digitally with methods that reflect conversations “in-real-life.” Using the basic principles of conversation (context, a shared language, engagement, an exchange, agreement, and an action), Pangaro prototyped a digital interface that allows users to make plans conversationally.

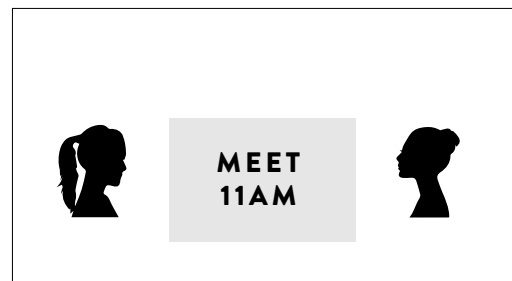
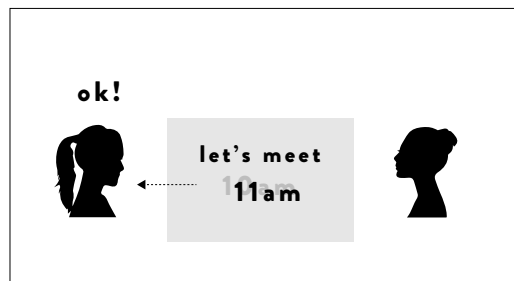
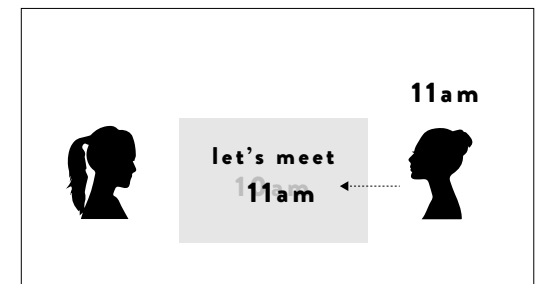
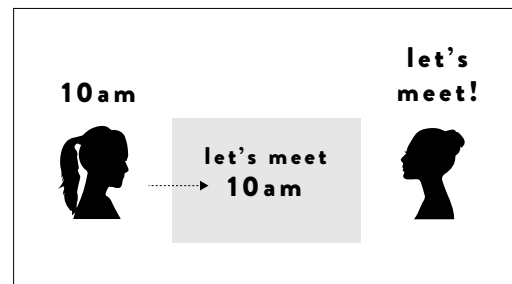
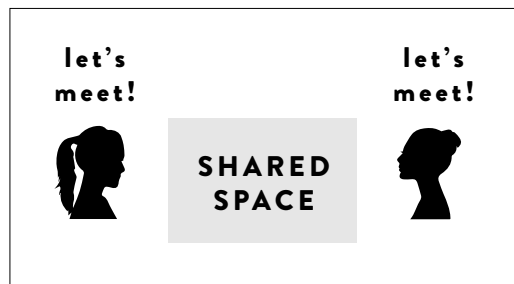


Diagram based on Paul Pangaro and General Cybernetic's "Shared Whitespace"

THOUGHTSHUFFLER

ThoughtShuffler, another of General Cybernetics proposals, aims to maintain critical thinking and encourage users to evolve and defend their viewpoints in conversation. ThoughtShuffler explores methods for delivering information and focusing a user’s interest while broadening his/her understanding of a particular topic. Using common search methods, this software provides opportunities for a user to compare and contrast search results, and ultimately refine their initial inquiry. Ideally, a user receives the most relevant information, and they feel confident the results are worth investing time and attention.

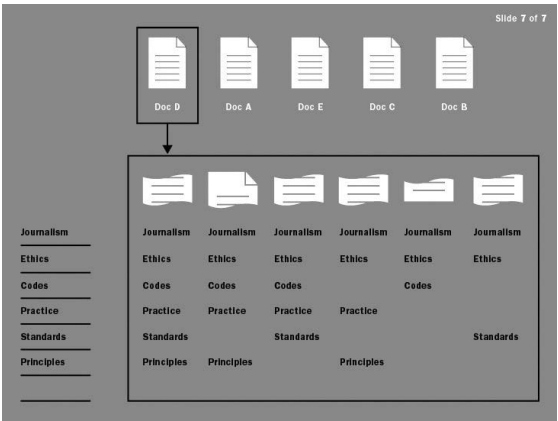
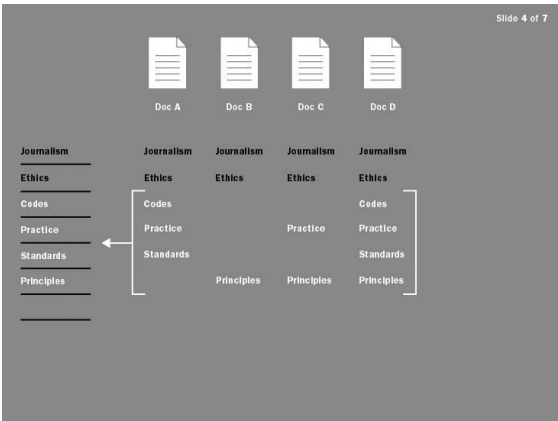
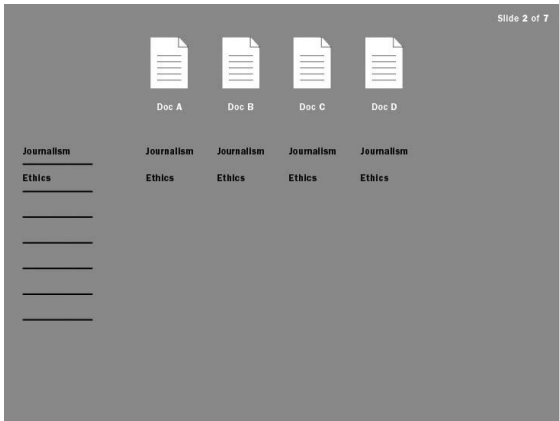
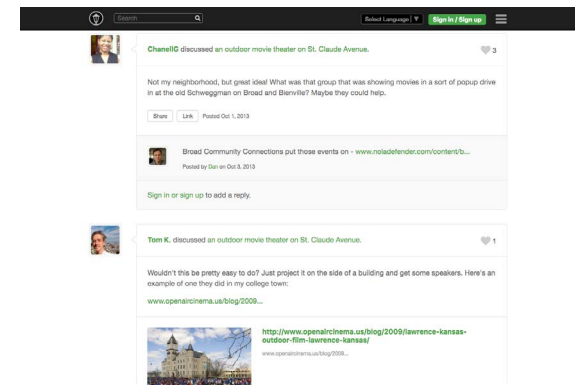
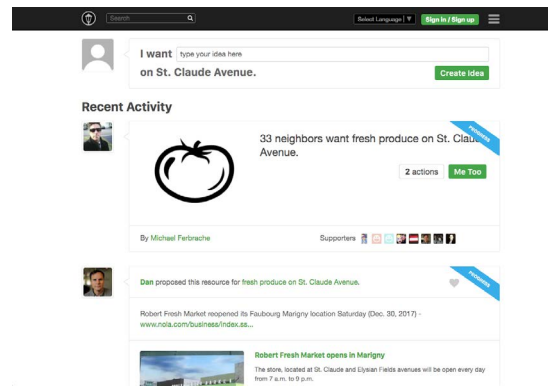
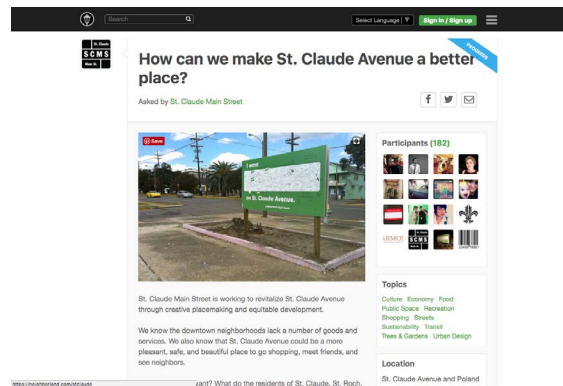


Diagram representing Paul Pangaro and General Cybernetics’ “Thoughtshuffler”

NEIGHBORLAND

Neighborland is a communications platform that facilitates conversation and collaboration between neighborhoods and organizations that offer resources capable of initiating community change. The program connects residents with city representatives, local organizations, public institutions, and foundations. Ideally Neighborland creates opportunities for participatory interactions that are accessible and equitable for all stakeholders. The tools and features live within a web-based platform used by hundreds of civic organizations across the United States. Neighborland is often used by members to host projects online, publish and update content, communicate with potential stakeholders, host events, initiate offline engagement, conduct surveys, solicit donations, and collect feedback.

The platform offers a wide assortment of tools that prompt engagement in meaningful ways and lowers barriers for participation. Users can choose to participate through methods that make them feel most comfortable.



Screenshots of Neighborland website

Design Precedents - Collaboration

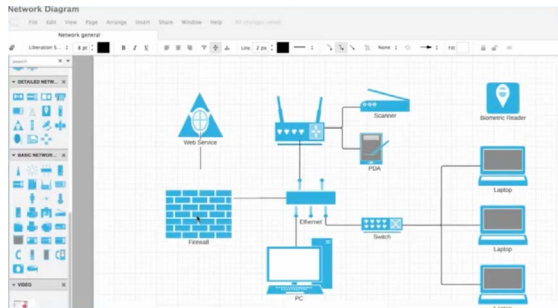
OPEN IDEO

Founded in 2010, OpenIDEO is a part of IDEO, a global design, and innovation company. Structured as an “open innovation practice,” users participate and collaborate with one another to develop solutions that solve complex societal problems. OpenIDEO is available worldwide and encourages diverse communities to engage with like-minded individuals. Using techniques such as crowdsourcing, OpenIDEO serves as a place for sharing resources, connections, and design tools. Challenges proposed by users go through stages of development that are modeled after “design thinking”. For example, the United Nations Population Fund collaborated with IDEO to pose a challenge aiming to improve access and quality of sexual health education for young people throughout the world.

The “Research” phase calls for participants to share stories, interviews, data, and scholarly papers. The “Idea” phase calls for current projects and proposals related to the challenge topic. Those ideas enter into “Review,” “Refinement,” and “Final Review” phases which narrows submissions down to a list of “Top Ideas.” Although OpenIDEO serves as a logical place to initiate ideas, the model is competitively structured, which limits accessibility. Additionally, the platform lacks a robust conversational component. Users have the option to leave comments, but this feature is discreet and currently underused.

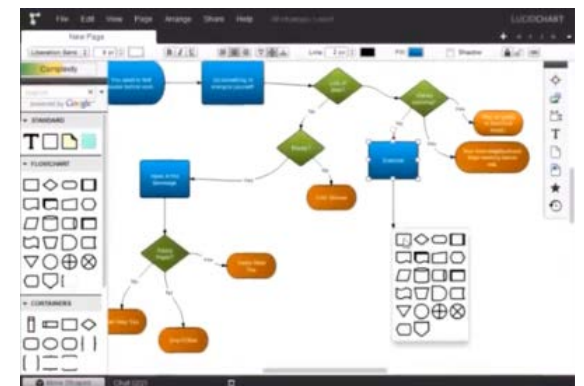
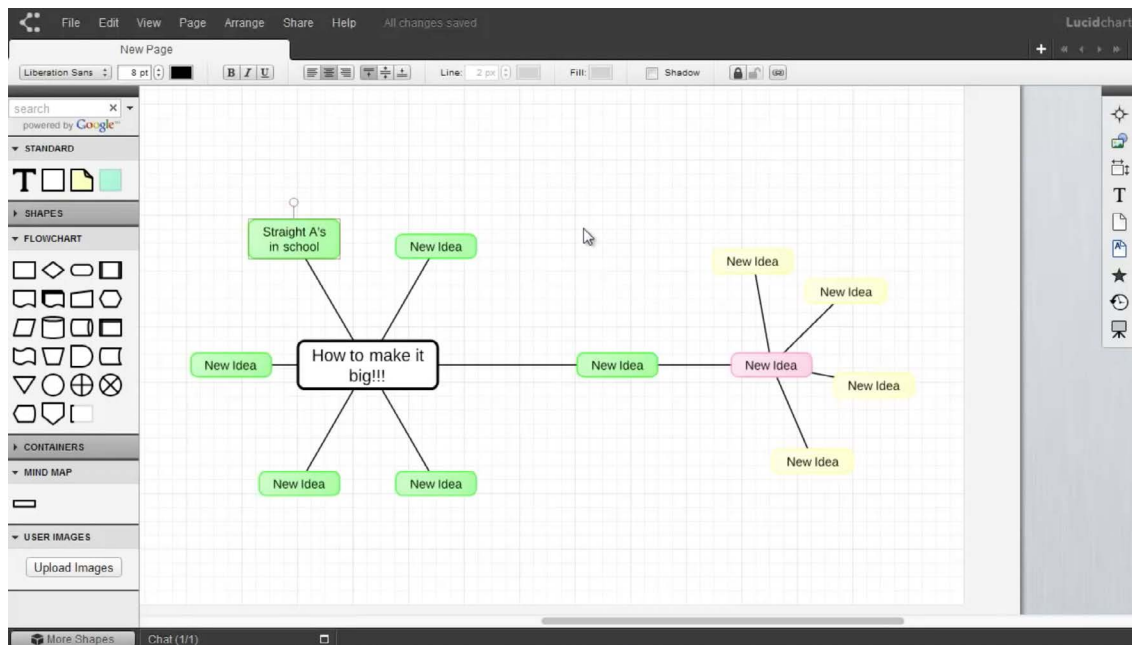
The screenshot displays the OpenIDEO website interface. At the top, there is a navigation bar with links for PARTICIPATE, ABOUT US, OUR WORK, and SPONSOR, along with a search icon and a LOGIN button. The main header features a large image of a smiling young person with the text: "How might we radically improve access to, and quality of, sexual and reproductive health education and services for young people?". Below this, a progress bar indicates the challenge's stages: Research (278 contributions), Ideas (256 ideas), Review (256 final ideas), Refinement (56 final ideas), Final Review (56 final ideas), and Top Ideas (Announced in 21 days). The "Final Review" section is highlighted, stating: "During our Final Review Phase, we'll dig deeper into posted concepts and determine our Top Ideas from the entire effort. Read the [Challenge Brief](#) for more on this important topic." Below this, it says "21 days left to contribute to the Final Review phase". The main content area shows "56 CONTRIBUTIONS" and a "SORT BY" dropdown menu set to "Recently updated". Three image thumbnails are visible: a group of people sitting on a lawn, a group of people standing outdoors, and hands holding colorful balloons. The first contribution is titled "AskMe: A mobile app to address young people's access to SRH products and services in Uganda." by Joseph Mulabbi, updated on 05-48 Jan 20, 2018. It includes a prompt: "Tell us about your vision for this project: Share one sentence about the impact you would like to see from this project in five years" and a goal statement: "By 2022, we aim to reach over 3 million adolescents and youth (boys, girls and other gendered groups) in Uganda with our mobile app services, empowering and impacting 5 million users in schools, universities, rural and urban communities."

Screenshots of Open IDEO website



LUCID CHART

Lucidchart is an online application that allows users to create diagrams with team members across devices. Participants may collaborate to create flowcharts and maps used for brainstorming, project management, or note-taking. The primary benefit of Lucidchart is its compatibility with various other programs, including Google G Suite. The software hosts an extensive suite of tools tailored to specific tasks, including design. Users can make grid settings, note hex codes, fonts, and formats. Tools and functions provide designers with the opportunity to collaboratively create wireframes that can be exported and shared with others. Lucidchart allows users to comment freely within a nonlinear structure where content is shared synchronously. Lucidchart provides users with a blank “whiteboard” space where they can freely arrange and rearrange content.



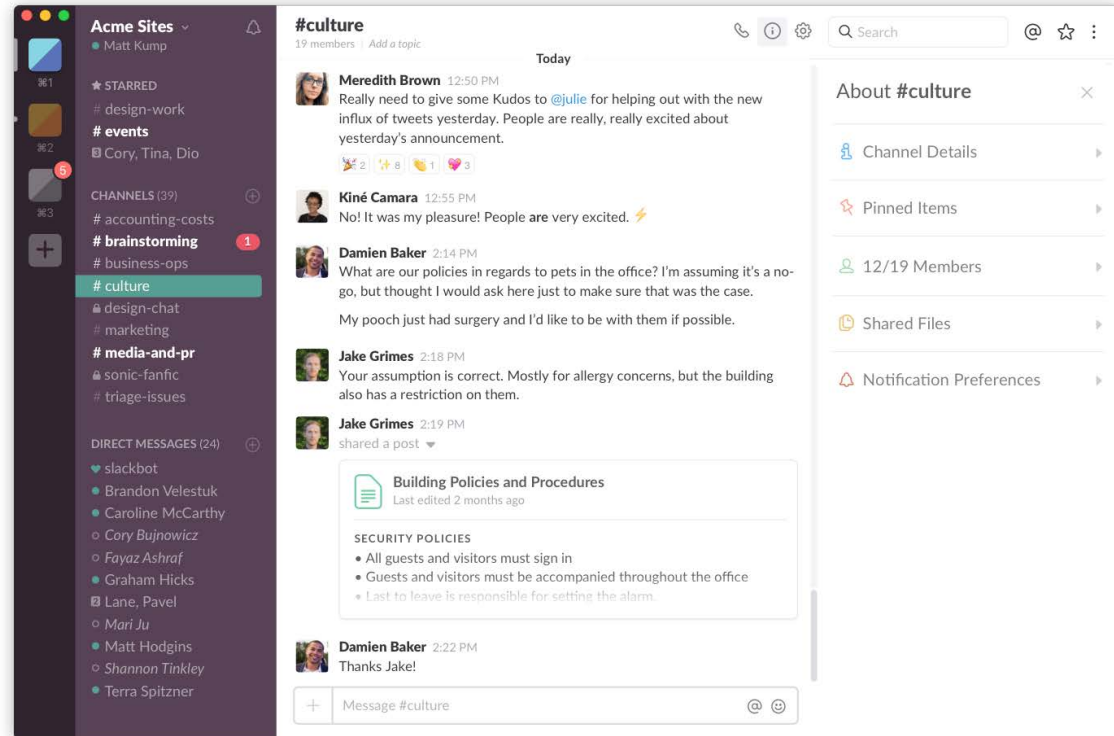
Screenshots of Lucidchart interface

Design Precedents - Conversation

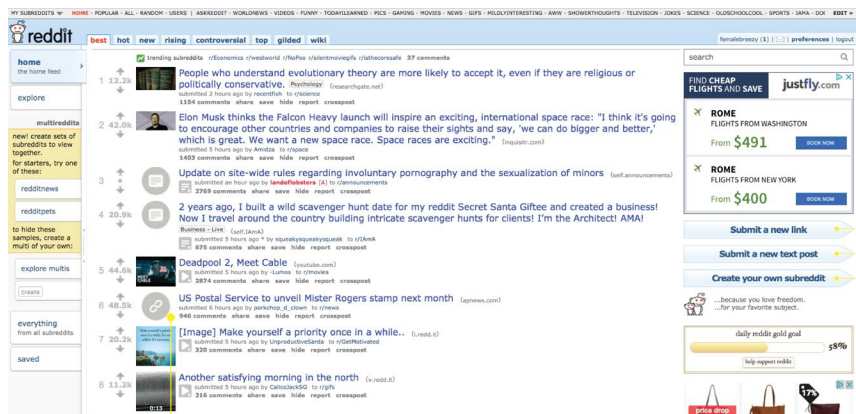
SLACK

Slack is an acronym for “Searchable Log of All Conversation and Knowledge,” which accurately describes its purpose as an online productivity platform that provides tools and services for team collaboration and discussion. The interface centers on a synchronous chat room that is organized by topic, supported with features like document sharing, private messaging, gif sharing, and third-party applications. Initially, Slack was designed primarily for organizational teams, but more recently it has been used as a platform for community building and social networking (*Slack*).

The primary chat room function can feel distracting or overwhelming for users who enter conversations late and need to catch up. Although Slack provides a search function, the feature does not help a community member who is “out-of-the-loop.”



Screenshot of Slack interface



Screenshots of Reddit

REDDIT

Reddit, the self-proclaimed “front page of the internet,” is a simple social news website and discussion platform that hosts large sub-communities dedicated to specific topics. Users can contribute content through text posts, images, and links that are then discussed further in a separate feed. Comments and parent posts are upvoted or downvoted anonymously by members. Posts and comments with growing upvotes move to the top of the feed, with the most popular content is featured on the front page.

Reddit members comprise a devoted community, with avid users calling themselves “Redditors.” The platform at large boasts its own set of etiquette and rules for commenting and contributions, with moderators and fellow members very quick to correct mishaps.

As a whole, Reddit fosters a sense of community, but smaller “subreddits” are home to smaller communities devoted to specific topics including science, pop culture, food, and image sharing. Reddit demonstrates opportunities to dive deeper into a broad community to discover distinctive conversations with varying engagement levels.

*“If conversation is important to ‘users,’
we should explicitly model conversation
as we design.”*

–HUGH DUBBERLY AND PAUL PANGARO
WHAT IS CONVERSATION? (2009)



Design Methods

LITERATURE REVIEW

My design methodology for this investigation began with reviewing the literature to understand the problem space and situate the needs of the users. The literature falls into four categories: Design for Good, Online Communities, Conversation, and Digital Tools.

CASE STUDIES AND DESIGN PRECEDENT ANALYSIS

I performed a case study analysis of existing online communities that addressed comparable users with related needs. I also evaluated online platforms with well-developed toolkits available to their users, lively and active communities used for a variety of tasks, and in particular, online communities whose digital activities lead to tangible action offline.

INTERVIEWS

To further my understanding of the users, I conducted interviews with likely stakeholders who represent the participants considered in this investigation. First was with a recent graduate of North Carolina State University. Later I interviewed a seasoned graphic designer that contributed to the development of the AIGA Design for Good platform. Lastly, I spoke with a self-taught designer who recently made a career change.

CONCEPTUAL FRAMEWORK

After conducting the Literature Review, I developed a conceptual framework that would facilitate the design process, guide my investigation, and clarify the needs of online communities and their members.

PERSONAS, SCENARIOS, EXPERIENCE AND JOURNEY MAPPING

Using the information I gleaned from my interviews, I developed personas that informed a detailed understanding of the current user experience. The process of developing personas lead to building scenarios and a speculative user journey that highlights opportunities for design intervention.

PROTOTYPING, VISUAL STUDIES, RESEARCH THROUGH DESIGN

Concept maps, small physical drawings, wireframe sketches, and animations enabled me to understand the implications of things designed using the matrix conceptual framework. This method revealed various discoveries and concepts without prototyping in a real and tangible space. Additionally, visual explorations presented a need for a narrower focus that would lead to robustly designed things.

Interviews

From interviews with designers interested in social good, I concluded that, despite their varied histories and experiences, their values and concerns are relatively the same. They all expressed the lack of available resources, depending upon geographical location. AIGA has a strong presence in some communities, however, chapters with a weaker presence delimit opportunities for involvement in socially oriented projects. The interviewees also discussed the value of networking as the most accessible path to engagement.

The recently graduated designers have a background in volunteerism or a personal attachment to social issues. While one designer knows her areas of interest explicitly, the other's interests are broad, with interest in any opportunity to do "good". In particular, my interviews revealed that designers are hesitant to "speak up" because they feel that their voices go unheard, or they won't make a difference.

While speaking with a designer involved with AIGA "Design for Good" and its "Living Principles of Design", I discovered that young designers are concerned that they don't have the means to get involved with the type of work presented within the programs. AIGA's priority is that young designers think about design for good early in their careers and apply their understanding to future endeavors. In the future, AIGA's progress ideally will lead to a certification program.

The interviews reveal that designers interested in socially responsible design strategies would not only benefit from a community wherein they can have conversations about the things they care about, but also as a means to learn. Conversations would also serve as a means for young designers to cultivate confidence through the support of their colleagues as well as exposure to the success of the overall community. Designing a platform for young designers provides them with accessible tools early in their career so that the concepts they learn become ever-present throughout their professional lives.

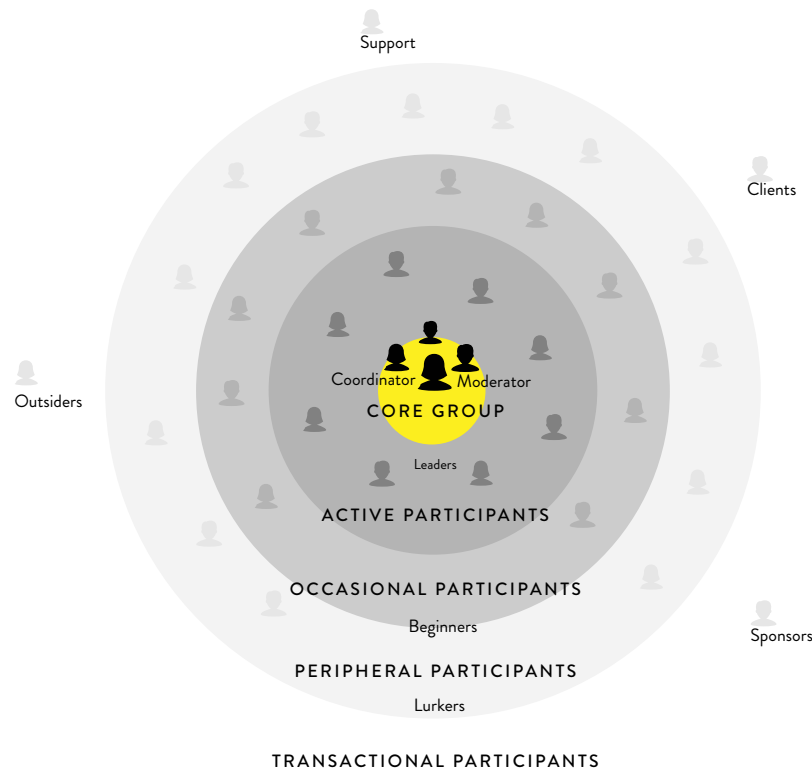


FIGURE 5: Diagram based on Wenger and Trayner's Community of Practice model (Wenger and Trayner, 1998)

Personas

The personas used in this investigation are based on interviews and research into the AIGA Design for Good and Living Principles of Design platform, as well as case studies concerned with social good. In this scenario, participants enter into and interact with the platform at different levels. Regardless, the goal is that they become active and engaged participants who are empowered to act outside of the online space to establish goals. In order to understand precisely how participants interact with the platform and what they need to engage, it is crucial to understand their beginning position and reception of the community and its associated tools.

Wenger and Trayner refer to communities that learn together as 'communities of practice', which exist through interrelated forms of participation (1998). The Community of Practice model outlines levels of involvement in communities. Naturally, when people come together to share and interact as a group, they will learn from one another through their interactions. This research is concerned with giving participants the opportunity to learn and collaborate with one another through conversation and participation (Dubberly, Pangaro 2015).

Within the community of practice, users participate in unique ways (**Figure 5**). Some users are transactional participants, which are the outsiders who occasionally engage with the community without being a member. For example, people who provide support, sponsorship, or perhaps the client. Other users may be peripheral participants; those who have an established connection to the community but who do not regularly participate or engage. Sometimes they are the newcomers or the lurkers. Occasional Participants only join in specific topics that are relevant to their interests, or they limit their contributions to what is familiar. Active Participants are users that define the community, although they may all be entirely different. They are the consistent practitioners of the community. Lastly, the Core Group includes the small group of users who are particularly passionate, involved, and engaged. Frequently, the Core Group is made up of the users who manage or run the community.

Whereas the Community of Practice model seeks to identify user participation level within community, David Rose's Audience Receptivity Gradient is a scale for identifying a user's response to an artifact or perceptions within a system of information. The gradient defines several steps of interaction with any designed thing. Ideally, the designer's work will move along the scale. The gradient used in this research has six levels: to start, a user is 'Not Ready to Know' and moves to 'Ready to Know.' Next, a user 'Knows Facts,' and then 'Accepts Ideas.' Finally, the user will 'Act on the Opinion' and 'Advocate.' Usually, users that fall on the lower end of the gradient engage with an artifact simply as a viewer. Users who have advanced to the higher end of the scale act as producers of new content and active participants in their communities. For this research, the goal is that users 'Act on Opinion' and 'Advocate' relating to their established goals.

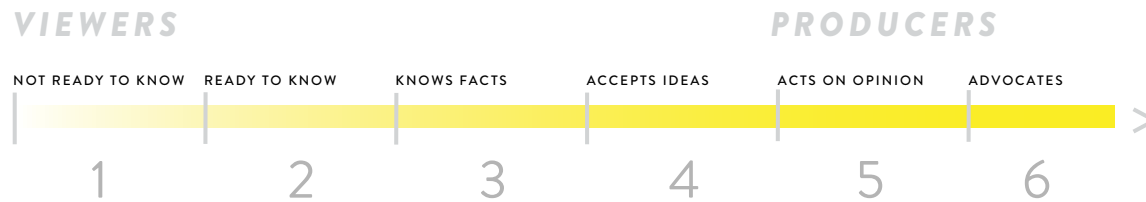


FIGURE 5: Diagram based on David Rose's Receptivity Gradient

The Community of Practice model and the Receptivity Gradient serve as multi-level guides for understanding the user's current reality and speculates on their future engagement. Assuming users' current experiences and the intended outcomes were crucial when exploring tools and functionality of a community platform. When using the two frameworks together, I could quickly visualize a user's present experience and the intended goals for interacting with the platform (**Figure 6**).

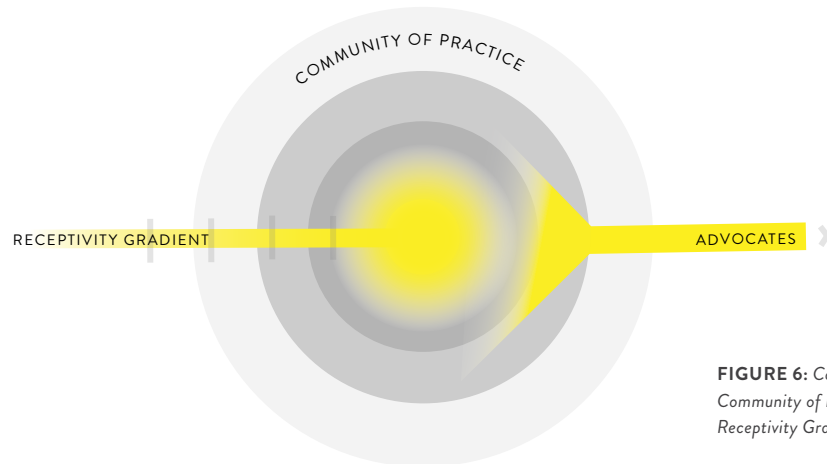


FIGURE 6: Conceptual framework utilizing both the Community of Practice model and David Rose's Receptivity Gradient

User Experience and Journey

Using the fictional personas, I investigated the current experience of a recent graduate interested in socially responsible design. In one year, post-graduation, a typical designer will begin their practice through securing a job, settling into their position, and then exploring their reach beyond the responsibilities of their current career. Presently, users that reflect the personas created for this research will encounter similar experiences and that prompt questions like,

HOW DO I USE DESIGN TO HELP?
HOW DO I MAKE CONNECTIONS?
HOW DO I DO IT?

In these cases, design can intervene in the form of a conversational platform that mitigates inquiries like those described above.

LEAH, 25

Recently graduated from NC State in May of 2017.

Occupation: Graphic designer at a small family-owned business, underpaid and over worked.

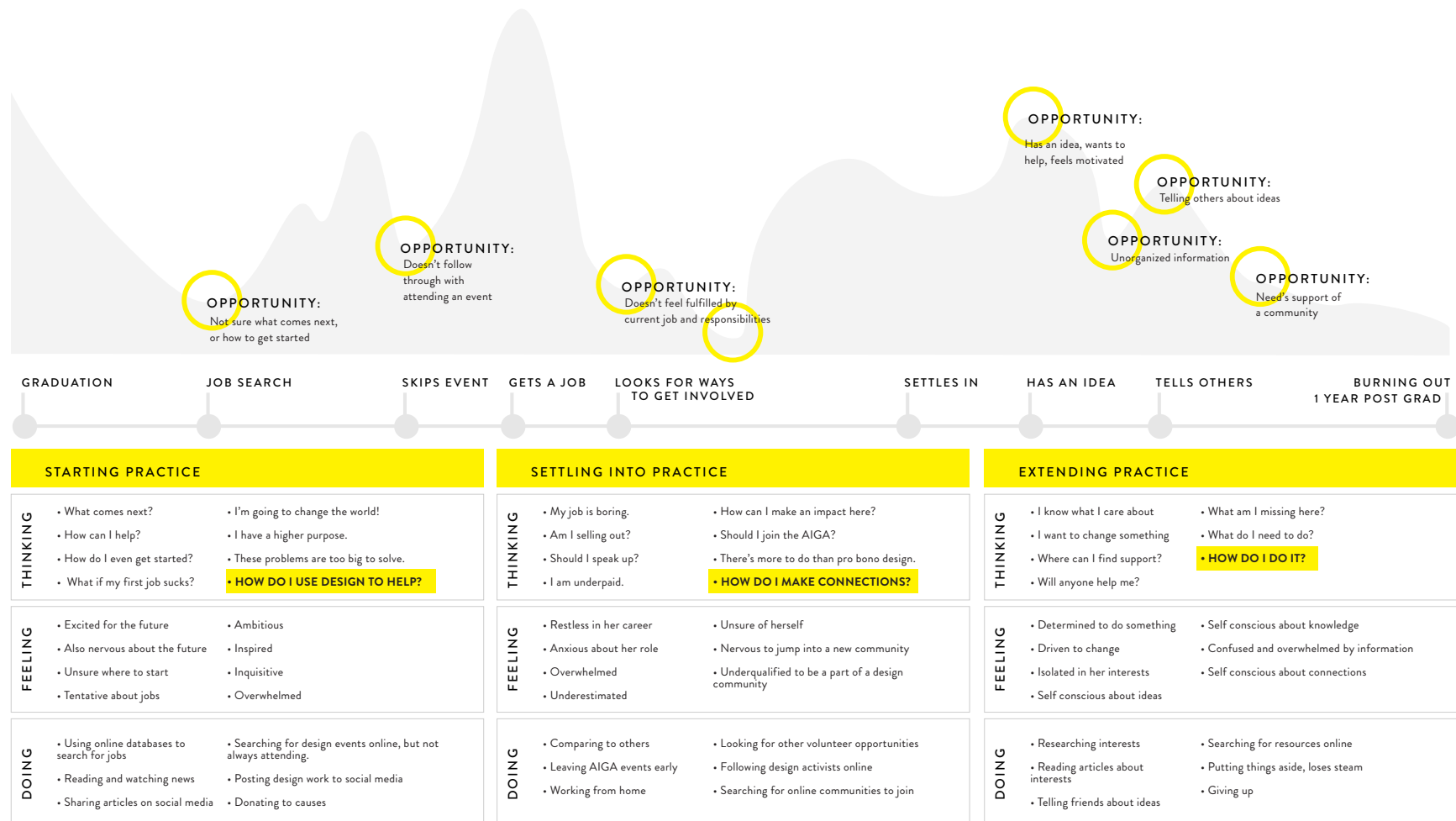
- + Uninvolved with the community since graduating.
- + While at state, was active in the GLBT group on campus.
- + Active member of 4H in her youth.
- + Frequently uses Instagram, Reddit, Dribbble and Twitch.
- + She is frustrated with “slacktivism” on social media.
- + Enjoys helping people on Twitch with her design skills.
- + Frustrated with complicated problems around her.
- + She fears “selling out” or working for “the man”.
- + She is self-conscious about her ability to contribute.

PETER, 24

Recently graduated from UW Madison in 2017.

Occupation: Graphic designer at a well-known agency in the area. Paid well, works normal hours.

- + Involved with the community through his job.
- + While at UW Madison, he wasn’t involved in with social issues whatsoever. He was just focused on his work.
- + Grew up playing league sports.
- + Active Twitter user, and often explores GitHub but hates Facebook.
- + Self-taught web developer, enjoys helping people out.
- + Fully realizes he has more potential to influence community and culture than he thought initially.
- + Wants to contribute with a purpose, but isn’t quite sure what that is yet.



Alternatively, a potential user journey based on the current experience presents opportunities for intervention but also methods for using an online community platform to anticipate and address potential pain points.



CONTROLLING

During controlling conversations, a manager-type figure tells a designer what to do and how to do it. A controlling exchange may be necessary when users are struggling to perform.

“A tells B what to do and how to do it”

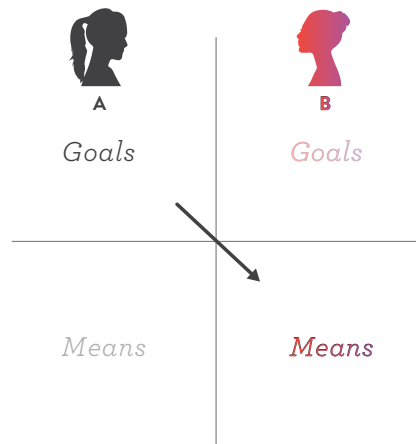


FIGURE 7: Diagram adopted from Hugh Dubberly after Paul Pangaro and Gordon Pask

MENTORING

When users are having a mentoring conversation, a more experienced user will set goals with a designer and also discuss the means used to reach the set goal.

“A sets the goal but discusses means with B”

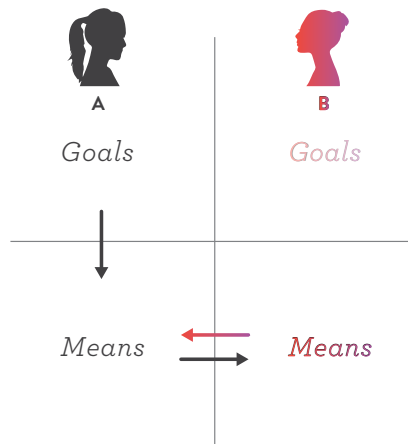


FIGURE 7.2: Diagram adopted from Hugh Dubberly after Paul Pangaro and Gordon Pask

DELEGATING

Conversations that are delegating occur when a manager-type figure sets goals with a designer but allows them to determine the means on their own.

“A sets the goal but lets B decide the means to reach it”

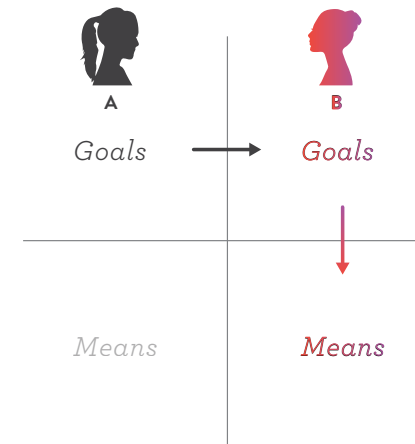


FIGURE 7.3: Diagram adopted from Hugh Dubberly after Paul Pangaro and Gordon Pask

DESIGN INVESTIGATIONS

Early Design Investigations

COLLABORATING

When designers have collaborative conversations, they address and pursue goals together. Inherently this model is less hierarchical and more reciprocal.

“A and B decide together on goals”

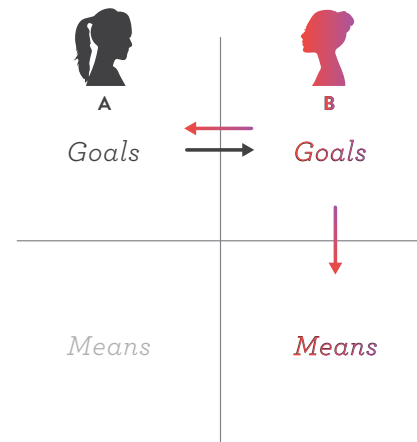


FIGURE 7.4: Diagram adopted from Hugh Dubberly after Paul Pangaro and Gordon Pask

Design involves making judgments, arguments, and decisions, all of which are forms of conversation. In other words, design itself reflects conversation (*Dubberly, Pangaro 33*). Therefore, a conversation is a requirement for making design decisions. Conversation allows for learning new concepts, sharing, learning, productivity and agreeing upon goals and context. The process is far more complicated than communication, which primarily recognizes the context of messages and following interpretation. Conversation is a more intricate process where participants make exchanges, agree, and act (*Dubberly and Pangaro*).

Conversation is crucial to building online communities. Hugh Dubberly and Paul Pangaro's research into cybernetics and conversation has proven to be central to my work.

Dubberly describes four architectures of conversations, based on research by Paul Pangaro and Gordon Pask (**Figure 7-7.4**). Conversations are controlling, guiding, delegating, or collaborating. In the case of this research, an online platform should specifically provide opportunities for collaborative conversations but also space for a variety of interactions.

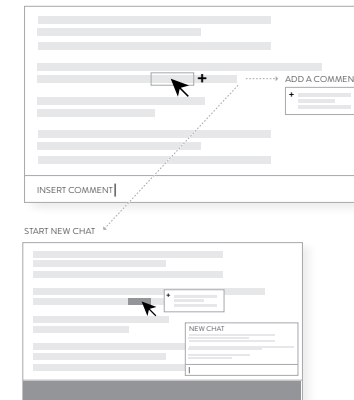
Exploring Architecture of Conversation

The following wireframes explore messaging tools that are inherently conversational. In general, my explorations investigate aspects of agency in that they examine a user's ability to control or influence decisions and his/her community at large. The primary focus of these studies address agency, many wireframes prompt exploration of other aspects of online communities (life goals, historical consciousness, organizational structure, and relationships).

CONVERTING CONVERSATIONS



INTERRUPTION



PROMPT TO ENGAGE



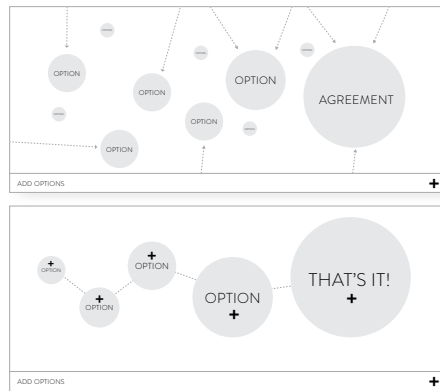
FORUM FORESIGHT



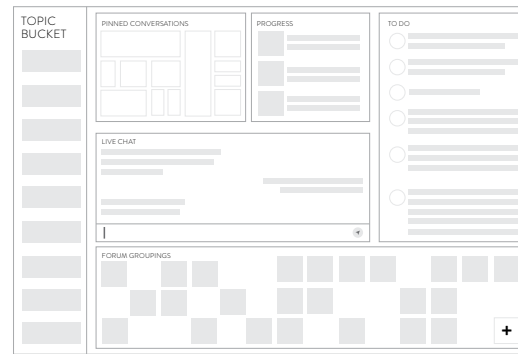
SYNCHRONOUS & ASYNCHRONOUS INTEGRATION



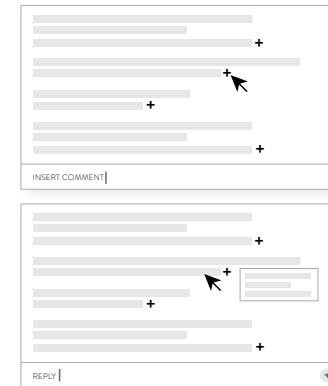
MAKING DECISIONS VIA CONVERSATION



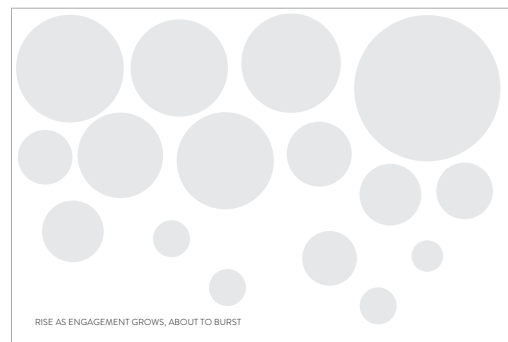
DASHBOARD



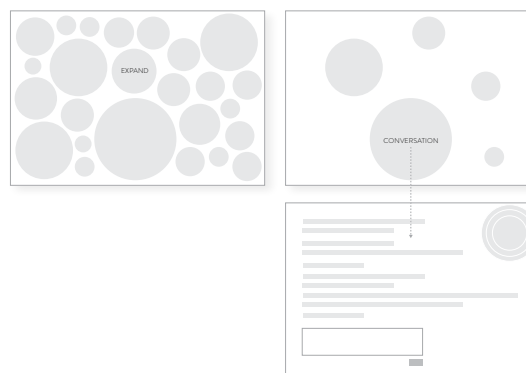
INTERRUPTION AND CONTROL



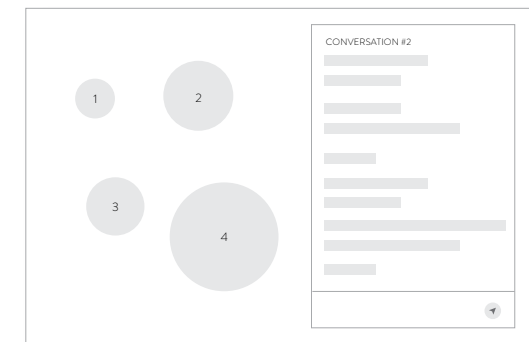
MEASUREABLE ENGAGEMENT



TOPIC SATURATION



MEASURABLE CONVERSATION

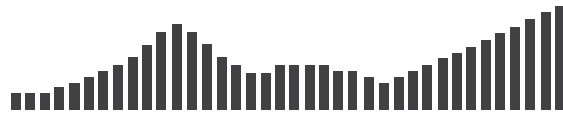


Exploring Visual Workspace Interfaces

Through early design explorations, I determined that the platform should be designed to facilitate conversations that are innately collaborative. In particular, the design of the space should reflect the members of the community, in this case, graphic designers. I concluded that a visual workspace interface that incorporates various levels of activity for collaborators working together would be a conducive online space for designers to meet, coordinate, and collaborate.

LINEAR INTERFACE

I began by exploring different models of visual workspaces. A linear workspace interface affords for controlled expression of life goals through a variety of tools organized into phases. This style of interface is mainly concerned with knowledge sharing, life goals, agency, and organizational structure.



SUGGESTS:

Levels within a timeline

OPPORTUNITIES:

Display engagement, progress levels

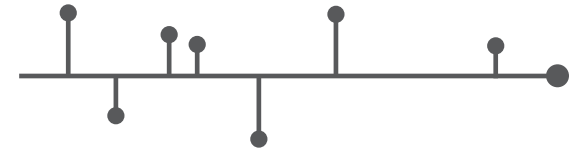


SUGGESTS:

Phases within a timeline

OPPORTUNITIES:

Look back at previous progress, look ahead



SUGGESTS:

Important events in a timeline

OPPORTUNITIES:

Mark positive or negative progress



SUGGESTS:

Changing levels, illustrates time and breadth

OPPORTUNITIES:

Show progress through time



SUGGESTS:

Extent of phases

OPPORTUNITIES:

Capture snapshot of work, compare phases



SUGGESTS:

Smaller phases within larger contexts

OPPORTUNITIES:

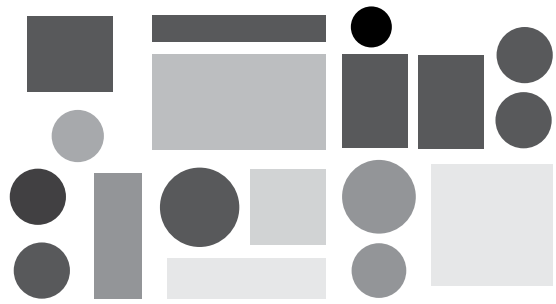
Breakdown each phase

Exploring Visual Workspace Interfaces

CANVAS INTERFACE

Alternately, a canvas workspace interface allows for thorough expression of life goals through a variety of tools that are simultaneously used by contributors in a collaborative space.

This structure is styled as a “free-for-all” and has little organization; rather users are free to create unique organizational systems. This structure may afford more opportunities for networking and also support stronger relationships between users. Depending on the topic or members involved, the organizational structure and conversation flow would always be unique. A canvas structure creates possibilities for discouraging ownership so that members of the community feel motivated to participate and act upon what they learn comfortably.

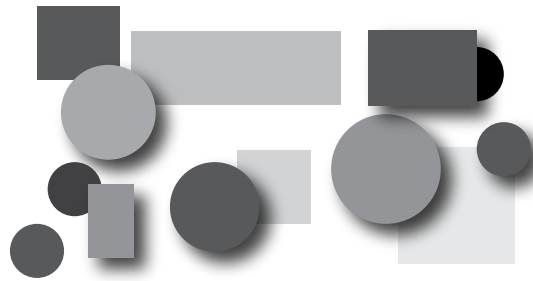


SUGGESTS:

Various tools, set organization

OPPORTUNITIES:

Arrange and rearrange content

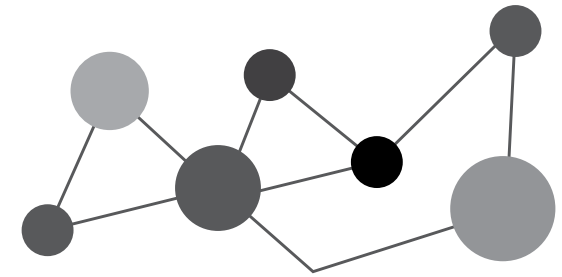


SUGGESTS:

Layers based on history

OPPORTUNITIES:

Cover up with newer content

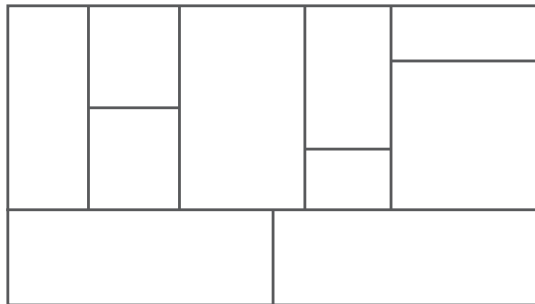


SUGGESTS:

Drawing connections between existing content

OPPORTUNITIES:

Linking, validation, and access to more resources

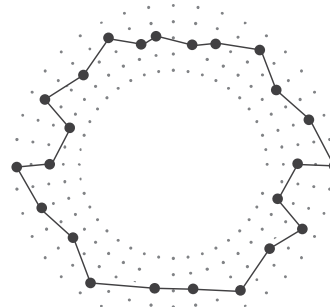


SUGGESTS:

Set canvas to work within

OPPORTUNITIES:

Work within present constraints



SUGGESTS:

Building on top of previous content

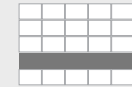
OPPORTUNITIES:

Versioning system and history

Exploring Searching Tools

Research shows that users are often unwilling to use search engines properly to find the most relevant information (Azpiazu, Dragovic, Pera, et al.). Frequently they settle for simple keywords or only explore the first page of results. Users also tend to end their search when the results do not meet their expectations. Therefore, Searching Tools must be familiar and comfortable to interact with, especially now that changing technology offers more affordances for users to interact with their search results (Rieger). Ultimately, the goal of searching is to explore options or find a match. Ordinarily, searching tools exist as search engines, directories, or repositories. I wanted to explore how different variants of search avenues support diverse aspects of online communities and strategies for designing tools with conversational qualities.

TASK: SEARCH



Searching Tools *that support*
Agency, Life Goals, Historical Consciousness,
Organizational Structure, Relationships

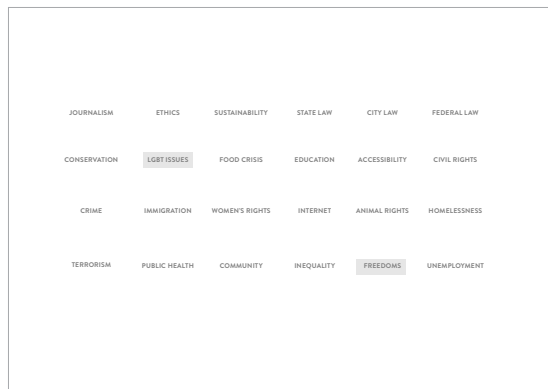


FIGURE 8: Wireframe based on Paul Pangaro's ThoughtShuffler

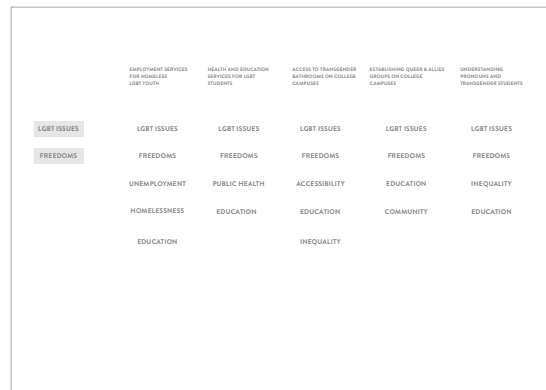


FIGURE 8.2: Wireframe based on Paul Pangaro's ThoughtShuffler

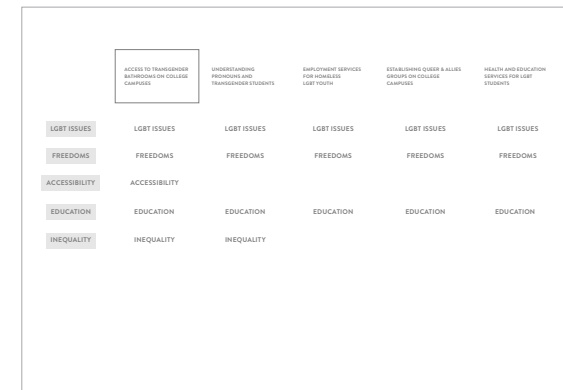


FIGURE 8.3: Wireframe based on Paul Pangaro's ThoughtShuffler

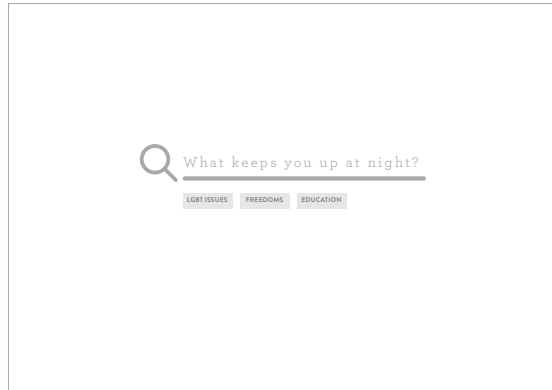


FIGURE 9: Wireframe of predictive text

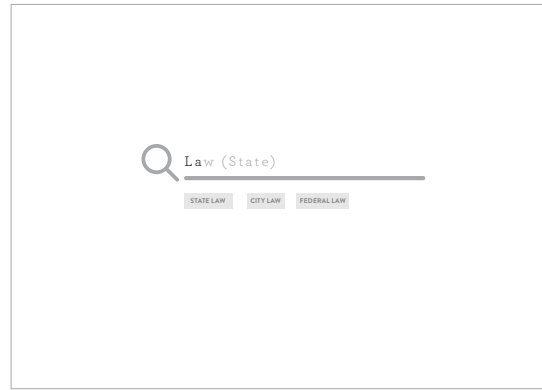


FIGURE 9.2: Wireframe of predictive text

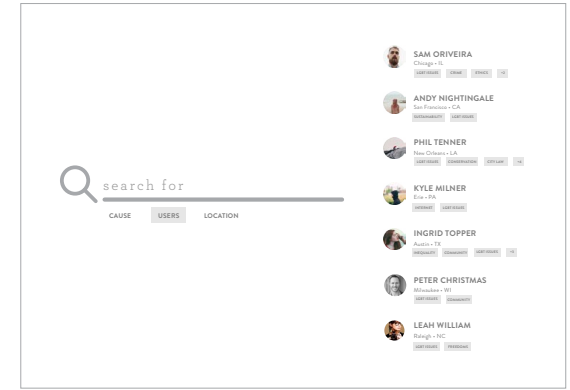


FIGURE 9.3: Wireframe of predictive text and search filters

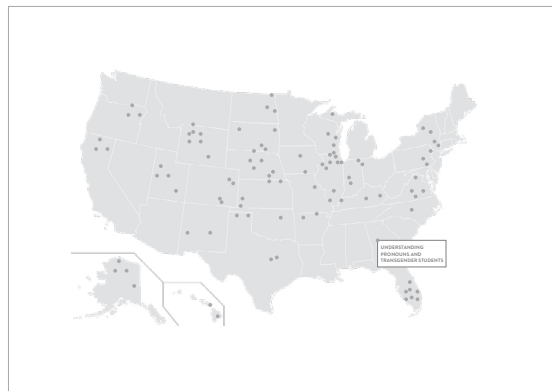


FIGURE 10: Wireframe of geographical search

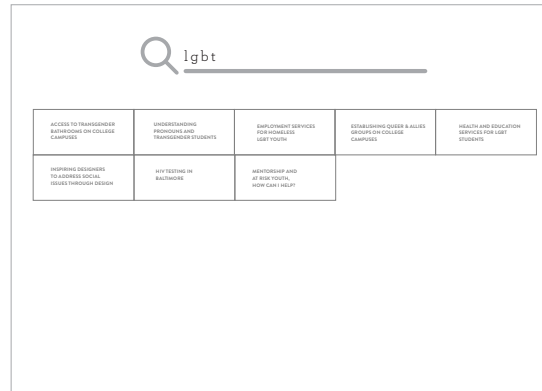


FIGURE 11: Wireframe of topic search

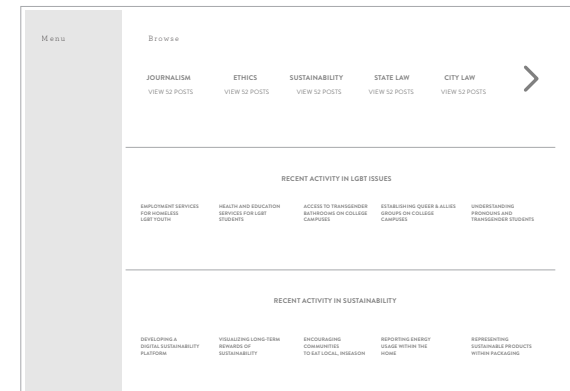


FIGURE 12: Wireframe of search dashboard

Animated Explorations

Based on my understanding and my initial design investigations, I wanted to explore further a visual workspace interface that reflected a canvas, or non-linear structure. Using animation allowed for prototyping robust interactions between users that more accurately reflected the function of the platform. Each animation explores a specific task, which addresses pain points and moments of opportunities in the speculative user journey. The animations explore distinct online activities, but also considered specific aspects of community and tool categories from the conceptual framework.

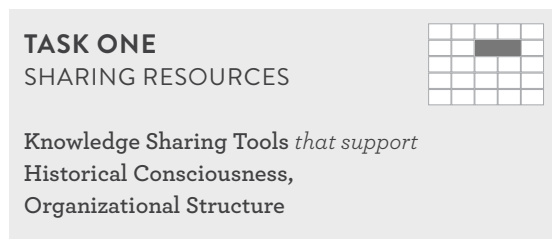
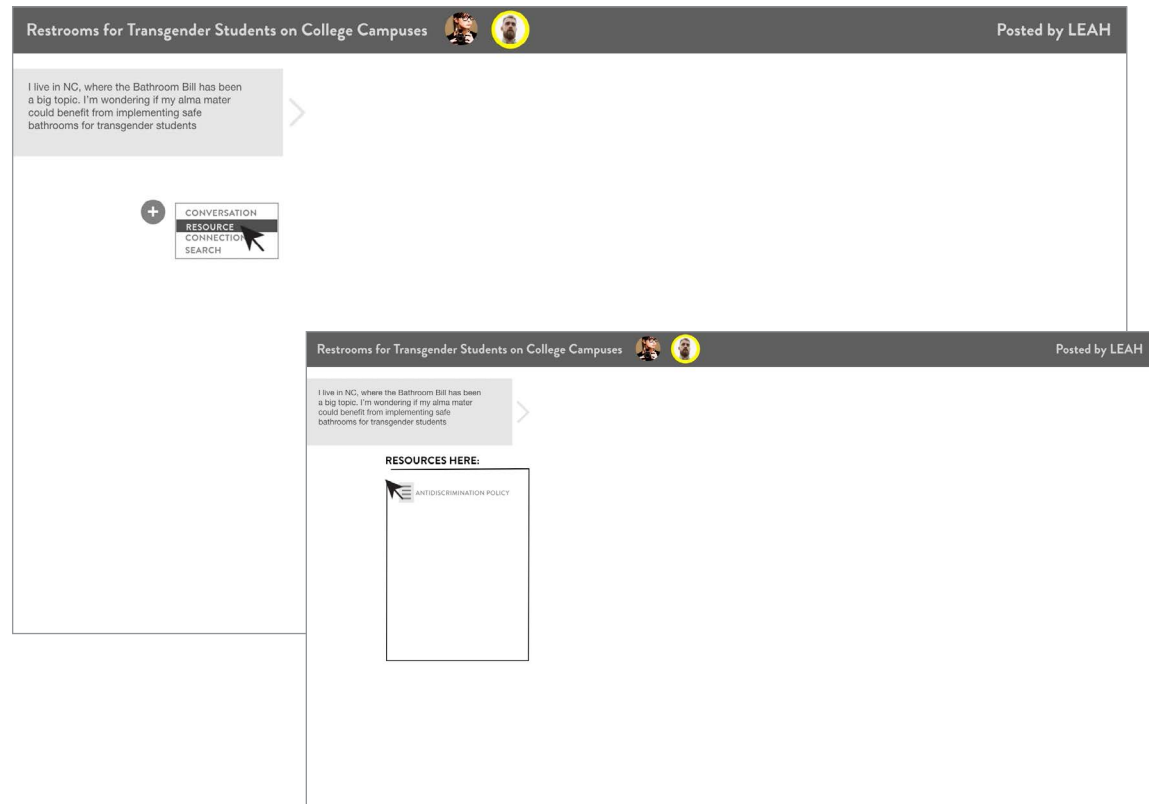
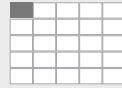


FIGURE 13: Resource sharing tool allows users to drag previously saved resources onto a canvas interface, as well as draw containers for future use by other community members

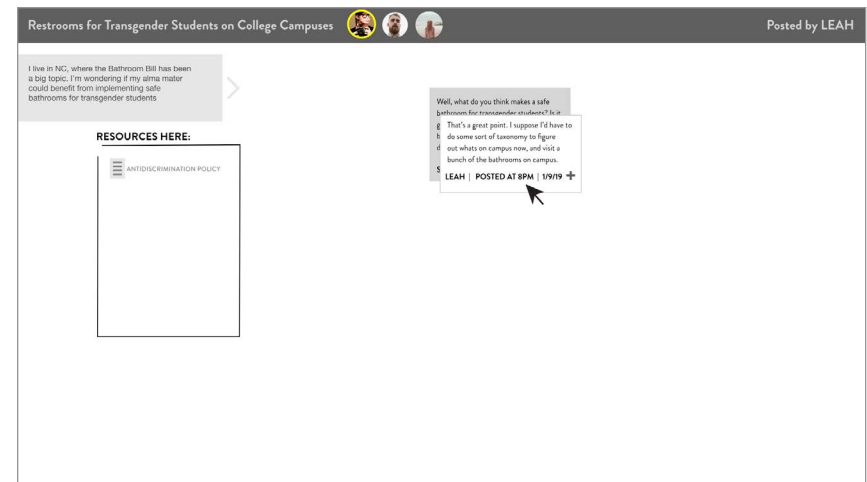
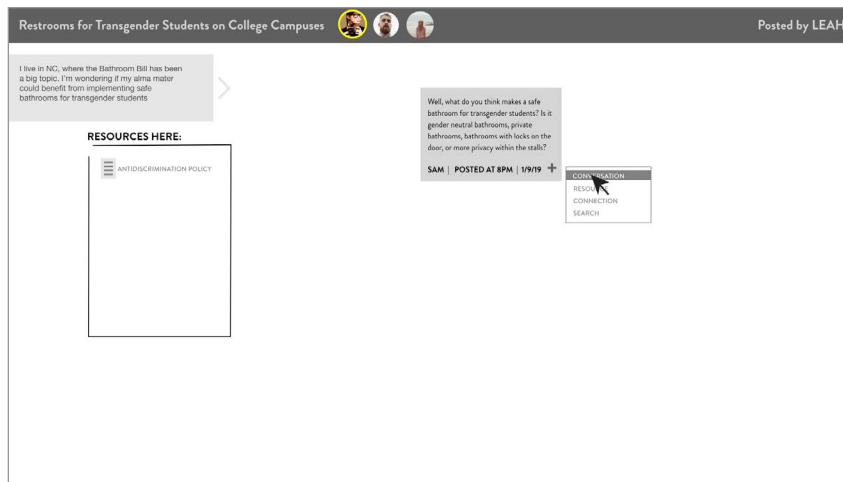
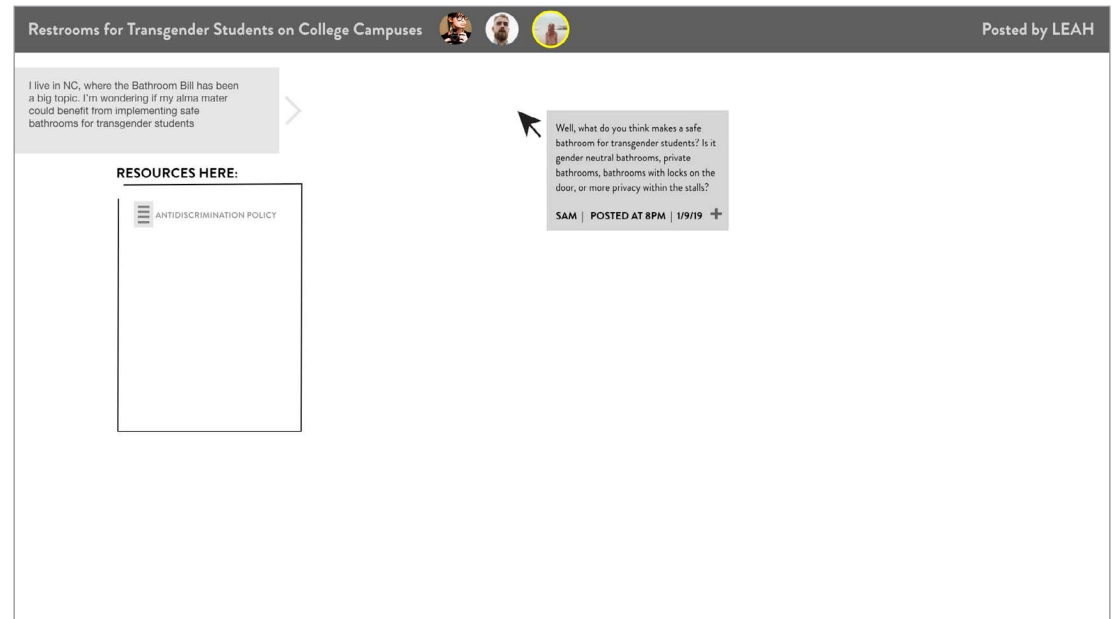


TASK TWO MESSAGING, REPLYING, CONNECTING



Messaging Tools *that support Agency*

FIGURE 14: Messaging tools that give users opportunities to comment on previous statements. Users drag comment boxes across the space and connect them with related threads.



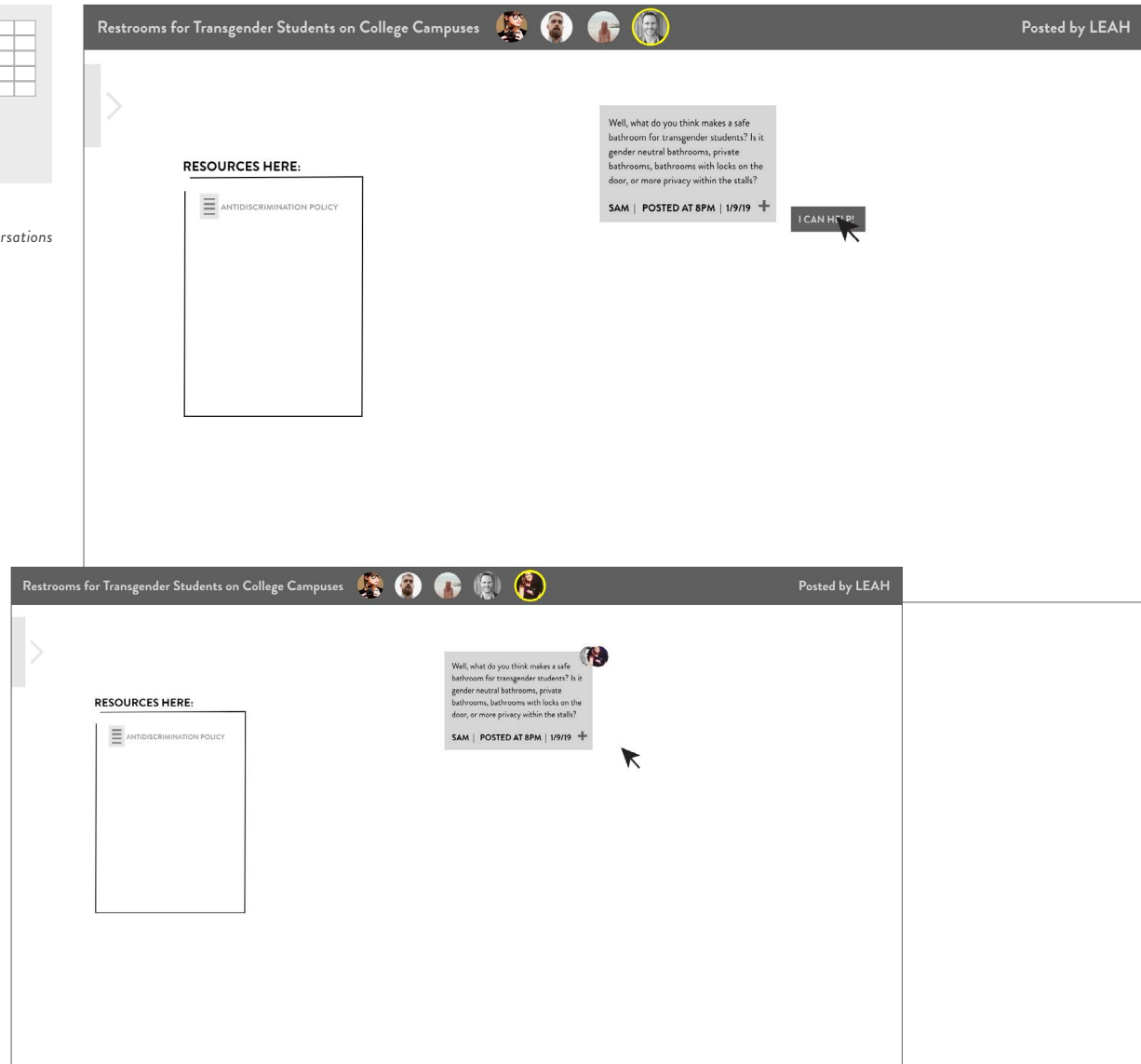
TASK THREE

MESSAGING, REPLYING, CONNECTING



Messaging Tools *that support* Life Goals

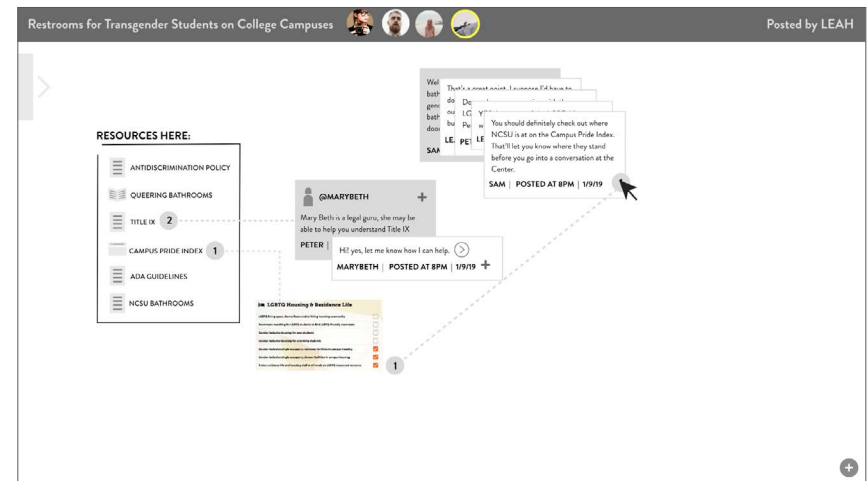
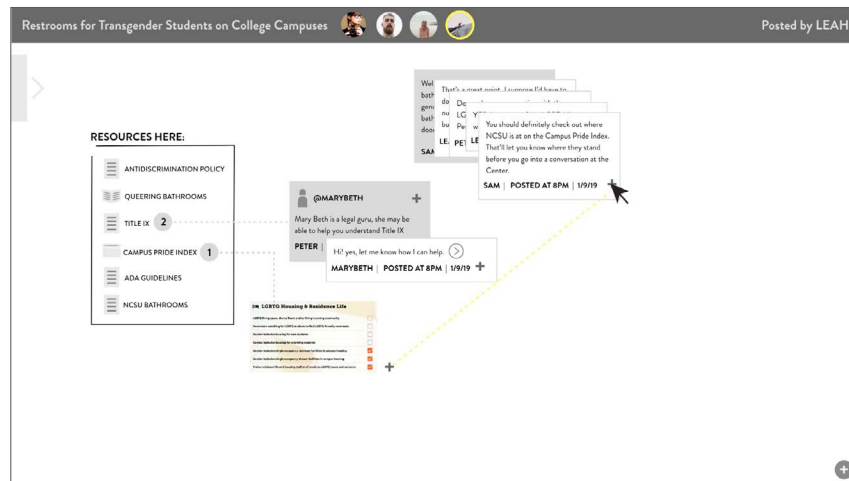
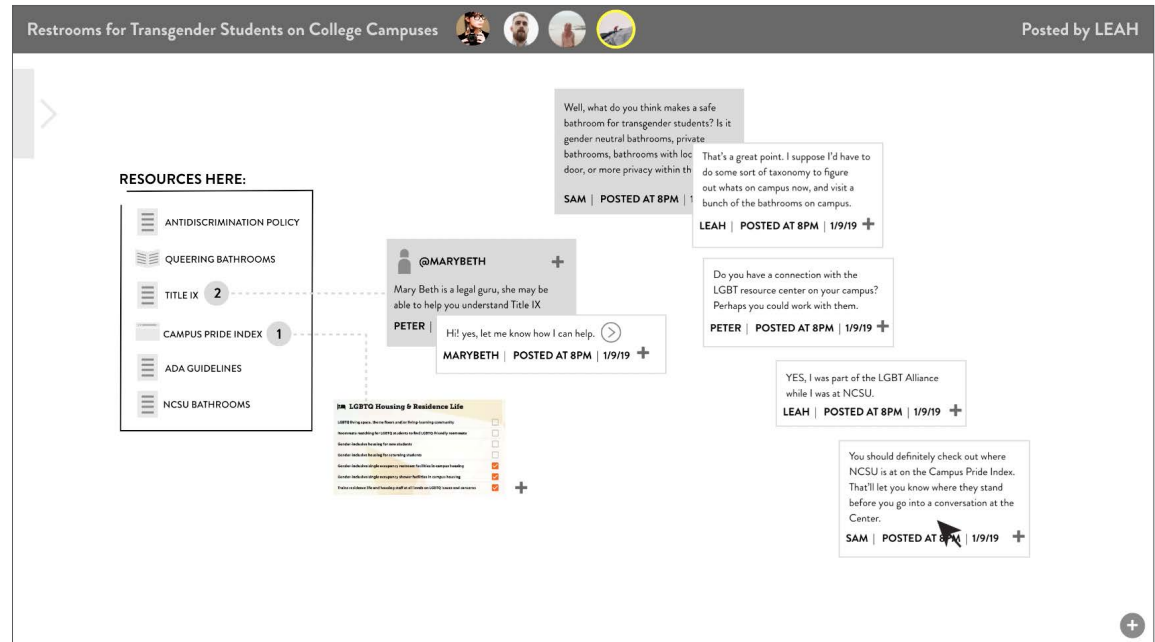
FIGURE 15: Messaging tools for users to “opt in” to certain conversations and commit to engage with fellow community members



TASK FOUR CREATING A CONNECTION

Validation and Input Tools *that support*
Organizational Structure

FIGURE 16: Messaging tools that give users opportunities to comment on previous statements. Users drag comment boxes across the space and connect them with related threads.

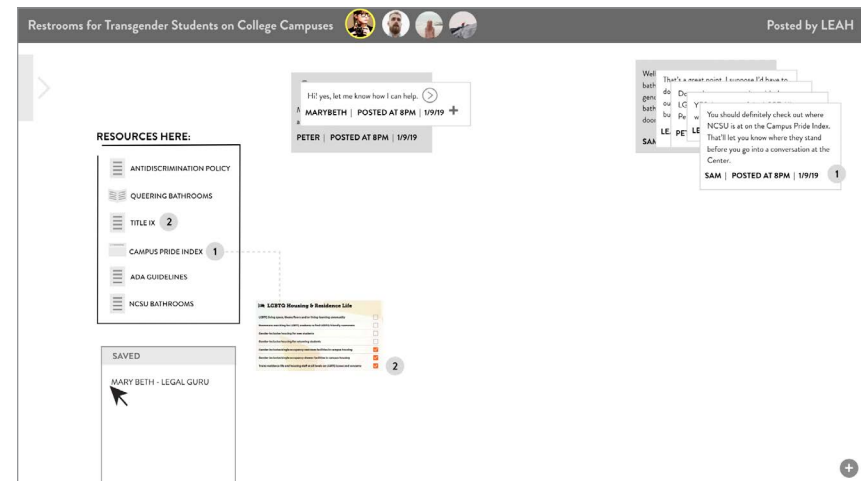
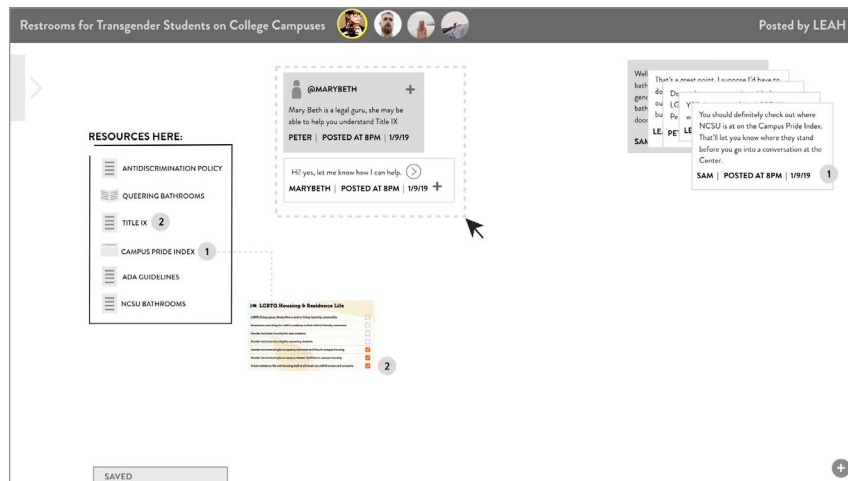
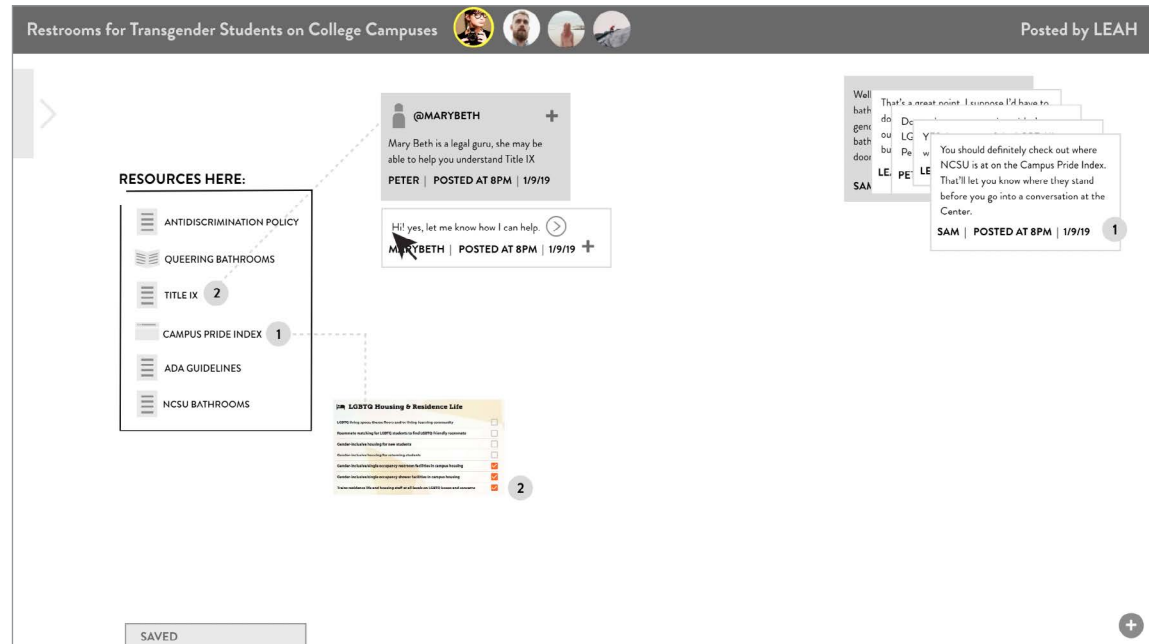


TASK FIVE CAPTURING A RESOURCE



Validation and Input Tools *that support*
Life Goals

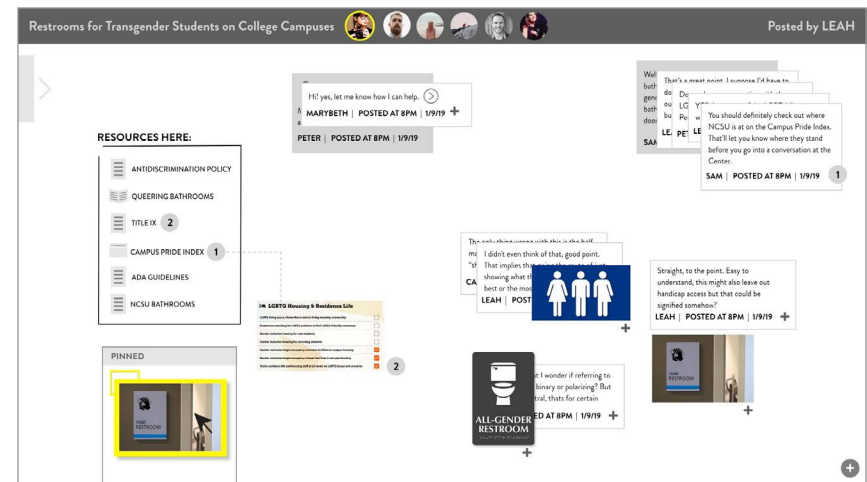
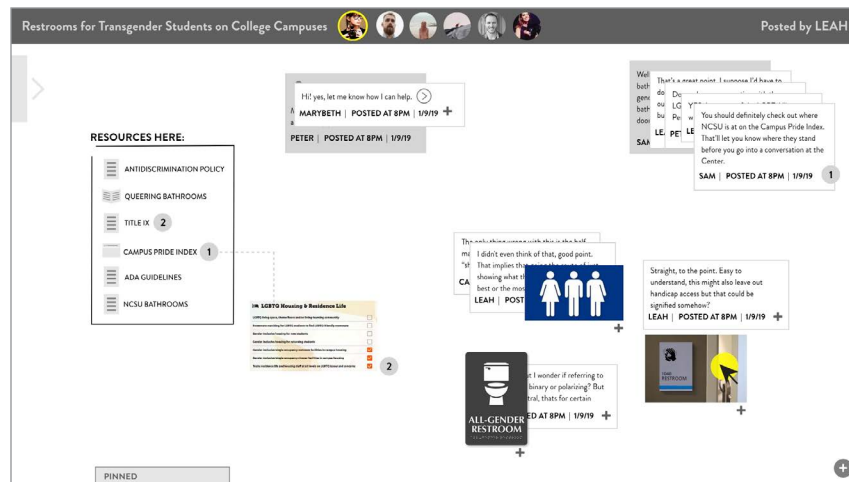
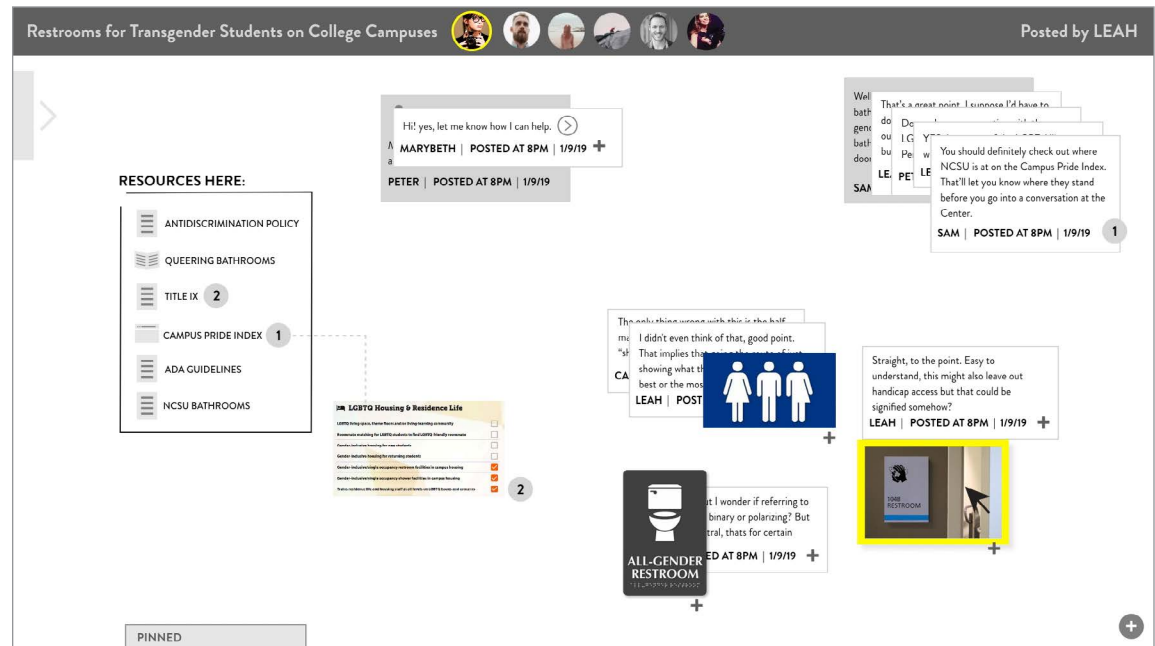
FIGURE 17: Validation tool allows a user to take a “screenshot” of a specific conversation which then saves to their personal folder for later. Users can also rearrange conversations before saving.



TASK SIX “PINNING” A RESOURCE

Knowledge Sharing Tools *that support*
Life Goals, Historical Consciousness

FIGURE 18: Validation tool that gives community members the opportunity to publicly save, or “pin” resources to note their importance or impact



A 5x5 grid with the second cell in the second row shaded.

[illegible]

Figure 1: A screenshot of a social media interface showing a discussion about campus resources for transgender students. The interface includes a header with the name "Posted by LEAH", a list of resources under the heading "RESOURCES HERE:", and several posts from users like MARYBETH, PETER, and SAM. The posts contain text about checking the Campus Pride Index and visiting the Campus Pride Index. The interface also shows a sidebar with a list of resources and a bottom section with a "SAVED" button. The interface is designed to be accessible, with a focus on providing information about campus resources for transgender students.

Reflection

The early prototypes and design investigations intended to understand categorically ways users interact with their community through an online digital platform, especially when concerned with established goals, all while keeping in mind principles of conversation. Through designing wireframes and animations, I came to two conclusions. The first is that conversations occurring within this platform are crucial interactions that lead towards success. In this case, success is engagement, solidarity, and a sense of legitimacy. Conversations are what is currently missing from popular models available to users. My understanding is that an essential characteristic of this research is the conversation itself, and how it is represented within an online community platform. The second conclusion is that the public understands online communities in distinctive ways. Often they are represented as social media platforms or a message boards. Most online communities live in digital spaces similar to one another, and they share common characteristics and features. Upon reflection, I sought to remove previously established schemas of online communities from this investigation and explore what else it could be.

Exploring Online Conversation Schema

The following collection of visual studies explored unfamiliar schemas and metaphors that represented my understanding of “real-life” conversations. In particular, I was interested in conversations that occur between small groups of people in a crowded place. To best visualize conversations I considered real-life scenarios where community members enter into spaces occupied by many people that are already engaged in various ongoing discussions, often observed within conferences, interest group meeting areas, gatherings, and community events. A participant will often find themselves entering a room or space and attempting to determine the most effective way to get involved or interrupt one of the conversations happening around them.

I explored a variety of metaphors and schemas that represent the familiar scenario mentioned earlier. Investigations included visual representations of conversational growth and development, building complex conversational structures, discussion flow and community influence.

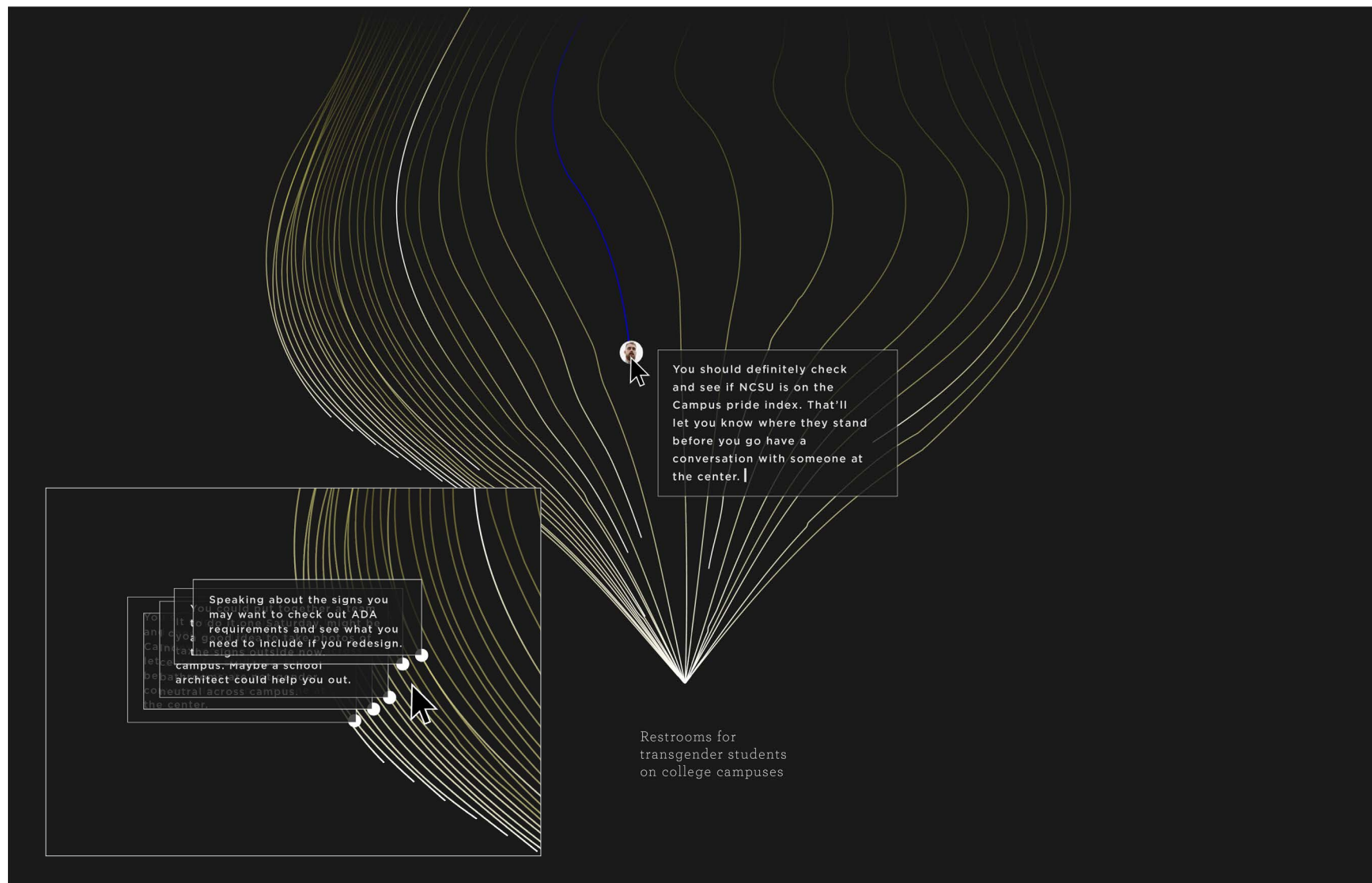


FIGURE 20: Visual schema of conversation representing comments as threads that push and gather

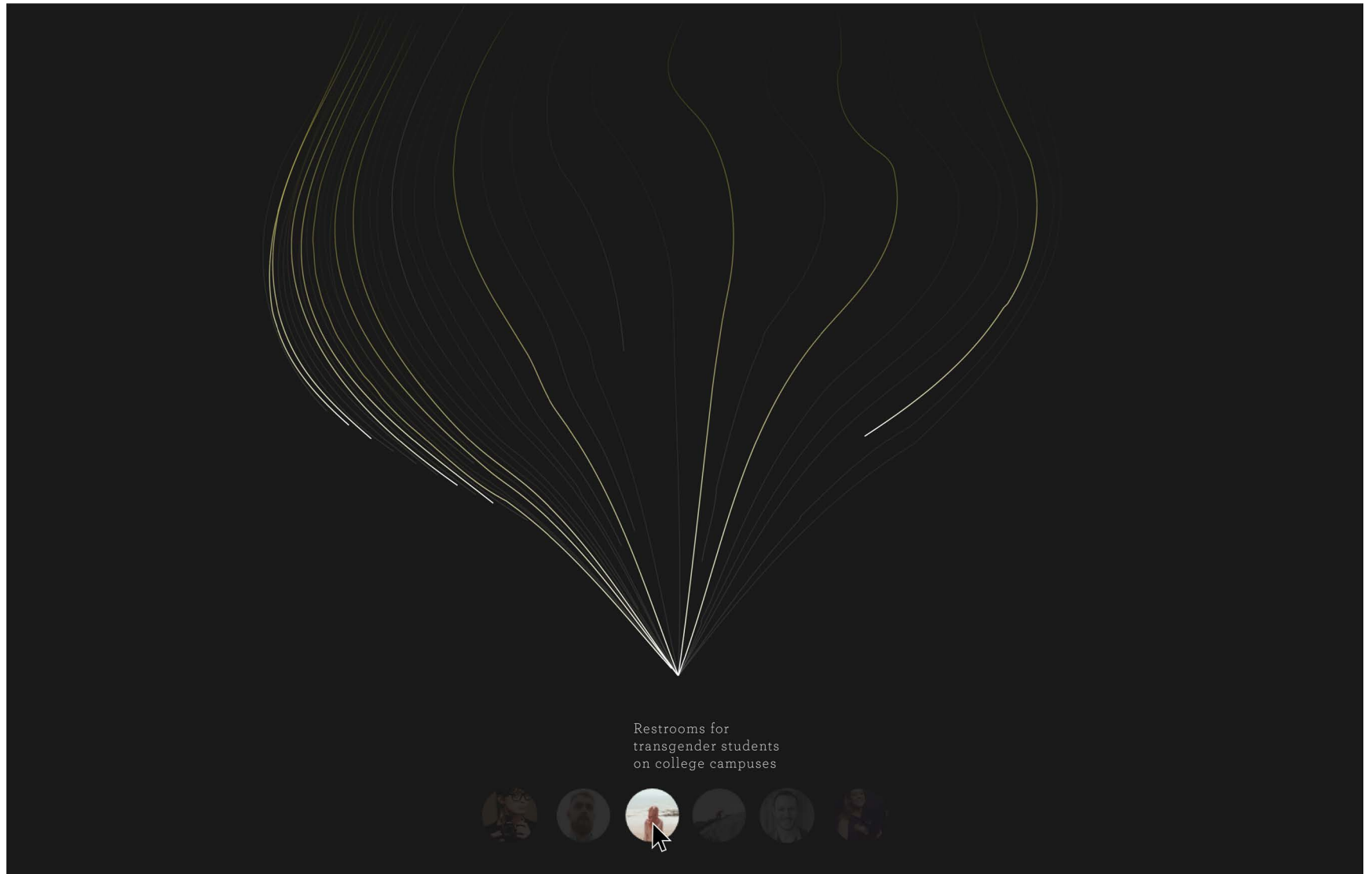


FIGURE 20.2: *Visual schema of conversation representing comments as threads that push and gather*

Restrooms for transgender students on college campuses

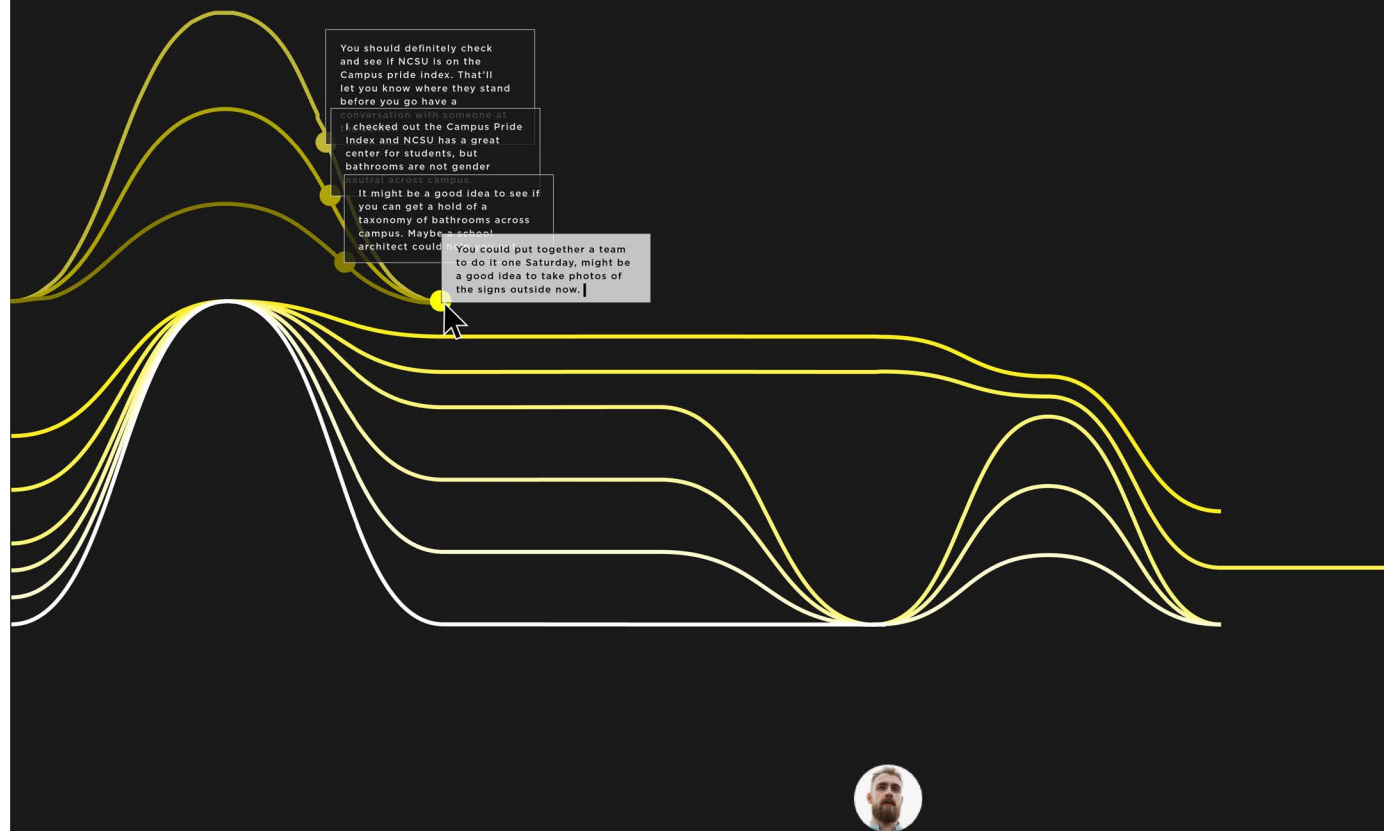


FIGURE 21: Visual schema of conversation using sound wave metaphors to represent member influence

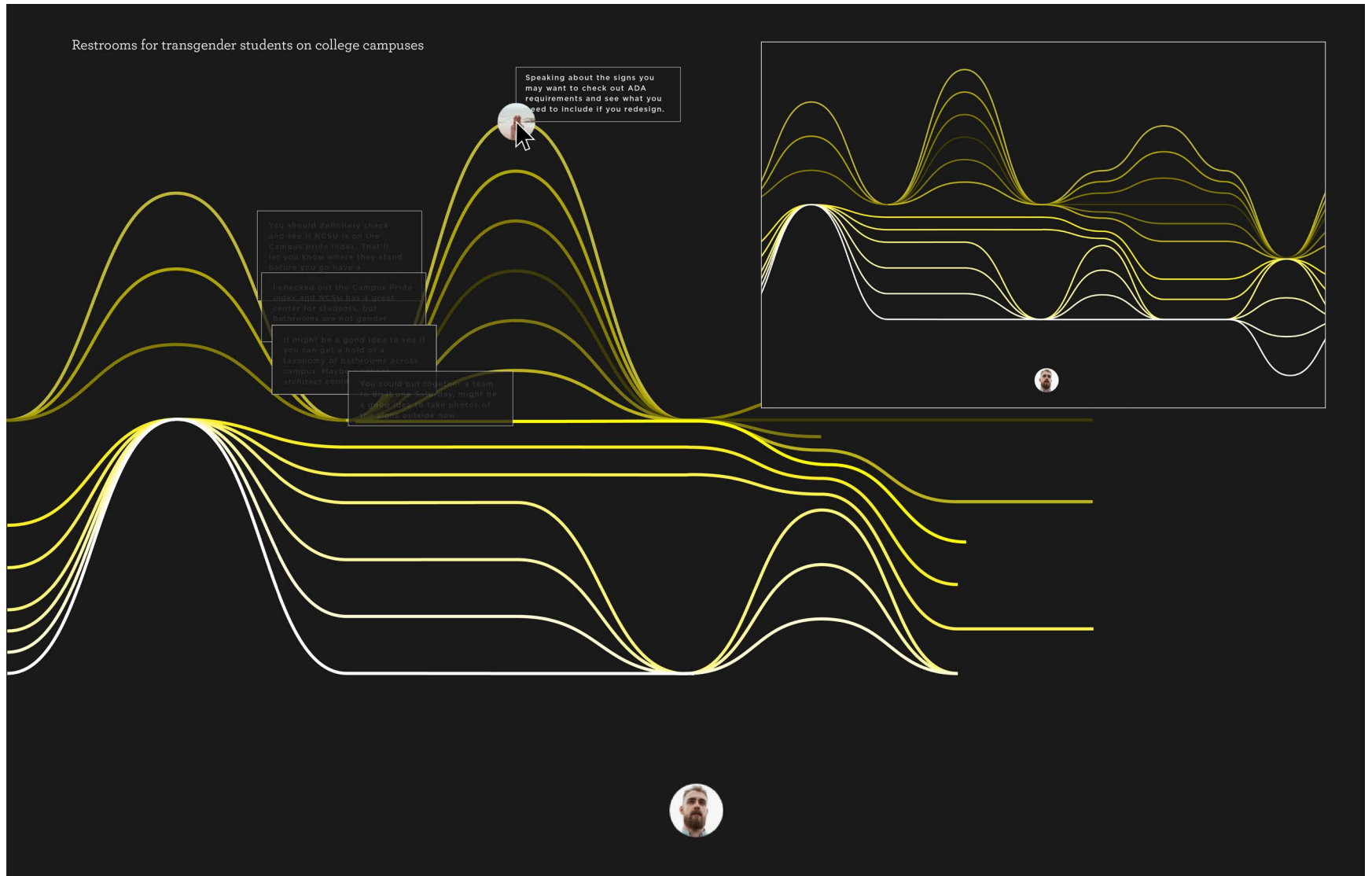
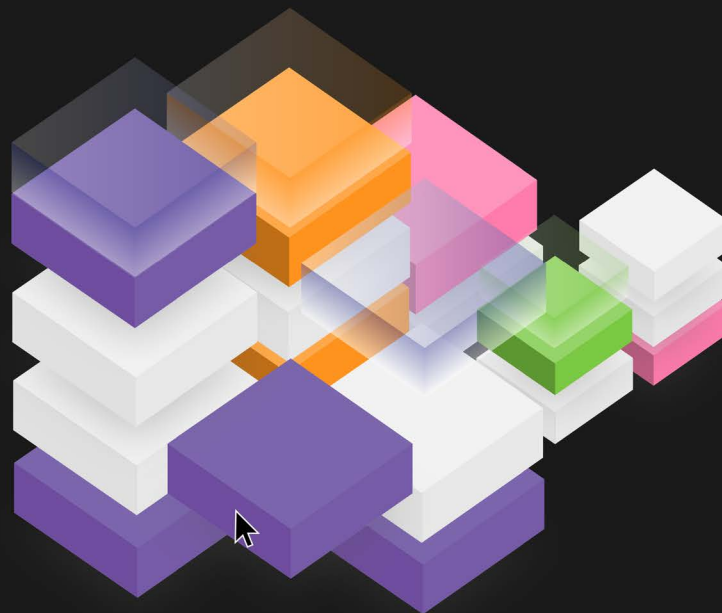


FIGURE 21.2: Visual schema of conversation using sound wave metaphors to represent member influence

Restrooms for transgender students on college campuses



You should definitely check and see if NCSU is on the Campus pride index. That'll let you know where they stand before you go have a conversation with someone at the center.



I checked out the Campus Pride Index and NCSU has a great center for students, but bathrooms are not gender neutral across campus.



It might be a good idea to see if you can get a hold of a taxonomy of bathrooms across campus. Maybe a school architect could help you out.



You could put together a team to do it one Saturday, might be a good idea to take photos of the signs outside now.



Speaking about the signs you may want to check out ADA requirements and see what you need to include if you redesign



FIGURE 22: Visual schema of building conversations, giving members opportunities to compartmentalize, sort, add, rearrange and rebuild.

Restrooms for transgender students on college campuses

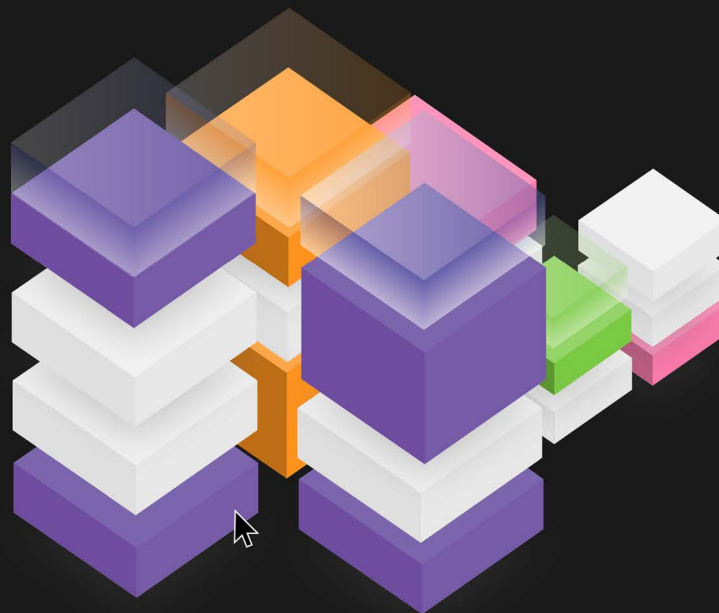


FIGURE 22.2: Visual schema of building conversations, giving members opportunities to compartmentalize, sort, add, rearrange and rebuild.

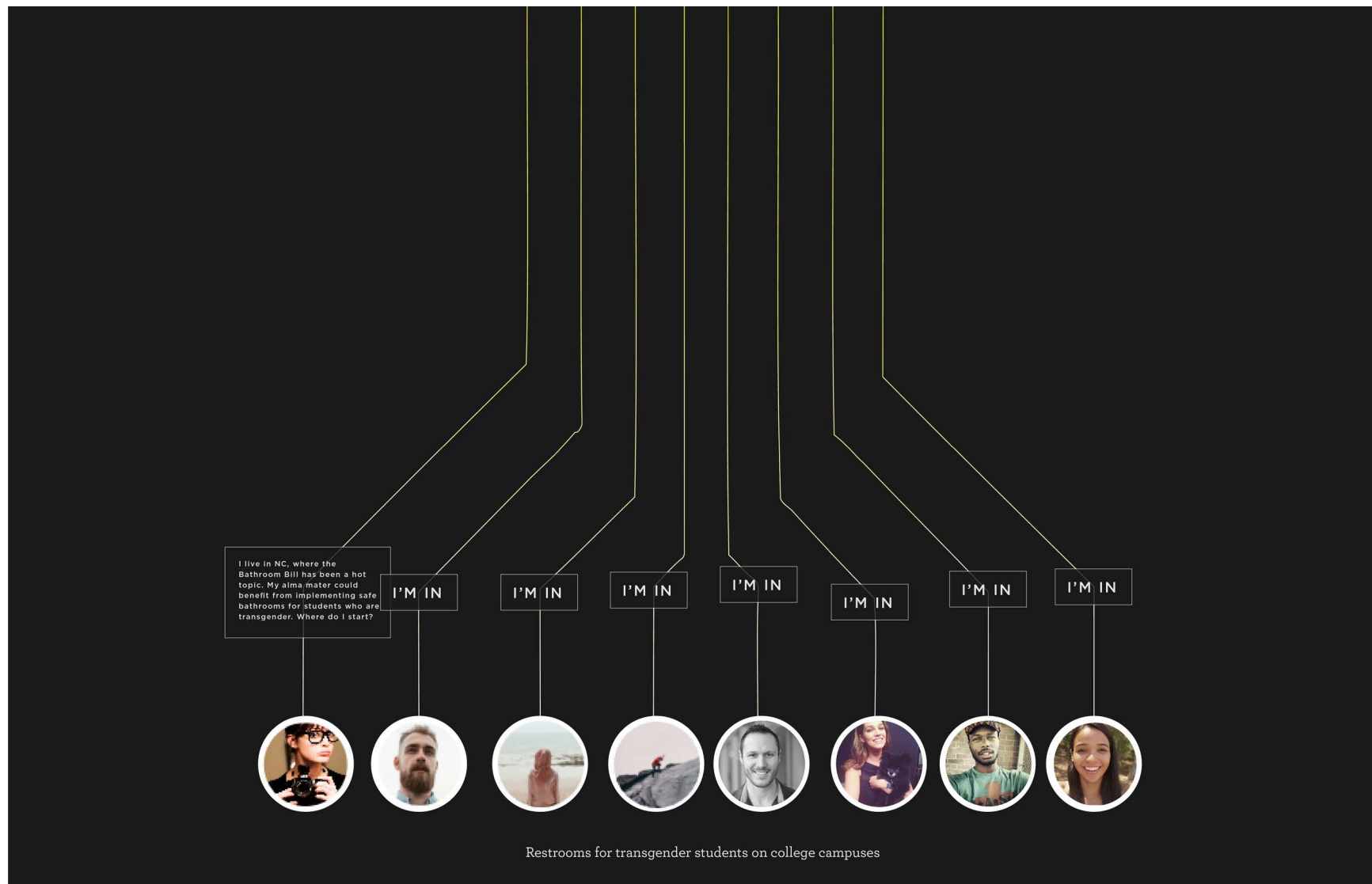


FIGURE 23: Visual schema of a growing conversation, where members commit to engage and then contribute to different branches of discussion.

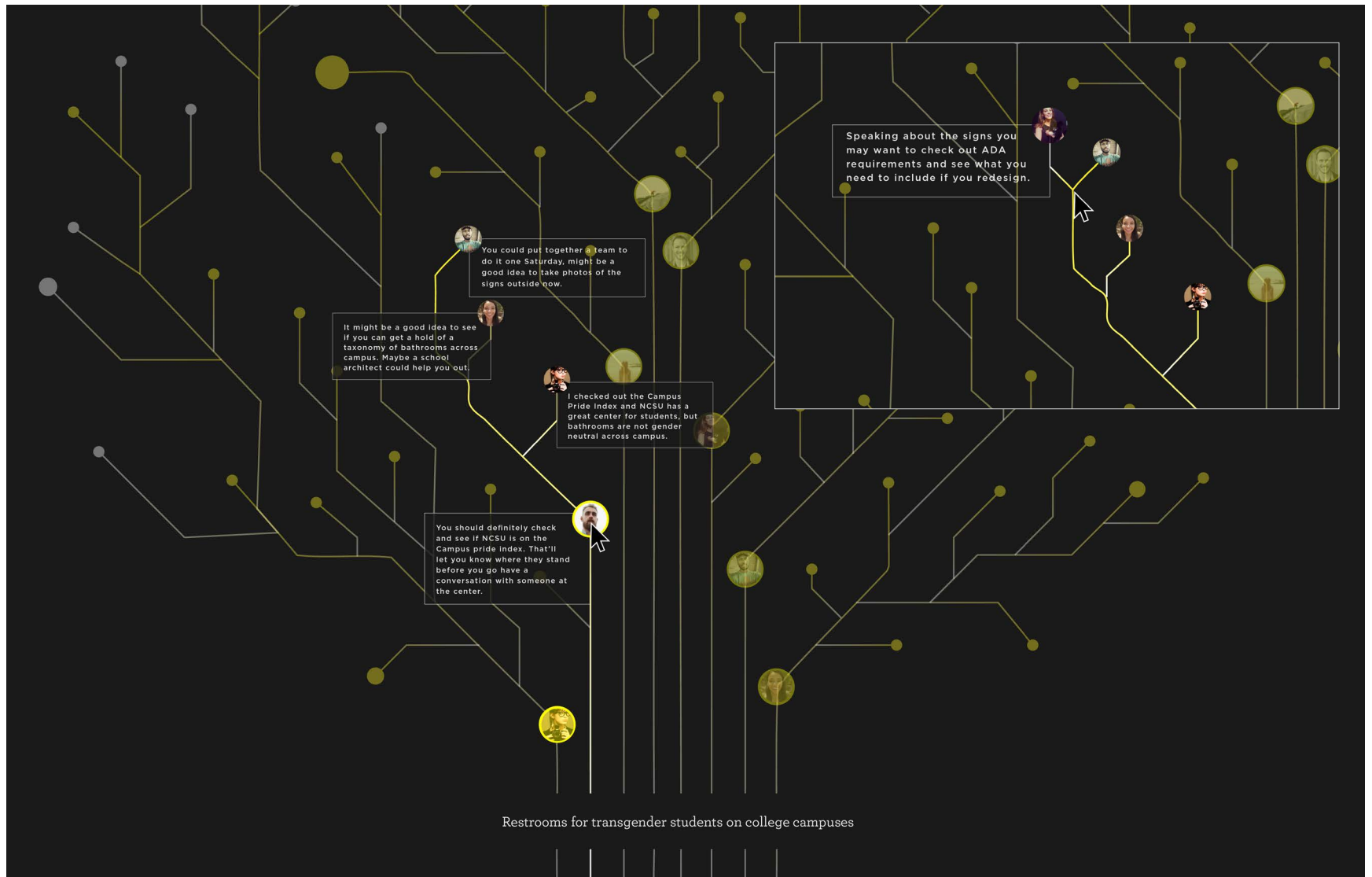


FIGURE 23.2E: Visual schema of a growing conversation, where members commit to engage and then contribute to different branches of discussion.

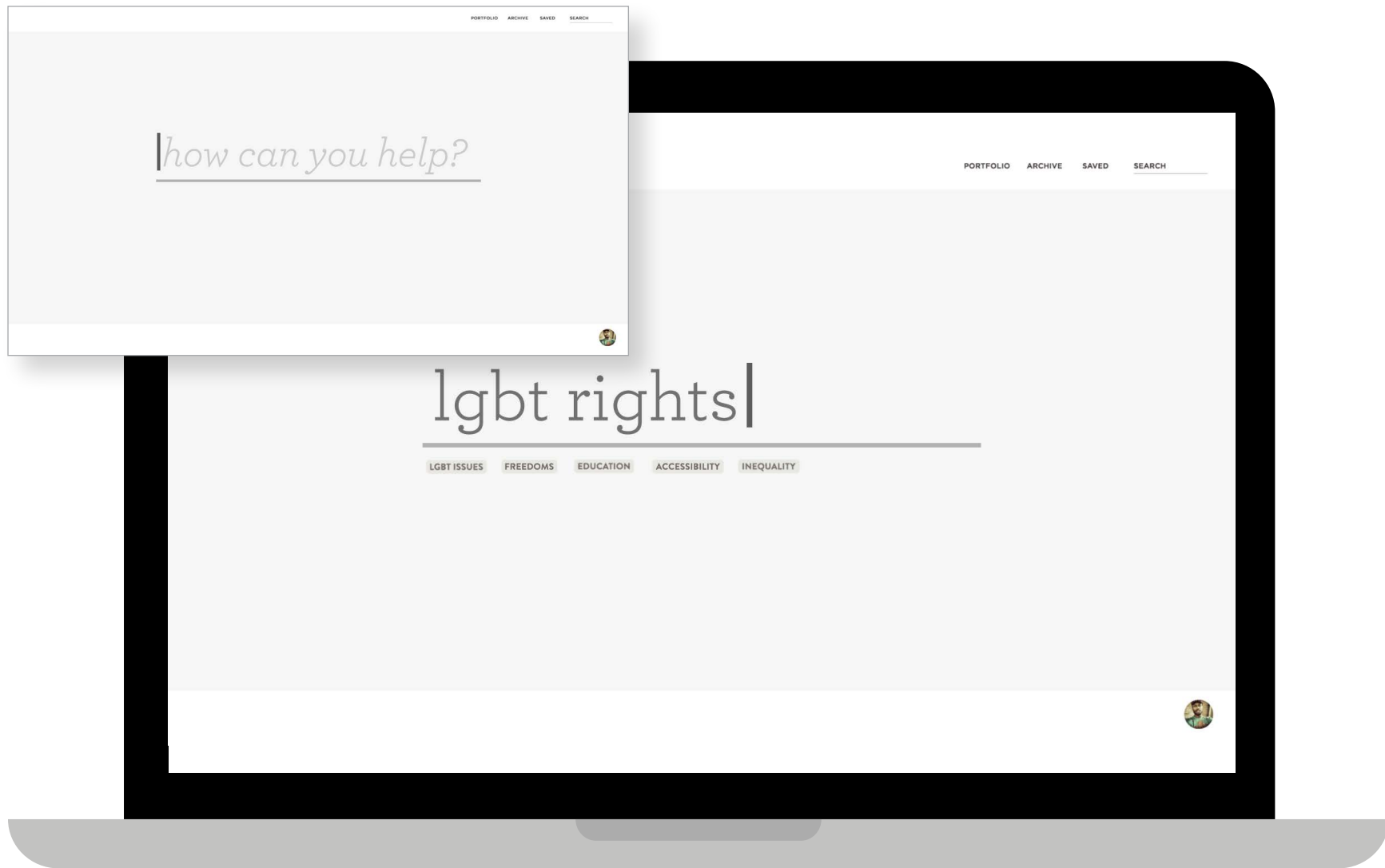
FINAL SCENARIO

Bringing it Together

A non-linear workspace interface would allow participants to utilize a collection of available tools and features simultaneously. It also enables users to engage in numerous conversations concurrently, and support multiple conversational threads across different discussions within one overarching topic. A platform that supports a free-flowing workspace also allows for one-of-a-kind exchanges shaped by unique groups.

Additionally, engaging users as co-creators encourages participation and interest in numerous available topics and conversations. Considering the users are designers, they should have the opportunity not only to contribute content but also form. By incorporating possibilities to manipulate form, participants may also be prompted to collaborate in unfamiliar ways that widen individual levels of participation. Conversational interfaces come packed with pre-established schemas of understanding that communicate specific expectations to community members. Approaching conversation and collaboration with a unique visual schema widens the circle of participation, in particular for “newbies” who enter an ongoing conversation and need to be “caught-up.” Additionally, a strange or unfamiliar visual representation of discussion prompts users to explore ideas and methods of collaboration through familiar tools and features.

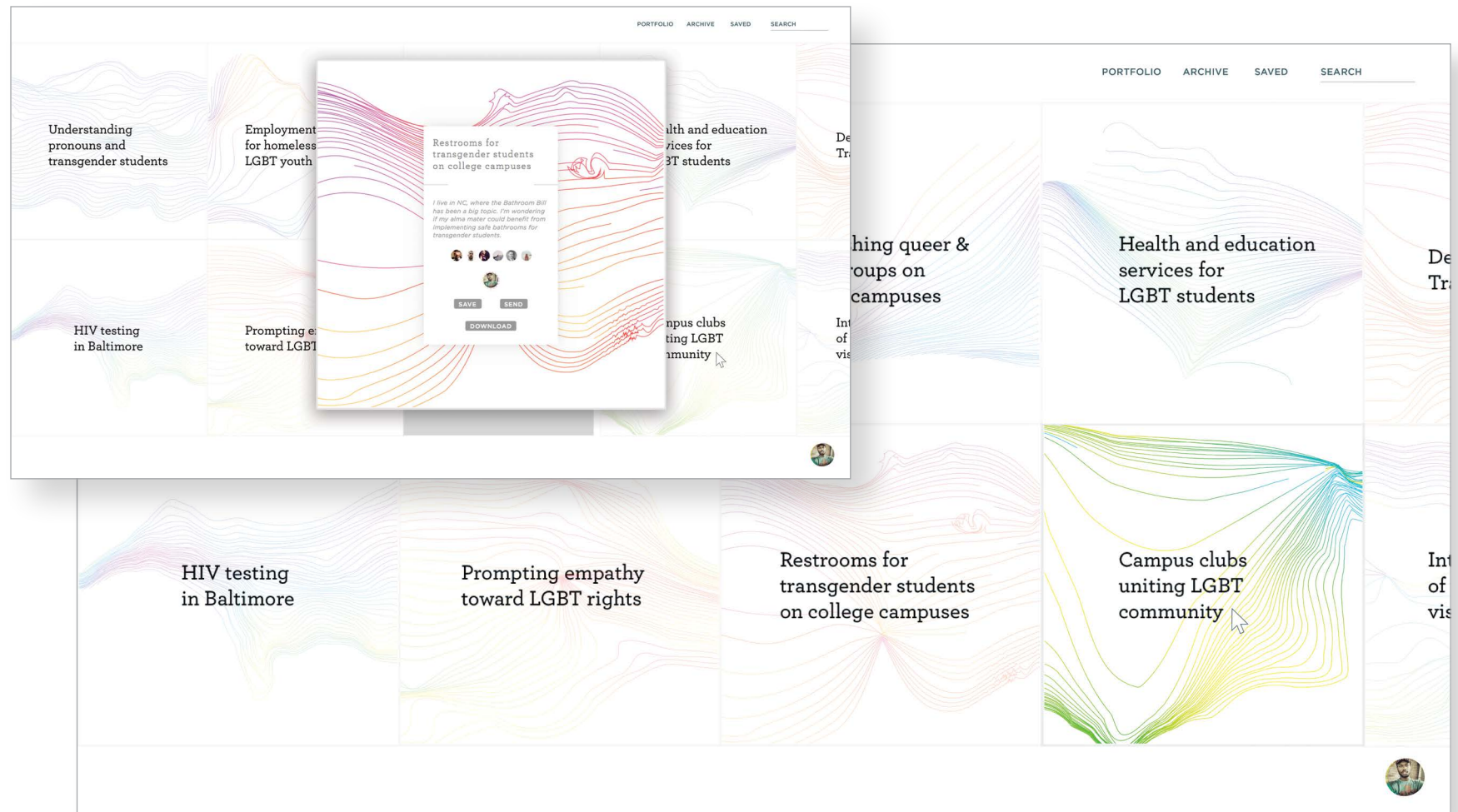
View all video scenarios at:
college.design.ncsu.edu/thenfinally/mcmahon



Peter uses the search feature of the online community platform to explore conversations related to LGBT rights. The tool suggests predetermined topics that align with the search query.

FIGURE 24: A predictive search component encourages the user to explore various broad topics and pin point what it is they might be interested in.

See video at
college.design.ncsu.edu/thenfinally/mcmahon/searching.mp4



Results returned are visualizations representing the current shape of conversation and indicate the specific topic of interest. Once a conversation is selected, Peter has the opportunity to preview the context of the discussion. He also has the option to enter the conversation, save it for later, send it to another community member, or download a vector file of its current state.

FIGURE 25, 26: The user is able to preview and compare the conversations already happening. They also are able to establish context before they enter into a selected conversation so that they feel relatively prepared

See video at
college.design.ncsu.edu/thenfinally/mcmahon/preview.mp4

[SUPPORT](#) [DISCOVER](#) [NODS](#) [SEARCH](#)

7 partners

3 active

Check this out...

Here's a link to the Anti-Discrimination policy in North Carolina. It might be a good resource for looking into discrimination issues in your state, and might provide some context of what you might be dealing with at NCSU.

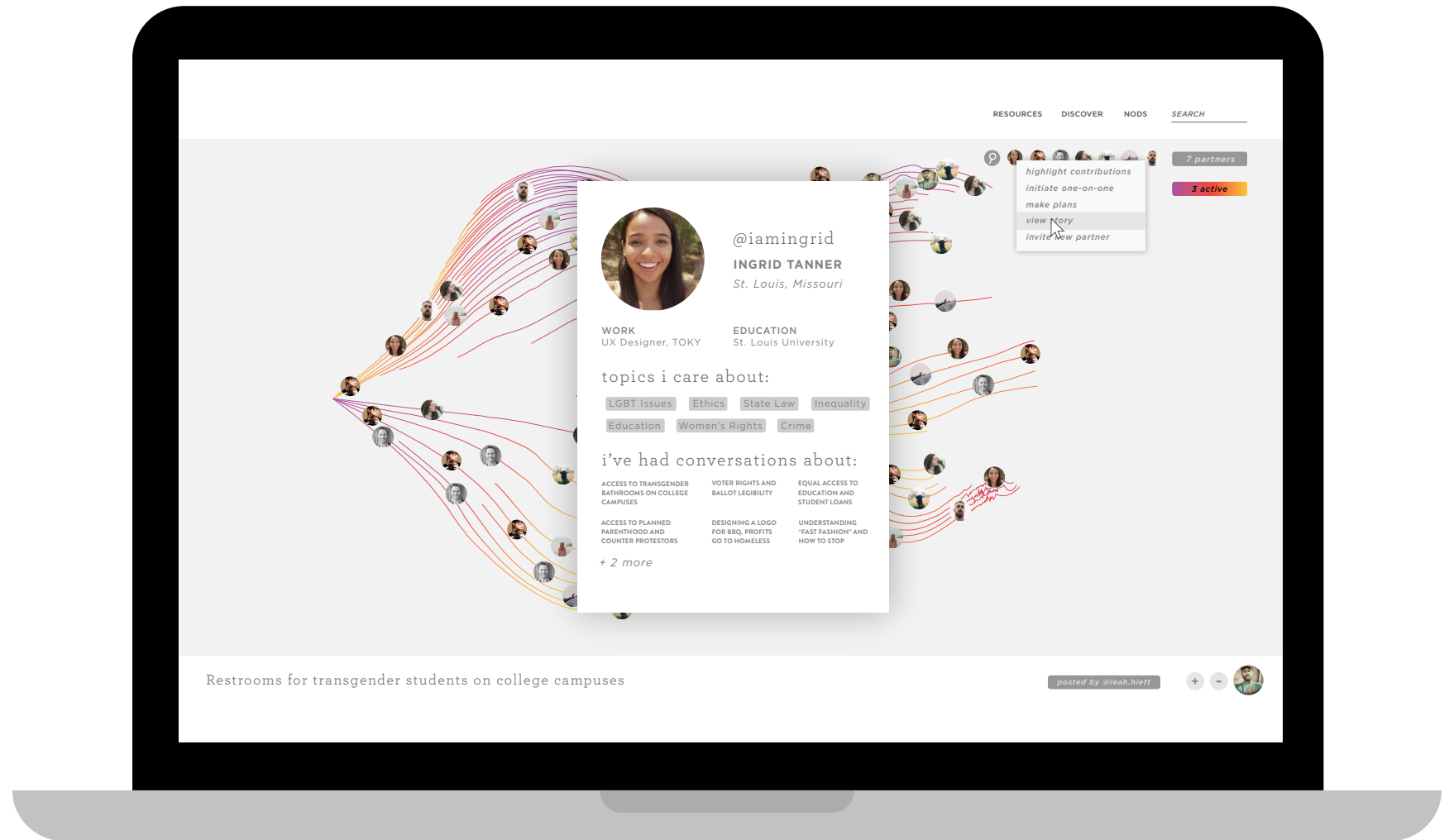
State of North Carolina

[VIEW](#)[SAVE](#)[SHARE](#)

Restrooms for transgender students on college campuses

posted by @leah.hiett

Once Peter joins the conversation, a variety of tools are available to explore past discussions, resources shared, inquiries, and moments of agreement. There is also a word cloud feature for Peter to get a better idea of the content of the discussion.



Peter can also see how fellow members are involved in the conversation, and also get a better idea of the things that interest specific users. Tools are available to explore a user's history and activity within the community.

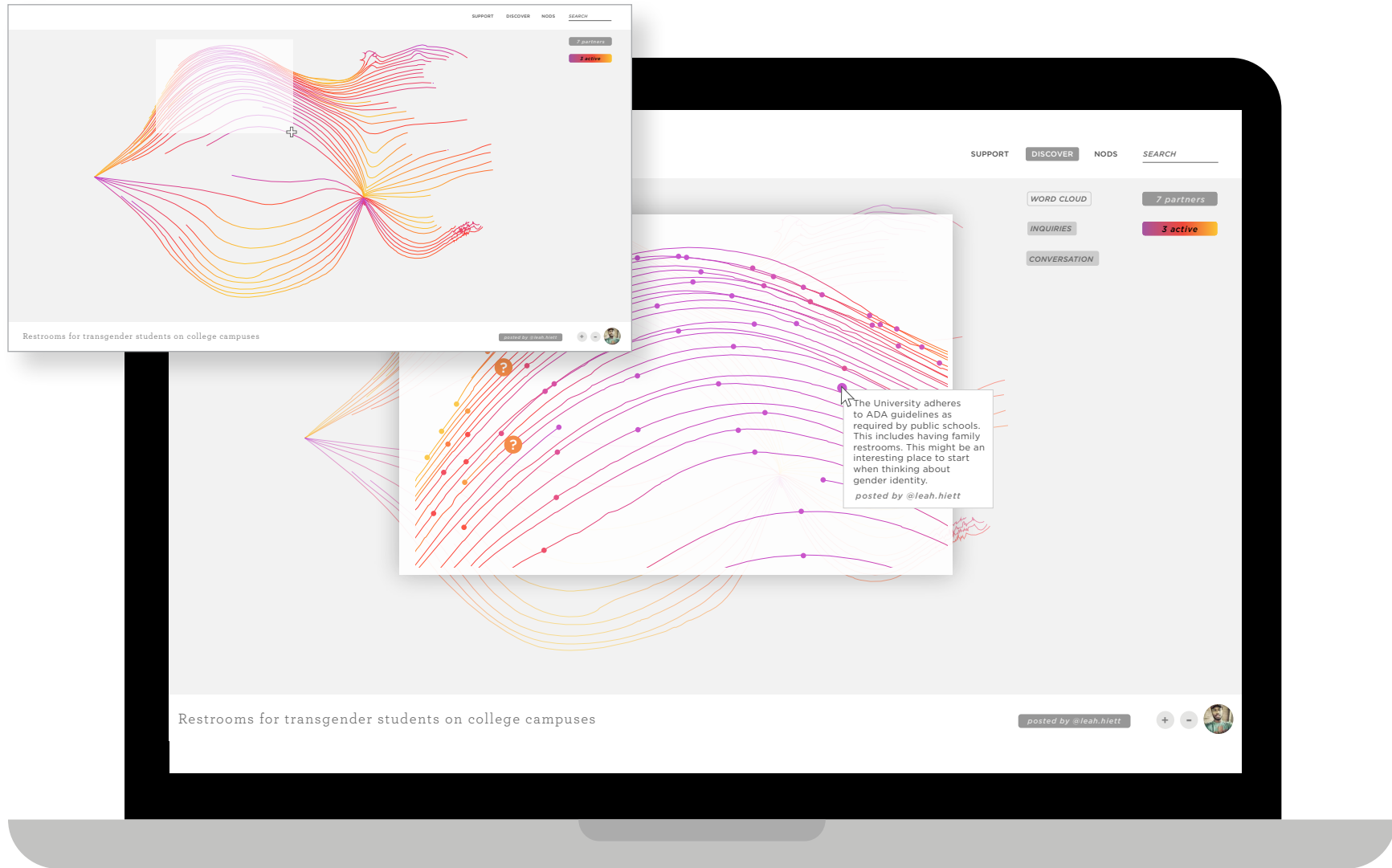
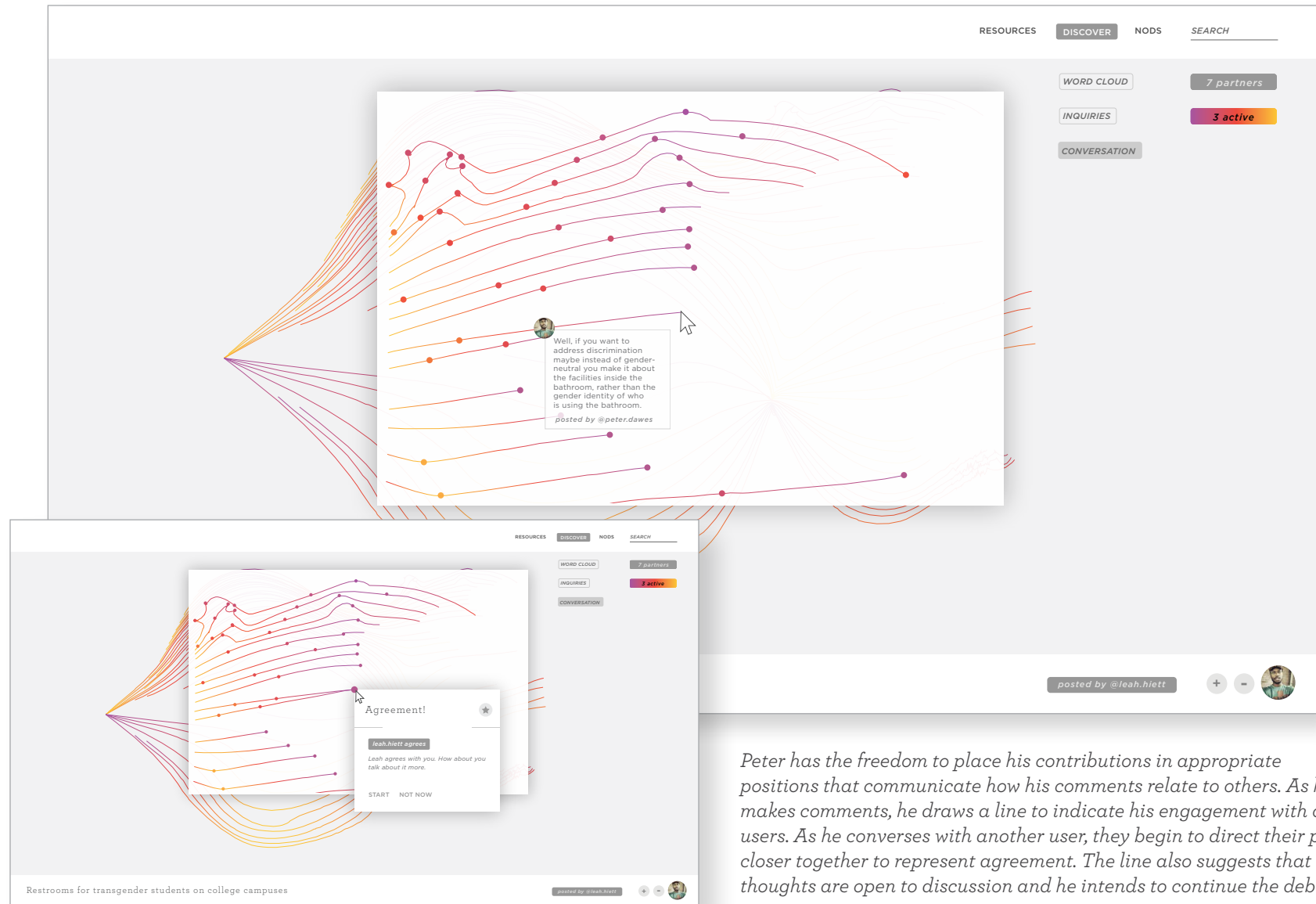


FIGURE 33, 34 (above): When the user participates in a conversation, they share content and also contribute to the conversation's overall form while collaborating with others.

FIGURE 35, 36 (opposite page): As the user interacts with other members, they can indicate their opinions through the thread of their conversation.

See video at
college.design.ncsu.edu/thenfinally/mcmahon/zoom.mp4



Peter has the freedom to place his contributions in appropriate positions that communicate how his comments relate to others. As he makes comments, he draws a line to indicate his engagement with other users. As he converses with another user, they begin to direct their paths closer together to represent agreement. The line also suggests that his thoughts are open to discussion and he intends to continue the debate.

See video at
college.design.ncsu.edu/thenfinally/mcmahon/reach_agreement.mp4

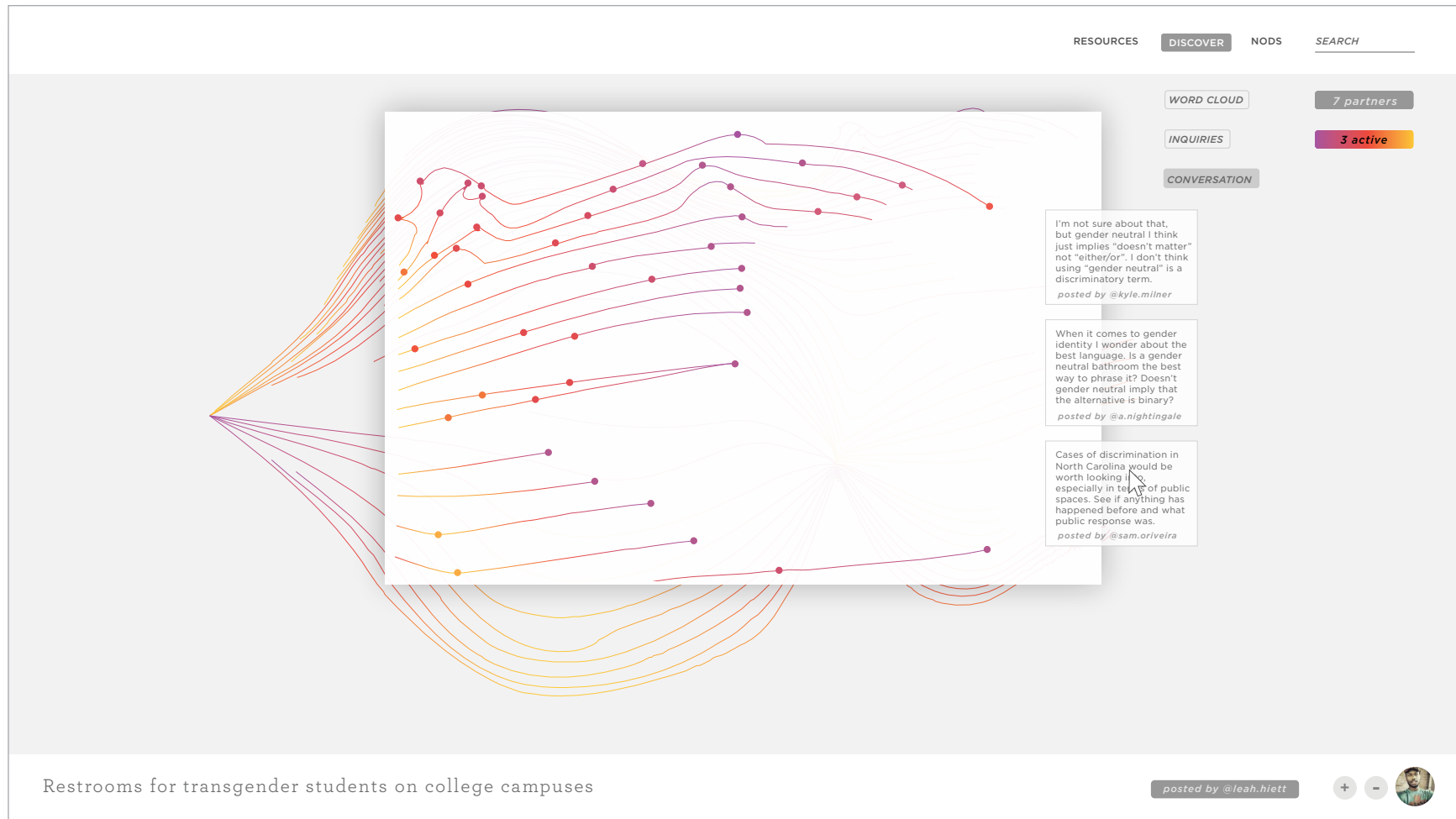
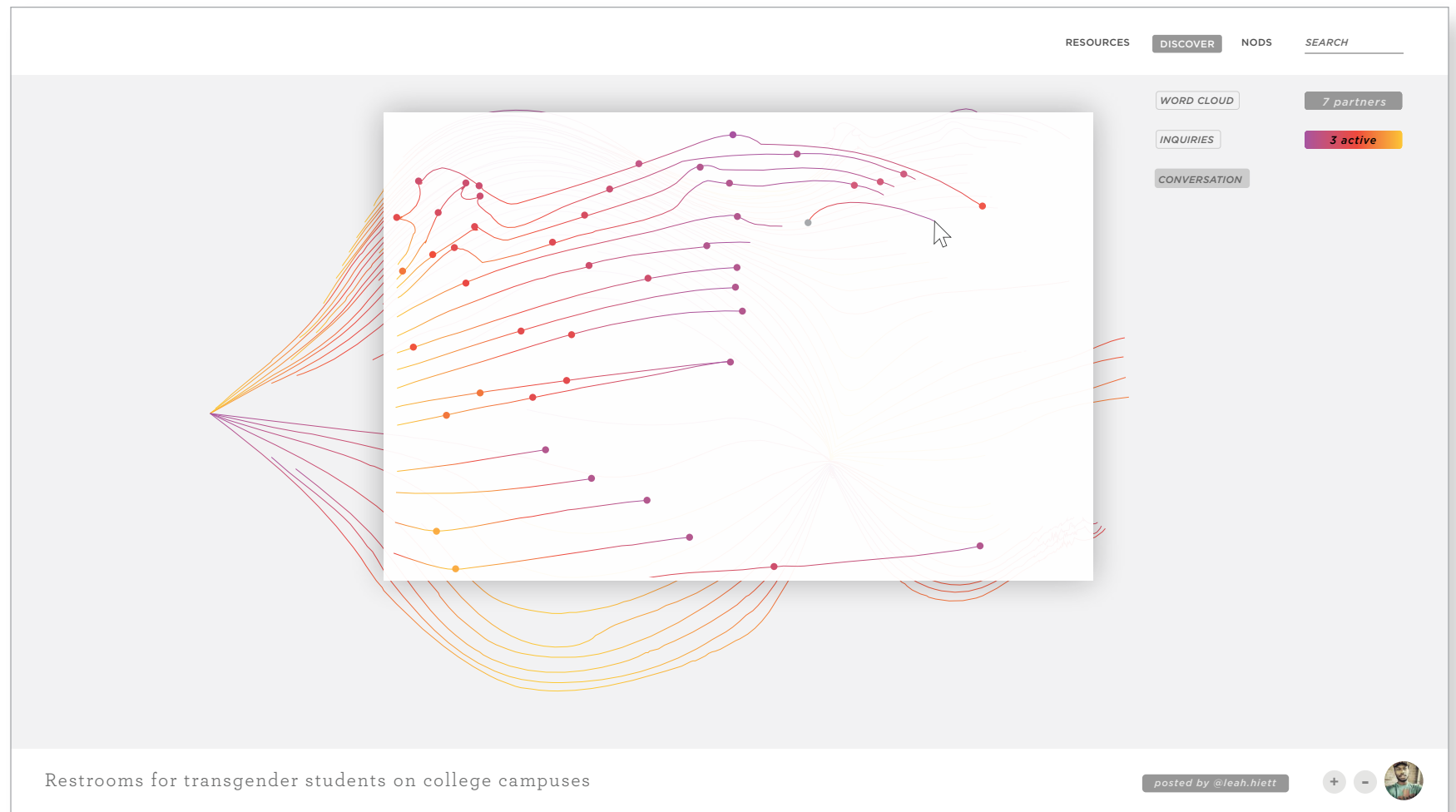


FIGURE 37, 38: When the user participates in a conversation, they share content and also contribute to the conversation's overall form while collaborating with others. A user zooms into specific areas of conversation to focus their discussion.

See video at
college.design.ncsu.edu/thenfinally/mcmahon/influence.mp4



As he moves his line, it interacts with the threads of conversation around him, which affects the overall form of the current discussion.

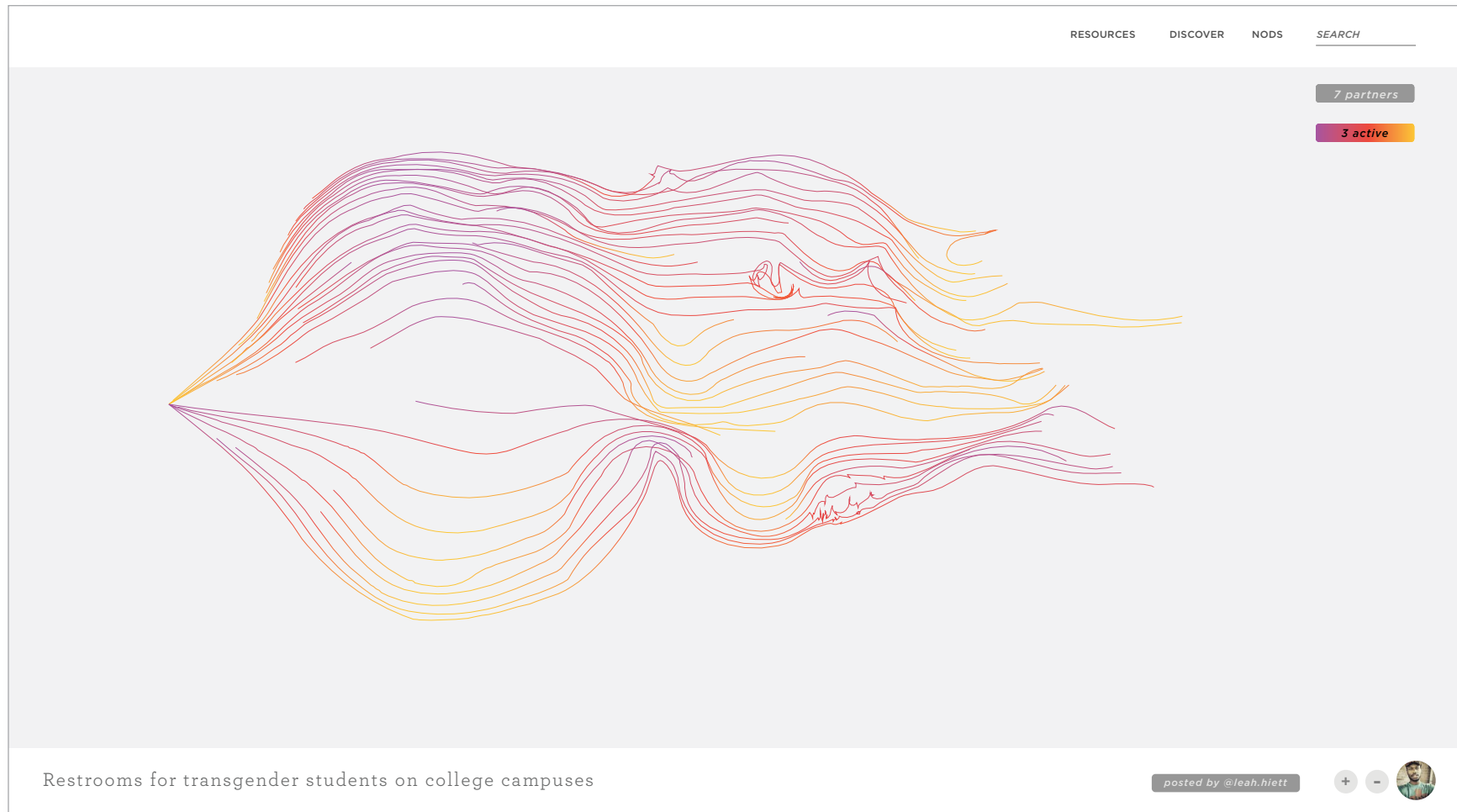
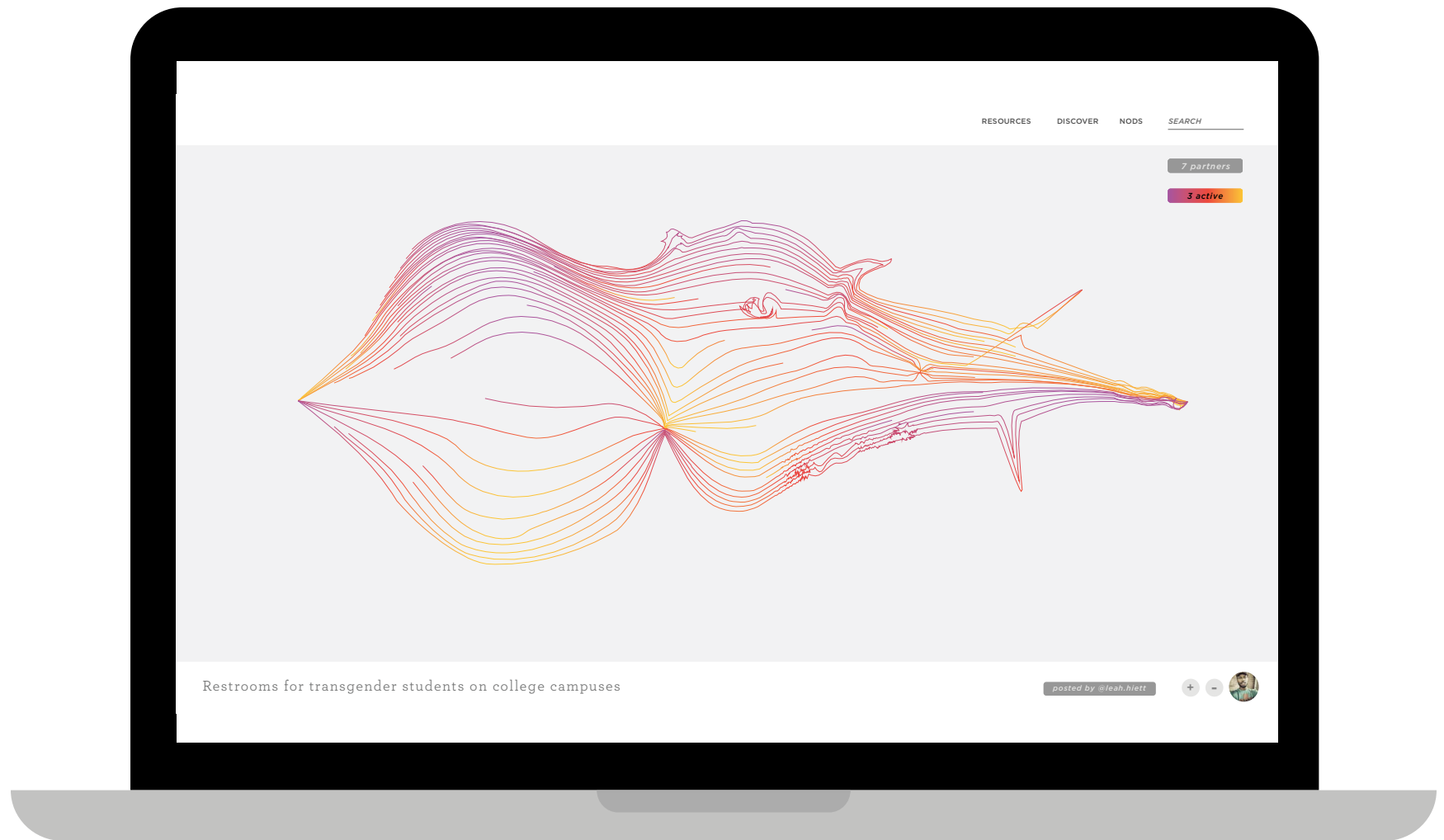


FIGURE 39, 40: Overtime, the conversation evolves. Participants are collaborating and discuss goals and methods for taking action, but they are also creating something that visually represents their collaborative conversations, and further strengthening their sense of community.

See video at
college.design.ncsu.edu/thenfinally/mcmahon/evolve.mp4



When the conversation has come to a (perceived) end, users can review and experience how the conversation evolved over time.

CONCLUSION

Millennials are ready and willing to use their skills to take action to address their goals and create positive change. Young designers who are interested in socially conscious design strategies seek opportunities to use their skills to give back to their communities. Platforms such as Slack, Reddit, and Neighborland suggest that learning and collaborating through immersive online experiences are becoming logical places for members to learn and have productive conversations. Designers have a role to play in designing tools and functions that contribute to thriving online communities that lower barriers for participation. Designers have the capability to create spaces so that conversations might emerge effortlessly. Conversation is a necessary component for building communities and is a natural catalyst for action. Additionally, discussion offers participants opportunities to learn, coordinate, and collaborate. When supported by an online community and engaging users as co-creators of content and form, young designers will be prompted to share goals, make actionable plans, and learn through collaborative conversations.

Implications of this Study

This research explores designing for conversation and establishing conditions for thriving communities. The investigation also considers aspects of community building and the necessary tools to support community activities. The studies examine the relationship between participation and digital tools as they relate to visual schemas of conversation. Participants can contribute traditional content in the form of messaging, resource sharing, and feedback as well as influence visual representations of user engagement. For designers interested in social good, the capability to provide both content and form can promote enthusiastic participation that may lead to actions that address advocacy goals.

The findings of this investigation transfer to other contexts, especially for members of the design community who seek to address complex topics from a design perspective. Design educators may value a similar collaborative space to discuss pedagogy, philosophy, and personal experiences. An online community platform for collaboration and conversation may also interest interdisciplinary teams with geographically diverse employees.

Overall, this research benefits designers interested in building communities that establish collective goals and inspire action, especially those designed to incorporate opportunities for collaboration and conversation.

Further Research and Questions

UNTANGLING KNOTS AND DISAGREEMENTS

This investigation explores possibilities for users to reach agreement, but it does not yet examine disagreement. During conversation, conflict is likely to occur. Visually, knots in conversational threads could represent disagreements. For community members attempting to establish shared values and goals, untangling knots should be a priority. Further research into mitigating online disputes would provide an understanding of tools and features needed. Specific existing platforms, such as Reddit, utilize moderators that act as police-like entities to diffuse argumentative situations. Tools that address disagreement and conflicts may also be useful to discourage online “trolling” or flaming. Online trolls are users that deliberately sow discord within digital communities (*Gunaratna*). While trolls are often unavoidable in most online platforms, this study especially requires barriers to prevent such behavior. The presence of unproductive discord discourages users from participating and maintaining a positive outlook concerning their intentions.

ONE-ON-ONE CONVERSATION

This study discreetly mentions opportunities to have one-on-one side-conversations that further explore the main topic. A future investigation would examine the implication of direct messaging capabilities and its integration into the current system. One-on-one conversations would provide an opportunity to address problems directly and quickly make decisions while working with a singular user. Direct messaging would also give users a chance to deepen relationships that contribute to the overall community’s success and user investment. Ideally, it would also be a method to alleviate disagreements and unravel any knots that may form in group discussion.

NOTIFICATION SYSTEM

A notification system may be integrated to keep users up to date on the status of conversation. Alerts would be particularly useful when users are actively involved in specific discussions, topics, or one-on-one messaging. Notifications would encourage participation and establish agency, as they provide users with results of their actions. In any case, notifications could also keep users updated on the progress of various conversations, to alert users on the status of prior discussions and how they may have manifested outside of the platform. When the community succeeds in facilitating a dialogue that leads to tangible action, participants should be informed to understand and celebrate community accomplishments.

INTEGRATING CONVERSATION INTO TOOLS

Designing for conversation was a primary method used to develop tools and functions for this investigation. When it comes to searching, features such as predictive text and suggestions mimic real-life conversations. In the future, users could interact with the system to explore and discover discussions that align with their specific goals. Similar to Paul Pangaro's ThoughtShuffler prototype, a searching system that delivers results while simultaneously expanding knowledge would reflect conversation while prompting users to investigate areas of interest.

Networking tools are crucial for building online communities with a strong sense of solidarity (Tunstall). Future research into online "friending" may expand this study's capability to strengthen connections with other community members. Hugh Dubberly and Paul Pangaro described four architectures of conversation; Controlling, Mentoring, Delegating, and Collaborating. This research primarily focuses on discussions that are collaborative. In the future, other structures could provide a framework for developing tools that build specific relationships between users. For young designers, mentorship could be a useful activity that further prompts taking action. Controlling and delegating conversations may also encourage users to make plans that address their goals.

DIGITAL HABITAT AND SECURE LOGIN

The question of trolls and user base puts into question the digital habitat of an online platform and accessibility. Whether it is a standalone application or a feature of AIGA, a membership requirement could provide security. Due to its advocacy nature, this study should be easily accessible despite a user's financial situation. Some Facebook groups require that users answer a variety of questions before they join specific communities. Vetting users before joining could benefit this investigation and further establish supportive and appropriate membership. Conversations occurring within the platform should also be secure and require user login to access. Sharing tools are necessary components for building online communities (*Wenger, White, Smith; Tunstall*) and therefore should be present but also limited to protect user privacy. Additionally, further investigation should consider integration across devices.

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