

# Political Blend: An Application Designed to Bring People Together Based on Political Differences

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## ABSTRACT

Modern social media have increasingly helped people separate themselves by worldview. We watch television shows and follow blogs that agree with our views, and read Twitter streams of people we like. The result is often called the *echo chamber*. Scholars cite political echo chambers as partly to blame for the divisive and destructive U.S. political climate. In this paper, we introduce a mobile application called *Political Blend* designed to combat echo chambers: it brings people with different political beliefs together for a cup of coffee. Based on interviews, we discovered that people are open to this kind of application and feel it may help the broader political environment. The primary contribution of this work is evidence that people are open to meeting those different from them, even those who ideologically oppose them. In an environment dominated by applications matching based on similarities, we see that this is an important finding.

## Author Keywords

Echo Chamber; Politics; Mobile; Social; Matching

## ACM Classification Keywords

J.4 Social and Behavioral Sciences; H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

## General Terms

Theory; Design; Experimentation.

## INTRODUCTION

In 1985, with the U.S. still enmeshed in the Cold War, President Ronald Reagan met General Secretary Mikhail Gorbachev face-to-face for the first time. When their discussion started to get confrontational, Reagan had an idea. “To ease the tension, Reagan suggested they [he and Gorbachev] talk in private. As they walked to a less formal house by the lake, they chatted about Reagan’s movie career. The first time they had talked as human beings” [7]. When the two returned, they announced that they had agreed to reciprocal visits between Washington and Moscow.

Later, Regan’s Secretary of State George Shultz would write: “Most of all, the precedent of serious and direct talk had been established. We could find issues where agreement was possible and, without the hesitations of the past, go ahead and agree” [23]. Sergei Tarasenko, a USSR Foreign Ministry official, similarly stated “maybe for the first

time our leaders started to think that on the other side, it’s not the machine, it’s not some robot” [7]. In the end, the Reagan-Gorbachev meeting marked the beginning of the end of the Cold War.

This anecdote serves to illustrate the powerful effect of in-group isolation and what can happen when you break through it [2]. Today, the United States finds itself in another ideological war: Republicans and Democrats bitterly oppose one another. News channels, blogs, social network sites, and apps are tools in this war [29]. Ironically, however, when the Internet first started making mainstream waves in the early 1990s, many thought it would open up a new era in cross-culture communication and thus increase civic discourse in the United States [20]. Sadly this does not seem to be the case, as modern social media often only serve to segment and compartmentalize in new ways.

The result of this is often called the *echo chamber*. While there has been no definitive definition of the “echo chamber” [6], in this paper we view an echo chamber as a group of people who share a worldview and then circulate information with each other that reinforces this worldview. In this way, an individual in the echo chamber usually only consumes information that supports their worldview [8, 26]. Modern technologies make this even easier [27]. We watch television shows that agree with our views, follow blogs of people we agree with, and read Twitter streams of those we like. Some of this is likely unintentional because people are often attracted to those similar to them [12]. In any case, however, modern social media have only made it easier to engage only with those who share a similar perspective on the world.

People in echo chambers rarely encounter information contradictory to their worldviews. In a heterogeneous society, this lack of cross-group discussion makes it difficult for groups to work together. Common experiences and frameworks between people of different political beliefs are essential to solving societal problems, and the vanishing common ground makes finding solutions more difficult [29]. An important part of a democratic society is for those with different beliefs to ultimately be able to compromise and work together. However, with the shifts in communication technology, dealing with people of different political beliefs is becoming increasingly unnecessary.

## Our Approach

The purpose of this study was to determine if technology systems designed to combat, instead of enforce, echo chambers could be effective. As a potential solution for the echo chamber problem, we created a mobile application called *Political Blend*, designed to bring people with different political beliefs together for a face-to-face conversation. Political Blend matched individuals on different ends of the political spectrum and scheduled meetings for them at a local coffee house. Based on participant feedback, we discovered that people are open to this kind of application and feel that these types of interactions could help the broader political environment. The primary contribution of this work is evidence that people are open to meeting those that are different from them, even those that ideologically oppose them. In an environment dominated by applications matching individuals based on similarities, we feel that this is an important finding.

This paper begins by reviewing what echo chambers are, and the effects on people in them. Next, we discuss previous studies that have attempted to counteract the effects of echo chambers. After our literature review, we examine ideological, methodical, and technological issues that went into the creation of Political Blend. We conclude the paper with findings from our semi-structured interviews with participants and directions for future work.

## LITERATURE REVIEW

In this paper, we focus on research looking at the impact technology has had on the creation of echo chambers, the fallout of echo chambers, and what approaches people have taken to combat them.

### The Makings of an Echo Chamber

Modern technology permits unprecedented access to information and people. We can now chat almost anywhere to almost anyone. Yet, many studies suggest people use technology to reinforce their own beliefs and connect with other like-minded people. For example, research suggests that people primarily use political blogs for gathering information, expressing political views, and demonstrating party affiliation [9]. People also have a bias towards information that supports their existing views [5]. It has also been shown that commentators on a blog usually agree with the posts' author [6]. This agreement can cause a compounding effect when one considers that popular blog news sites skew the news they report in favor of their political leanings [3].

Research on political blogs has revealed that liberal and conservative blogs rarely link to each other and often discuss different news, topics and politicians [1]. Also, given that popular blogs and posts attract more viewers, but less equitable discussion participation [6], the echo chamber of most online discussions perpetuates themselves. Recommendation systems and other automatic filtering systems inadvertently place individuals in "filter bubbles." Here, al-

gorithms supply new information and recommendations based on users' past actions and preferences. This creates a feedback loop that continues to expose a user to information that they already like; drastically cutting down the chance they are exposed to challenging and dissenting information. [15, 26].

There is strong evidence that this phenomenon of political separation, or echo chambers, not only happens in the virtual world, but also takes place in the physical world. It has been shown that mobile technologies, like smartphones, cause people to ignore or separate from people physically proximate, even family [32]. The mobile web means that people can choose to interact with those like themselves instead of the varied people nearby. Moreover, people are deciding to move to areas that fit their political and social outlook [4]. Individuals are also engaging less in community activities and local civic organizations [19], decreasing the likelihood of interacting with people who have different political beliefs.

Even outside of politics, a preliminary survey of the technology performed for this paper showed that there was little to no commercial effort to create technologies that bring people with differences together, regardless of what those differences are. Technologists use similarities and areas of agreement between people to make connections for dating (Match), friends (Facebook), sales (Airbnb), hobbies (Xbox Live), social bookmarking (Delicious), etc. [31]. Political Blend takes an orthogonal approach, looking at ways to combat echo chambers using mobile technology.

### The Effects of the Echo Chamber

What are the effects of echo chambers? Segmenting people into echo chambers can make it more difficult for groups sharing different worldviews to collaborate. People who receive validation from their in-group often become more extreme in their views. This effect is pronounced when an individual receives group confirmation of a view outside of the general norm [2]. Cohesive groups also often reject individuals who present information counter to group beliefs [21].

This situation is compounded by the fact that an individual's impressions of other groups seem largely to be created by those who share that individual's same world view, those who are in the same echo chamber as them [22]. A lack of shared information between groups can lead to fewer common experiences, which makes it harder for heterogeneous society to address social issues [29]. Diverse groups and societies tend to be more effective at addressing problems [15, 28]. Yet, technology is currently being actively harnessed to segregate people and keep them from being exposed to dissent.

When people leave personal information out of group interactions it increases group cohesiveness, but it also increases polarization of members' opinions in the direction of group norms [10]. Anonymity combined with a lack of visual cues

in discussions also has a tendency to increase group polarization [24]. This polarization also happens when individuals are more focused on group membership [11]. Given that many online political spaces are semi-anonymous, group-focused, and organized around a specific political party or viewpoint, this creates a perfect storm for political opinion polarization.

### **Breaking Through the Echo Chamber**

Some researchers have worked through technology to combat echo chambers. Price and Cappella [18] created the Electronic Dialogue Project for the 2000 US campaign season. They had individuals from different political backgrounds join an online moderated chat room to engage with each other once a month about political issues. The researchers found that those engaged in these discussions tended to enjoy the experience it seemed to have a positive effect on civic engagement.

Park, Kang, Chung and Song [16] created a tool called NewsCube that displays articles to the user that are all on the same topic, but from different points of view. NewsCube collects articles that are all about one specific news story, classifies them, and then displays them to the user in a way that they can see and compare the focus/bias of each article. The researchers found that this display caused users to read more articles covering different views and to develop a more balanced viewpoint about a given story. It should be noted that this study was performed in South Korea, and there is the possibility that the results would not transfer to the US for cultural reasons.

Munson and Resnick [13] performed a study where they presented users with a set of links to different news stories. Some of these stories would support a user's viewpoint and other stories would challenge that point of view. The researchers found that there were two types of individuals, some who liked challenging information and others who were "challenge adverse." They also found that a majority seemed to be challenge adverse. Layout changes such as ordering or highlighting did not make challenge adverse individuals more accepting of challenging information. While all three of these systems looked at ways to expose individuals to information that would be outside of their echo chamber, only one of these tools was social, and it did not facilitate face-to-face interaction.

There is research [34] to suggest that people do engage in online political discussions with people of different beliefs, just not in designated political spaces. In non-political discussion forums, individuals seem freer to share dissenting political views. Political Blend embraces this idea, bringing people together for a face-to-face conversation in a neutral third place, a café [14].

### **POLITICAL BLEND**

We decided to approach combating the echo chamber by creating Political Blend, a lightweight mobile application that's purpose is getting people from different political

backgrounds together for a cup of coffee. The Political Blend system focuses on ease of use, integrating into users schedules, and creating personal interactions between participants.

### **User Scenario**

Brendan visits Political Blend on his smart phone to sign up. Brendan provides a valid university email address, puts in some demographic information, picks two political figures he agrees with most (Bill Maher and Bill Clinton) and then selects times during the week that he is available for Political Blend meetings. After he completes the process, he receives an email from Political Blend saying that he will receive a meeting appointment in a couple of days.

Two days later, Brendan receives an email saying that he has a Political Blend meeting at the local coffee shop with Molly that coming Tuesday at noon. He also receives a link to half of a coupon for a free pastry branded "Molly and Brendan" with directions on how to redeem it. Monday evening Brendan receives a text message reminding him of the meeting. At noon the next day, he meets up with Molly. After some pleasantries and some brief chitchat they go stand in line to get their coffee and free pastry.

Standing in line, Molly and Brendan decide to get their coupon ready. They both pull out their smart phones and go to the Political Blend coupon page. Each of them sees a coupon containing half an image of George Washington stamped with Political Blend icons. They quickly realize that by putting their phones side by side they complete the image and thus complete the coupon. After getting their coffee and pastry, Brendan and Molly talk for a little while about politics. Molly talks about small business loans, an issue she's passionate about, but Brendan had never given much thought. Brendan shares some of his thoughts on privacy issues, which to his surprise, Molly in general agreed with. As they part ways Brendan decides to schedule a meeting again for next week.

### **Reasoning**

There were multiple reasons for selecting this design. First, meeting in person would likely cause users to be more polite to each other than they might have been with the space of the Internet between them [25]. Second, having a hot beverage that the user enjoyed would tie a positive personal experience to the interaction [33]. (In a remarkable recent experiment, holding hot drinks created positive feelings among dyads.) A third goal was to help build healthier communities through interaction. This approach also tackled another common complaint about technology, that it keeps individuals locked in front of a screen [32].

### **Concerns**

Anytime strangers meet there is possibility for things to go badly. This possibility is potentially compounded if the strangers have extreme differences in opinion. Given this, care was taken in designing the study and system. Information like email addresses, phone numbers, and last names

where kept private. All users had to register with an active university email address to cut down on anonymity and to ensure a viable avenue for redress if there was an incident. A well-populated public meeting place was also chosen so there would be others who could intervene, and increased social pressure to behave civilly. In addition, meeting times were limited to standard business hours to keep meetings in the daylight hours.

### **Participant Pool**

This study focused on the political landscape in the United States. While this does limit the universality of the findings, the lack of localization does not mean that the core feature of Political Blend, face-to-face meetings between political opposites, can only be implemented in the US. With some contextual changes, the core system could be tested in other nations to determine if there are universal findings.

We limited participants to only university students, faculty and staff. We did this so users knew the individual they were meeting had a connection to the school. The intuition was that this makes them less wary of a stranger, provides a common frame of reference, makes the user feel that the other participant has been vetted by the institution (through employment or academic application), and the sense that there is the possibility of recourse if something unpleasant happens during the meeting. For purposes of building the application, it meant that we could verify real users from spam accounts and troublemakers, by requiring a valid university email address.

Limiting the study population to members of the university does decrease the ability to generalize findings to broader populations. It is a convenience sample. At the same time, large university populations (over 35 thousand) tend to be relatively diverse. A large university presented a strategic balance between population diversity and familiarity (location and technical tools) to build and test a system designed to get people with differences together for face-to-face interactions. Simply put, we posit that this sample works for this kind of research: an existence proof for a type of social application.

### **Subject Matter Experts**

Several subject matter experts were approached for their feedback on the project. For technical design and layout, two professionals each with over 15 years of web application design experience and multiple years of mobile application design experience were consulted. They gave feedback on technology, layout, and task flow.

A professional political consultant with many years experience working for national and regional campaigns provided advice on how to illicit responses about political leanings and views. The specific issue examined was: How to determine a person's political leanings quickly in a way that they would find comfortable?

### **Personal Political Data**

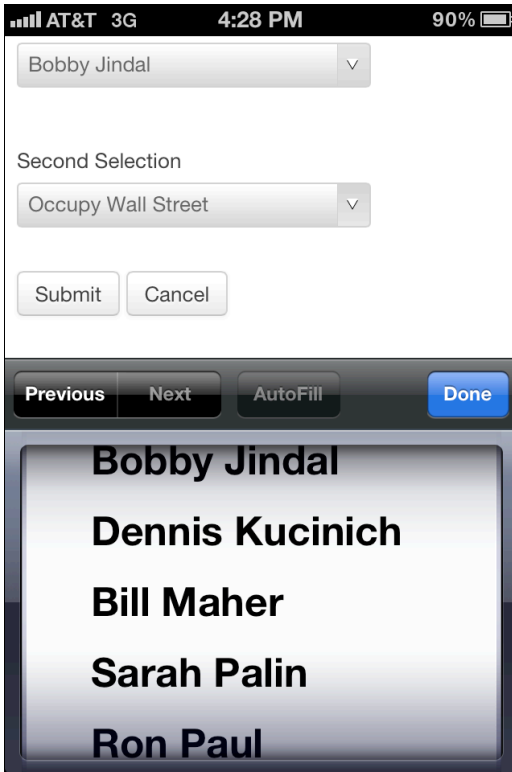
Politics is often a sensitive subject, and one that people are often reluctant to discuss with others. We consulted a subject matter expert, who had 15 years polling experience. They advised that a questionnaire would be too long and annoying for the average user, and may not display well given a mobile screen size. The subject matter expert informed us that since we were trying to identify general political leanings and not feelings on a specific issue or candidate, we could achieve viable results by just asking a key question or two. Working with the polling expert, we decided to have the users select two political figures that they agreed with most politically. This would give us accurate enough information to place individuals on a general political continuum without risk users abandoning the sign up. Figure 1 shows how the interface looked to users.

Each figure that a user could select from was given a ranking from one to seven, with one being extremely liberal and seven being extremely conservative. The user's selections would then be added and averaged to determine the users ranking on the scale. There was concern that the application's ranking accurately matched people's perceptions of the political figure. One thing that made this task easier was that a user would not need to agree with political figure A's ranking, just that political figure A was more liberal than figure B and more concrete than political figure C. Also, since the goal of the application is to get people of different beliefs together, it was determined that a surgically precise measurement of users political feelings was not needed. A gross measurement would probably work fine. To make effective matches the application did not require an accurate measurement on any specific issue or policy, just a general political leaning. Therefore, the research team and the polling expert ordered the list of politicians as follows: Occupy Wall Street, Rachel Maddow, Dennis Kucinich, Ralph Nader, Howard Dean, Jon Stewart, Bill Maher, Nancy Pelosi, Al Gore, Bill Clinton, Bob Dole, Dennis Miller, Mitt Romney, Bobby Jindal, Ron Paul, Bill O'Reilly, Rush Limbaugh, Sarah Palin, and The Tea Party.

Political Blend displays the political figures in random order and does not show that figure's political score. This was done to encourage the user to select who they really agree with, and not focus on what political ranking they would like to show. For example, an individual may be attracted to figures the system ranks as very conservative, but likes to identify as a moderate. Matching people up based on their actual feelings was considered more important than allowing the user to project a certain image. To further this goal, the system never displays the user's ranking to users. Since political views are on a long finely gradated continuum, it was more important that the users focus on their interactions with others than if they were ranked a 2.0 instead of a 2.25.

### Comfort

Keeping the users political rankings hidden helped fulfill another design goal, helping make users comfortable meeting a stranger. The system needed to put the user at ease in as many ways as possible. Meeting strangers can be uncomfortable for many, and meeting a stranger who is politically different can compound this effect. Hiding a user's political ranking allowed the user to decide how much information they want to disclose to the individual they were meeting. Also, hiding this information might prompt a discussion between the two users, as it implicitly suggested an initial conversation starter about a user's political leanings.



**Figure 1. Political Blend's interface for users to select political figures with whom they most agree.**

While one of the goals of the system was just to get individuals of different backgrounds to interact with each other, there was also the desired goal that the system participants discuss their political beliefs. Much consideration was given to how much the system should prompt, suggest, or force these types of discussions. A topic generator was considered that would display news items, or political topics for users to discuss. A less forceful alternative was to display quotes from historical US political figures, with the intention that they might spark discussion. Ultimately, it was decided that the name Political Blend and the user's knowledge that they were meeting a politically different individual was enough to spark discussion. The thinking was that if the system forced discussion that a user found unpleasant, it would create a negative experience and be counter to the goal of the system.

### Location

Meeting a stranger can present issues for a user about possible physical danger. This can deter users from trying the system, and for the users that do try it, put them in a state of unease. To counteract this and provide a level of familiarity and safety, a local well-known coffee shop was chosen to have all the user meetings in. This store was well known on the university campus and well-visited. In this way, a user was always meeting a stranger in a very public and well-populated place. Also, this meant that the system could rely on social pressure to keep any negative interactions from getting too far out of hand.

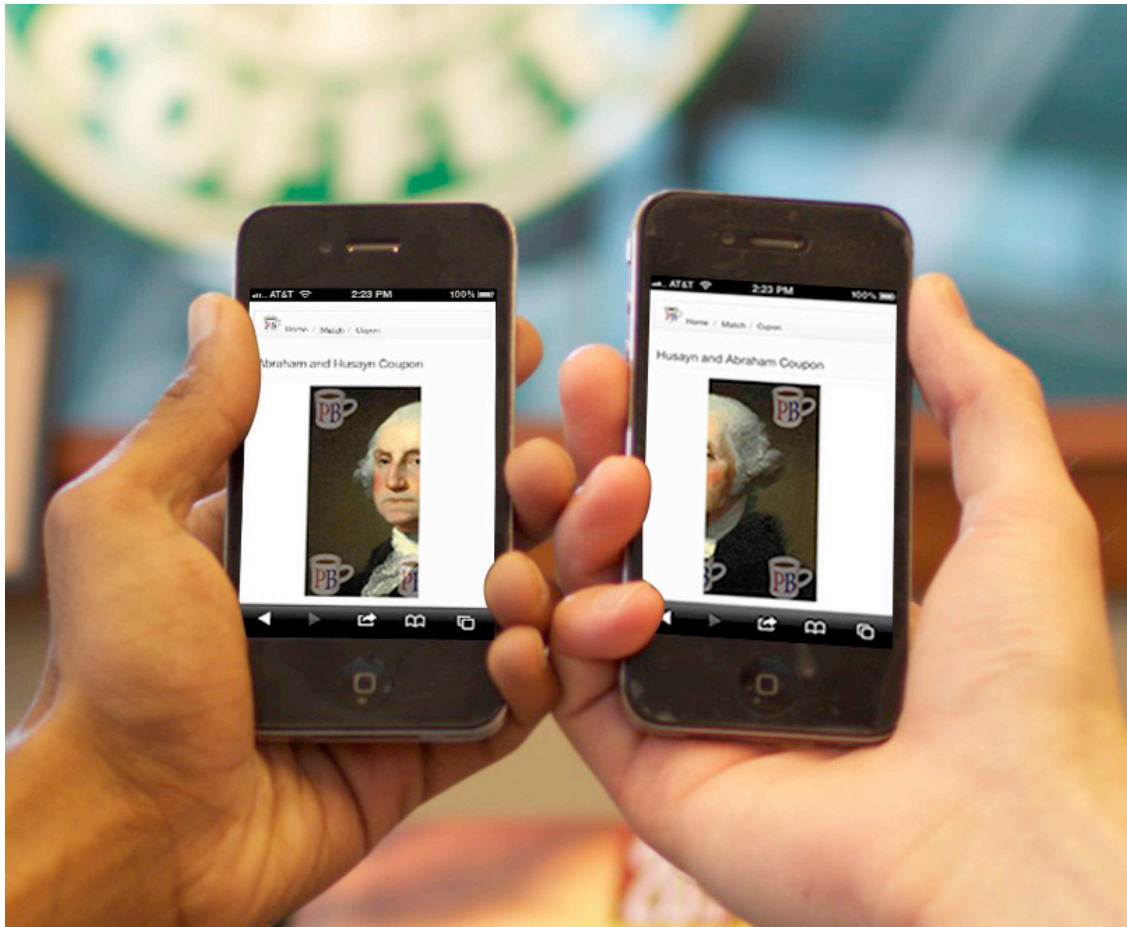
By choosing a well-known coffee shop the system could also piggy-back on a user's established routine. People, especially students and professors, often take coffee throughout the day. This meant that Political Blend could potentially fit in a user's normal daily activities. The users would not need to go to a new location or fit in something out of the ordinary into their schedule.

### Incentive

Choosing a coffee shop also meant that it would be easier to provide study participants an attractive incentive. By working with the management of the coffee shop, we were able to provide users a free pastry with any drink purchase. This incentive was felt not only a good way to compensate participants for their time, but an interesting enough incentive to get them past any initial doubts about meeting politically different people.

After talking with the subject matter experts, it was apparent that any discount or item should be given immediately for the best impact. Coupons provided after the meeting would not be attractive to the user, and as one expert pointed out, people often liked to get their coffee before they talked with people. However, an immediate coupon had the potential for users to grab the incentive and not participate in a meeting. To ensure at least some interaction between users, it was decided to display half of a coupon on each user's system display (see Figure 2). The discount would only then be provided if both users were present at the same time displaying to the cashier both halves of the coupon. This redemption tactic provided an incentive while ensuring that the users had to work, at least nominally, together.

A coupon based incentive fit in with the environment the meetings were held in. In this way not only did the coupon provide motivation for the user, but reinforced the social context the meetings were held in. Coupons and discounts are also ways merchants currently drive traffic to their stores and support community drives (e.g., Scoutmob). This meant that if Political Blend was successful it was potentially a viable approach for merchants to attract business while supporting a community building activity.



**Figure 2: Example of users combining and presenting the redemption coupon on their devices.**

### Meetings

Several different scenarios around meeting scheduling were considered. These ranged from spontaneous meetings, to meetings scheduled in advance. Given the expected user population size, we choose a weekly meeting schedule. Once a week, users indicate their availability for coffee meetings for the upcoming week. Then the meetings would be scheduled throughout the week, based on availability, and the users would be notified. This process would repeat every week during the study.

The system limited potential meeting times to Tuesday, Wednesday, and Thursday to increase user density. Constraining users to these times increased the likely hood that users availability for meetings would overlap. Doing this decreased the chance that a participant would not get a meeting partner in a given week, and reduce their likely hood of frustration with the system. It was also determined that a user would have a limit of one meeting a week to avoid system fatigue.

Once a user indicated their availability, they would be matched with an individual who was ranked at least 1 unit away from them, in either direction, on the political scale. A larger minimum difference criteria was initially looked

at, but due to potential limits of population size it was determined that 1 unit would be sufficient to provided difference while leaving the greatest potential for matches. A premium was placed on getting individuals involved in meetings to better evaluate feelings around the system. Where possible matches would be made with the greatest possible difference in rankings.

### Implementation

A Linux, Apache, MySQL and PHP (LAMP) framework was chosen as the bases for the technical aspects of the Political Blend system. An HTML5 application would provide access to the largest number of devices without out multiple coding environments or third party gatekeepers, like the Apple store. The interface used the Twitter Bootstrap CSS library<sup>1</sup>. Political Blend sent email and text message alerts for meetings using SendGrid<sup>2</sup> and Twilio<sup>3</sup>.

<sup>1</sup> <http://twitter.github.com/bootstrap>

<sup>2</sup> <http://sendgrid.com>

<sup>3</sup> <http://www.twilio.com>

## DEPLOYMENT

Participants were recruited through a combination of flyers, email lists, and class announcements. Twenty-one successful meetings were scheduled by Political Blend. Eleven participants participated in these meetings, with many having multiple meetings. Ten of the users were male and 1 was female. The participants ranged on the political ranking scale from 1.5 (very liberal) to 6.5 (very conservative). Five of the users ranked between 3 and 4 on the scale. The average of all rankings was 3.45, the median was 3 and the mode 2.5. The participants were asked to indicate their age by selecting the appropriate age groups. The possible age range was from 18 to 54, with the most users, 4, indicating an age range of 22 to 28. Users were also asked to indicate their citizenship status, with 8 users indicating that they were US citizens.

This study set out to determine if there was an innate interest in the population at large in a system like Political Blend. The self-selecting nature of the study did mean that the researchers could not influence direct control over the study population without interfering in this organic process. This led to population inconsistencies, such as a large difference between the number of male and female participants. Future studies should look at whether any population discrepancies are due to the system design or just an artifact of this particular study's methodology.

## Method

The Political Blend deployment lasted 3 weeks in the spring of 2012. Given the complex nature of the study topic, politics, it was determined that interviews would be helpful in determining users' thoughts and feelings around the application and the meetings that they had. A semi-structured interview protocol was chosen to allow researchers to follow up on any areas of interest that emerged during the interviews, while maintaining enough similarity to invite comparison across interview participants.

Four face-to-face interviews were conducted during the third week of the study. These semi-structured interviews lasted from 15 to 20 minutes. The length of the interview was chosen to fit with participants' spring schedules to maximize participation. The focus of the interviews was the participants' experiences with the application, their thoughts about the application, its value, and potential changes. The interviews were recorded, transcribed and then grouped into themes using a ground-up, empirical approach. Emerging themes were noted, categorized and matched with specific participant quotes.

Knowing that not all participants would be able to meet for interviews with researchers, a survey was created to ask general questions about users' experience with the system and the meetings it generated. The survey questions were designed to be similar to the structured questions of the interviews to enable comparison across methods. This survey was sent out via email to all participants using Google's

survey tool. The survey consisted of 11 Likert scale questions and an open comment section to elicit unstructured feedback. Likert responses were recorded on a 5-point scale ranging from "Strongly Agree" to "Strongly Disagree". Unstructured comments were examined in a similar manner to the interview responses.

Of the 11 participants, 7 responded to the questionnaire and 4 of those were individuals who also participated in the face-to-face interviews. In this way, feedback from 7 of the 11 participants was collected. The survey responses and comments were compared with the interview data to see if the responses were similar across instruments.

## RESULTS

"When you get people together in this kind of way, again, you relate on a human level. And even if you don't agree 100% with them you can find, you can at least empathize with their position. And that's important."  
— P1

The face-to-face interviews and surveys indicated that Political Blend was something that people found interesting and thought had potential to address and alleviate the political discourse issues in the US. In the interviews, all the participants indicated that they thought that the current political discourse in the US was driving divisiveness in the country and that was a negative trend. Interviewees also felt that the political discourse had been largely hijacked by pundits and talking heads, and that these individuals were driving people of different beliefs apart. They thought that individuals from different political spectrums that talking to each other, in a non-combative environment, could give people different perspectives and allow the discovery of similarities.

All 7 survey respondents felt that Political Blend would help people of different beliefs communicate, and 6 of 7 felt that applications like Political Blend would change the political environment in the US for the better. Survey comments from several of the users echoed these results. The comments below are an example of this.

"Good to see a concept devoted to bridging differences instead of exacerbating conflict and polarizing political affiliations."  
— P3

"PB is good for anti-ignorance of others' beliefs."  
— P7

Six of the 7 respondents found Political Blend easy to use, enjoyed using PB, and enjoyed the meetings that the system set up. Based on the survey results many of the participants did not talk or always talk politics at their meetings. This is interesting because it suggests that users do not feel that political discussions were necessary for Political Blend to provide value. However, two of the interviewees who did not always talk politics at their meeting did indicate that they were interested in talking about politics, but were not sure what to talk about. One of these interviews indicated



that they were interested in talking politics in one of their meetings, but did not want to force the issue.

All but one of the survey respondents indicated that they would continue to use Political Blend. However, based on the survey results and face-to-face interviews it was clear that an incentive would still need to be provided to encourage participation. Though those who were interviewed said that the incentive could be of a smaller economic value than a full pastry. They suggested even a small discount, 10%, or a free cup of coffee. This size of discount would be more sustainable for merchants, allowing them to consider this approach for community and traffic building.

The Political Blend system never gave an indication of how long users should talk with each other at the meetings. It was felt that these meetings would be relatively short, 5 to 10 minutes. However, based on interviews it seems that the meetings lasted around 20 to 30 minutes. Interviewees indicated that they were going to the meetings expecting to spend some time and that this was perceived by them as something valuable to spend time on. Possible reasons for this are that the meetings had been scheduled in advance, and that there is a social expectation convention of meeting someone new, or a desire to engage in extended conversation. Follow-up research should be done on this finding to determine exactly why users spent a significant amount of times at meetings.

The one issue with Political Blend that came up during the interviews was the difficulty at times of a user meeting up with their partner. In the original Political Blend system there was no way to indicate what a user looked like or was wearing, and there was no way to tell another user if they were running a couple of minutes late. The Political Blend meeting email told people where to look at the location for their partner, but given that the location was often full, this could still be difficult. Political Blend was adjusted after the first week so users could indicate what they were wearing by emailing Political Blend, but that was still somewhat slow and used the researchers as a go-between.

## FINDINGS

This study looked to see if using technology to bring people of different political backgrounds for face-to-face interactions could have an impact on echo chambers. To help determine if Political Blend was an effective tool, we focused the study of our results on two main areas; whether participants thought there was an issue with political discourse in the United States and whether participants thought Political Blend gave them new understandings about others.

### Divided We Stand

It was important to determine if participants felt there was an issue with political discourse in the United States. While participants' lack of concern on this issue would not negate the existence echo chambers or their effects, it would mean that tools like Political Blend could have a harder time gaining acceptance due to a perceived lack of utility. However,

this was not the case. All interview participants stated that the way politics is currently discussed in the United States is divisive and combative.

"Things are so polarized right now. You basically have to choose teams to be on. You know what I mean. Whatever your political persuasion, you're on that team and you tow the line. Things are much more grey than that." — P5

"America in 2012 is kind of a divisive place." — P2

There was the feeling among some of the respondents that this was due to the way political discussion are handled in the media at large. In fact, one interview participant felt that it was the people in the media that were causing the United States to seem more divided than perhaps it really was.

"I'd like to think that most people are like me and that they are accepting of other people, but I think that the people you see in the media are vocal minorities. That maybe have more extreme views than the average republican or democrat." — P2

The perceived contentiousness of political discussions even made some participants wary of engaging in these types of interactions. This led to individuals not broaching the subject of politics in some meetings. Part of this was due to individuals not having a shared political jumping off or safe political topics to discuss. Even in situations where participants wanted to or were open to engaging in political discussion there was desire to avoid a confrontation. This suggests that future iterations of Political Blend should consider ways to facilitate political discussion.

These findings are important because they signify that people in general believe there is political polarization, and identify that it causes with echo chambers. We also noted that participants felt this situation should change. Political polarization is not a problem that only specialists are aware of and concerned about.

### Building Understanding

For Political Blend to be considered successful, we not only had to identify that individuals felt there was a political discourse issues, but also identify if Political Blend addressed those issues. All survey respondents indicated that they felt applications like Political Blend would help people of different beliefs communicate. For example, one participant expressed finding common ground with his match:

"By the end we were concentrating on things we had in common rather than arguing about things we didn't".  
— P4

It is these understandings that are essential in getting a pluralistic society to work together. Large democratic societies typically work through various forms of compromise, but compromise is hard to achieve when people are highly polarized. However, the responses we received from participants suggest that in one-on-one meetings like these, they were often able to see commonalities:

"[You] find a lot more commonalities and a lot more things you agree upon. And differences are subtler. And when differ-



ences are subtler it seems like there'd be more room to compromise." — P1

The purpose of Political Blend is to foster understanding between ideologically different individuals. Participant feedback suggests that we were successful in this endeavor. We did note, as anticipated, no one felt that their political beliefs changed or would change based on their meetings. The goal of Political Blend was not to change people's minds about their beliefs, but to set a common ground with people from different political orientations.

Common ground and common frames of reference are vital in building understanding and consensus. Through consensus, the resources of the United States can be mobilized to address the problems that all citizens see regardless of party affiliation. Tools, like Political Blend, that can bring to light these commonalities, are important in keeping a democracy moving forward.

### Contributions

Political Blend expands on the NewsCube, Electronic Dialog Project, and Munson & Resnick's studies in several ways. Our study demonstrates the viability of the idea that exposing people to different viewpoints is a viable way to break through echo chambers. The system shows that incorporating social physical-world interactions into a technological solution can work. It also provides evidence to support the idea that interactions between individuals in politically neutral social contexts can lead to a constructive exchange of political ideas. Our study showed that not only is there value in using technology to break through the echo chamber effect, but there is desire from the users for technology that does this. Given the potential benefits to our society at large from more cross-group interaction, we believe it is imperative to explore solutions like Political Blend.

### FUTURE DIRECTIONS

Participant responses indicated that some individuals had uncovered commonalities with those the initially expected to be different, others gained a richer understanding of other view points, and nearly all felt tools like Political Blend would help foster greater understanding between individuals with different political beliefs. This qualitative data was taken relatively shortly after these individuals participated in the study, and was self-identifying. A future longitudinal study that empirically tested participants' pre and post condition attitudes would help determine if the change participants perceive are significant and if the effect last over time.

Based on feedback received during interviews and survey comments, new features would have increased Political Blend's effectiveness. The feature with the biggest potential impact would be enabling users to use the application to communicate directly with each other. This would help users facilitate meetings, and handle any lateness or rescheduling issues. Users were not originally given this option to protect their privacy, and prevent unwanted further contact.

However, users view this as a necessary feature going forward.

This feature would be relatively easy to incorporate while still protecting user privacy. In looking at the Political Blend technology stack, it looks as though Twilio could enable users to message each other through the Twilio service, thus keeping their phone numbers private. This would empower users to communicate while still keeping certain information, like phone numbers and perhaps full names, private.

Another feature that respondents thought would be good to add was a political discussion starter. This could be an in-application prompt about political issues, news stories, or general political topics. Researchers had decided not to add such a feature to the initial study design due to concerns over making the Political Blend meetings too uncomfortable and confrontational. However, comments from participants suggest that this feature's effect would be more positive than negative. Interviewees acknowledge that these discussion prompts would need to be carefully chosen to keep discussions from becoming heated or otherwise uncomfortable, but they still felt that it was a worthwhile addition that would overall improve the experience. Future user research could determine what kind of prompt would work best, one that would facilitate discussion without cause conflict or discomfort.

Political Blend was originally conceptualized as an impromptu meeting tool. For example, a user would indicate that they were interested in having a cup of coffee in 20 minutes. The system would then look to see if there was a suitable match for a meeting. Due to a perceived small participant population this idea was scrapped. In the interviews, users were asked if they thought the impromptu meeting system would be better. All interviewed users disagreed that it would be better, but they thought it might be a good addition to the current system. In this way, a user would still schedule most of their meetings in advance, but if they found themselves with free time that they could try and get an impromptu meeting. Though, all the interviewees stressed that the advanced scheduling should be the primary mode of setting up a meeting.

A tool like Political Blend could be incorporated into existing platforms to expand on its capabilities. Social network sites like Facebook could use this approach to not only facilitate people connecting across groups, but in the real world as well. Online merchants such as Amazon could use this approach to have people from different backgrounds recommend different books to each other and then met up later to discuss them. Community organizations might incorporate technology like this to open up their members to new people in their community, thus creating better community awareness. Furthermore, a user's political orientation might be inferred from their activity on Facebook, rather than eliciting it via a dropdown menu as Political Blend did.

## CONCLUSION

“Political Blend, I think, is a bit nobler in it’s scope. I thought it was definitely, the system has so much potential to fix a lot of the problems we have with the sort of partisan echo chamber stuff that’s going on here.” — P4

Based on a survey and interviews, Political Blend was largely a success. Users felt that it addressed a need in the current political landscape, and could help bring people together for a “noble” purpose. Given this feedback, using technology to bring individuals with different backgrounds for face-to-face meetings seems viable. These types of tools could help break people out of their echo chambers, facilitate a better political environment, and build stronger, less disconnected communities.

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