

Dr. Flame | Final Report

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05-497 Special Topics: Embedded Designs in HCI for Mitigating Unconscious Bias

Introduction

In order to mitigate bias in an embedded manner, our group wanted to prompt people to reflect on their everyday biases in the context of social gatherings. In this sense, we decided to pursue the creation of a social party game, *Dr. Flame*, that not only obfuscated the true educational intentions by being fun, but more importantly, caused players to reflect on statements and social issues that they might have previously been unaware of.

The two main focus areas of our game were (1) to have people address microaggressions committed in everyday conversations, and (2) to promote reflection and conversations through distancing one's own identity from the game's narrative and characters.

Background

Unconscious biases occur in everyday contexts, but often come unnoticed by individuals involved. In psychology, there are two systems of thinking that people undergo in everyday contexts. The first is System 1 categorization which is unconscious and quick to fire off in your everyday mindset. The second is System 2 categorization which requires more attention and conscious decisions. Our implicit biases are largely due to the fact that our System 1 are automatic, and due to the automaticity of this system, we tend to make associations that tend towards bias. Our approach to the game design focused on encouraging people to override these automatic associations from System 1 to promote people to utilize their System 2 to guide their conversations and actions towards others (Fiske & Neuberg, 1990).

Today, many party games exist to help facilitate social interactions and provide entertainment. Under this context, game design can help promote social interactions regarding unconscious biases in a manner that is masked under entertainment. Examples of the utilization of social party games to help mitigate unconscious bias include the games *Buffalo* and *Awkward Moment*. After reviewing the rules and guidelines for these two social games, we decided to utilize some of the elements each game offers, but to have the underlying difference to center our game around narratives and self-generated conversations.

From *Buffalo*, the idea of expanding "players' mental representations" (Kaufman, Flanagan, 2015) were guiding principles for when we designed *Dr. Flame*. We wanted to promote the idea of reflection about questions and comments one might have when playing the game, especially those regarding character associations. From *Awkward Moment*, the idea of providing players with actual examples of unconscious biases to help them reflect on their own actions or their own witnessing of actions and events helped guide another design principle for *Dr. Flame*.

As we drew from the research and concepts that have already been explored in these two games, we wanted to differ from them in the sense that (1) we addressed microaggressions and (2) we distanced the players to embody the characters in the game through narratives and dialogues. In order to achieve these differences, we utilized microaggressive biases in the form of quotes to help guide the conversations generated in the gameplay. We also emphasized the importance of characters and the storyline of the game to push forward the narrative aspects of the game.

Our focus on microaggressions was consciously made due to the interesting implications they have under social settings. Microaggressions “tend to be subtle, indirect, and unintentional,” but “the victim is usually placed in a catch-22,” questioning the correct way to respond to a comment, if at all (Sue et. al, 2007). In order to expose subtle microaggressions in everyday context, there seems to be a need for self-reflection that addresses the issue indirectly. So instead of directly accusing one for making microaggressive comments or being passive in witnessing a microaggression, *Dr. Flame* aims to promote internal questioning and reflection upon comments that people tend to hear in everyday conversations, but do not recognize as microaggressive. By embedding microaggressions into the game, we have obfuscated the directness of addressing these comments. From our research with social intervention games relating to mitigating unconscious biases, we have yet to see a game that incorporated microaggressions in their gameplay to promote reflection upon these comments. For this reason, we chose to incorporate Clue Cards in *Dr. Flame* to help expose some of the negative impacts and absurdities of microaggressions.

We also wanted to focus on narratives and self-generated conversations to help ease a social group into the discussion of implicit biases. Although both the gameplays of *Buffalo* and *Awkward Moment* can lead to discussions on biases, we wanted it to be the main focus in our game. We, therefore, created characters and roles for the players to embody, and made the game center around asking each other questions. Because the majority of the group (the townspeople) wish to identify *Dr. Flame*, they would want to strategize by conversing with each other about the traits deducted from *Dr. Flame*’s Clue Card. In order to cause confusion and therefore more discussions, we also instruct the players to take on the characteristics of your own character (based on Character Card) and personality (based on Clue Cards). By doing this, we also demonstrate the idea that anyone can be a victim or perpetrator of microaggressions.

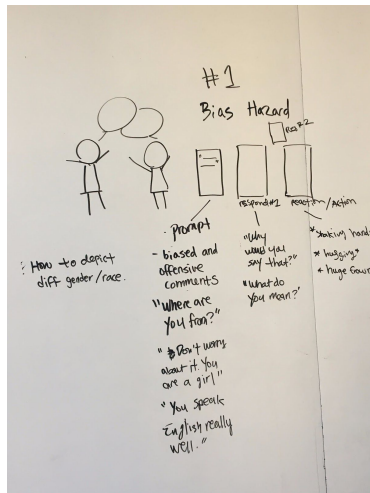
Another important aspect to highlight is our use of distancing to help facilitate the social intervention. Based on the embedded nature of this intervention, we thought it would be important to include a fictional and narrative element to the game in order to promote the embrace of conversations that related to biases (Kaufman, Flanagan, 2015),

Design process

Game design ideation

We initially brainstormed three different types of games to pursue based on research of implicit biases, as well as current games available in social settings. Because our focus was on narratives, a lot of our initial proposals centered around conversations, scenarios, and storytelling:

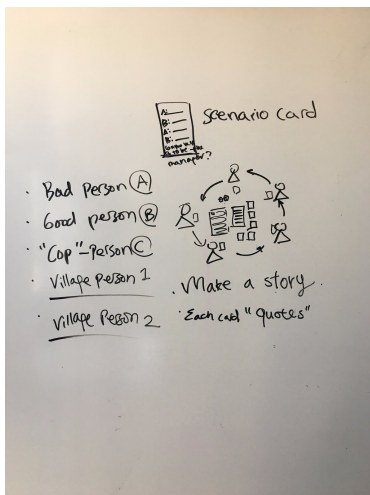
Brainstormed games



1) **Bias Hazard** - scenario-based game to address everyday situational biases. Inspired by the game *Joking Hazard*.

- *Game description*: The goal of the players is to create a cohesive conversation by playing a series of three appropriate cards. Players are given a set of cards that contain different characters making remarks for unknown context. Depending on what card is played, the result of the completed conversation can lead players to reflect on everyday unconscious biases they have experienced or committed.

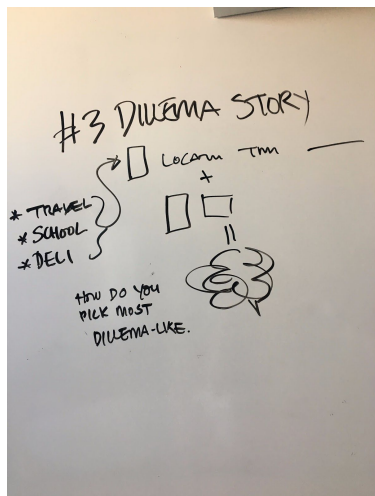
- *Feedback*: we found that this game was too explicit at times due to comments characters were making, and that the generation of generic scenarios (with animations) was difficult to achieve a wide-range of conversations. Due to the game structure, it proved to be difficult to have more than two characters in the conversations, which limited types of biases we can address during the gameplay. In addition, this game was very similar to *Awkward Moment*.



2) **Storyline** - storytelling game that centered around making a collective story that addressed situations relating to unconscious biases.

- *Game description*: The goal of the game is for players to create a story together. In the beginning of the game, each player is given a specific role and character to embody for the round. To start the game, a card is drawn from the scenario deck, which includes various background stories and goals for the players to achieve. During their turn, players can play their "quote" cards to construct stories.

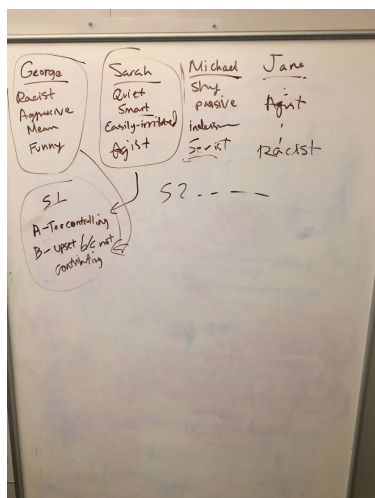
- *Feedback*: although this idea was favored by the feedback we received, we found that the creation of this game was rather difficult. In order to create a storyline collectively, and to still include unconscious biases in the story, the game would need to be more explicit. The need for structure in the game, and the freedom to generate and lead the story towards addressing biases proved to be a challenge for the scope of the project.



3) **Dilemmas Dilemmas** - story sharing game about one's own experiences.

- *Game description:* For each round of the game, players need to draw one context card, which includes activity, environment, and one emotion card, which might include surprised, sad, funny, etc. The goal of the players is to think of their own experience based on the drawn cards and share their stories to one another. The winner can be decided by voting for the best or most relatable story or by a judge who can be selected for each round.

- *Feedback:* this game best addressed microaggressions, but due to the sensitivities of the topics that we wanted to promote, we saw that players would have lacked the incentives to share their own experiences. The game would have also been very open and unstructured, which would have caused issues with gameplay.



4) **Impromptu Battles** - a competitive game that centered around improvising scenes using particular characteristic traits.

- *Game description:* The goal of the game is to identify the characters that are being acted out. All players are divided into two groups. One player from each group is selected and is given a card that contains the name and personality traits of the character she/he needs to act out. Next, a scenario card is drawn out to give the setting for the conversation. Then, the selected players are to do improv to portray their characters in a subtle and implicit way. To earn a point for each round, the remaining team members need to correctly guess the character of the opposing team's improviser.

- *Feedback:* after prototyping this particular game, we found that improv made certain gameplay uncomfortable at times due to a lack of structure in the given scenarios and character traits. Another big issue was the use of generic personality traits that made the social intervention too obvious (e.g. "racist," "sexist," etc.).

User testing to inform final design decisions



During the process of user testing and receiving feedback on each brainstormed concepts, we were able to gain valuable insights to shape our design decisions toward the final game design.

- *Fictional character vs. personal*: We noticed that participants were more comfortable with acting out fictional characters instead of sharing personal experiences or perspectives especially when they didn't feel too close to the other players; revealing personal stories made them feel vulnerable.

- *Structured vs. improv gameplay*: When we presented *Bias Hazard*, we received some comments regarding the rigidity of the gameplay. Some participants commented that they would feel limited by the cards in hand and would want more freedom in constructing their own responses. On the other hand, when playtesting *Impromptu Battles*, some participants expressed that they felt awkward and pressured to act out the characters in front of others, and wanted a more structure or guideline. Also, other teammates, who were not doing improv, felt a bit removed from the game. Based on these feedbacks, we aimed to provide more detailed portrayal of the character -- using both physicality card and personality (clue) cards -- but left it up to the players to interpret the traits on their own. Also, we tried to engage all players by involving every player to play a role in the game.

- *Level of overttness*: During the test play, one participant expressed that she liked the conciseness of the character traits on the card (e.g. racist, agist, etc.), however, she did immediately know the intent of the game, which made the game less engaging in terms of playfulness. When we presented our second iteration of the character traits that are less explicit and more descriptive, participants thought the traits were too lengthy and didn't find them relatable to everyday context. As the final iteration, we presented the traits in conversational quotes -- the form microaggression and unconscious biases are typically delivered in.

Final design

Dr. Flame



Based on feedback from user testing *Impromptu Battles*, we found that the use of characters with particular traits that our players can embody allowed for an ease of distancing. However, based on mixed reviews from users who mentioned the difficulties of improvisation and scenario building, we iterated our design to have more structure in terms of conversations that the game was promoting.

After reviewing games such as *Spyfall* and *Insider*, we were inspired to create a game that involved asking questions to one another to try and identify a particular person. To make matters more interesting, we wanted to encourage open discussions as to some of these questions or behaviors which people embodied during the gameplay. So, similar to games such as *Mafia* and *Resistance*, we wanted to structure the game to have people strategize publically in their conversations to convince others who Dr. Flame is or isn't. By opening the environment to discussions about the characters and roles in the game, we wanted to promote the idea of expanding mental representations through conversations.

Development of Character Cards

Due to our desire to create distancing of the players from the characters, we wanted to put an emphasis on Character Cards. Because of this, we decided to animate some physical characters to represent the players of the game. The characters needed to be diverse in physical traits (e.g. gender, age, etc.), and with their names (e.g. Shristi, Jamal, etc.). We found it pertinent to include actual drawings of people to humanize the characters so that embodying their traits would be easier and more natural. Our drawings balanced a fine line between demonstrating the various traits that people have, but also the fun and lightness associated with games to help obfuscate our intentions. It was important to promote the diversity of characters to create an all-inclusive environment, so that discussions about all types of biases may occur.

Development of Clue Cards

An extremely important aspect of the game to help guide discussions towards implicit biases relied on the Clue Cards. Our initial approach (from *Impromptu Battles*) was a little too explicit for the purposes of our game. However, we found it difficult to balance normal traits with traits that elicited biases based on pure descriptions, without being too obvious (e.g. “Believes in All Lives Matter” versus “Believes cats are cute”). Due to the severity of topics on race, gender, etc., it became rather explicit what we intended to promote.

Because we wanted to focus on some forms of microaggressions, we found that the inclusion of quotes, rather than descriptions of personality types, was more subtle. In this sense, we not only addressed the fact that these comments are casually made in everyday situations, but we can also intermix normal comments more easily to distract the players of the game from recognizing the social intervention. Quotes were also more ambiguous and up for interpretation, allowing for more perspectives and discussions to unfold. (For example, “Pranking people isn’t mean if it’s funny” and “Can you relax? Come on, it was just a joke!” are similar in nature, but the latter could address a microaggression that undermined one’s response to microaggressive jokes).

From the game’s perspective, we decided to overlap many characteristics across the different Clue Cards. This way, each character may confuse the group as to who Dr. Flame is. It is also a general statement about how hidden people’s biases are across the globe. Even though people have similar personalities such as enjoying science fiction, they may still maintain implicit biases unknowingly.

Development of Role Cards

The three different roles of the game related a lot to the social games we looked into (e.g. *Mafia*, *Spyfall*). There is typically a group of regular roles (townspeople), and special roles (Dr. Flame and accomplice). We made sure to introduce the accomplice so that the identity of Dr. Flame could be obscured in the discussions. However, we made it so that everyone except for the accomplices has to stay in character based on their Clue Cards. By doing so, we emphasized the distancing of players from their roles and characters, building onto the narrative to help embed the bias mitigation.

Development of Narrative

Our narrative was largely structured to help provide context to the narratives. This decision was to further help distance the gameplay from one's own identity. We made sure when constructing the narrative and instructions to focus on providing subtle non-stereotypical examples of characters in an attempt to make people internally reflect. So instead of having Detective M be a male in a trenchcoat from our images of Noir films, we used the pronoun "her" later in the description of the narrative. Our intention with Dr. Flame's name was to similarly promote the idea that a doctor could be either male or female, old or young, disabled or not disabled, etc.

Next iteration

When we demonstrated Dr. Flame during the final presentation, we observed some behaviors we didn't notice from the previous user testing sessions we held. Unlike other players who had to look up their clue/personality cards to answer the questions, we noticed that the player who had the role of Dr. Flame didn't have any incentive to look up her/his role card to answer the questions directed to her/him, which made it easier for others to identify Dr. Flame based on her/his behavior, not by the responses to the questions. To address this issue, we can provide players with card stands to keep their cards upright during the play. Another suggestion was to include investigation notebooks with card slots, which can also be used for everyone to keep a record of all the responses to find Dr. Flame.

Also, some participants had some difficulty of asking questions that were not directly related to the quote cards. To improve the gameplay flow, we can test incorporating cards with keywords or themes to provide a bit of guide for questioning (e.g. a card with keyword 'job' would prompt players to ask questions about occupations or related topics).

Conclusion

Dr. Flame provides a platform for the players to discuss and reflect on microaggressions and unconscious biases that occur in everyday context. By embedding the social intervention in a social party game, we believe Dr. Flame is valuable in promoting players to reflect on personal actions and associations without feeling directly forced to by a form of intervention.

We would have liked to expanded our final product to include more Clue Cards that touched upon a wider variety of unconscious biases and microaggressions. Also, currently Dr. Flame addresses a mix of general microaggressions and unconscious biases that occur in everyday context regarding racism, ageism, and gender bias. We can imagine variations of the game to target more specific biases that differ from the current ones by including more relevant quotes toward issues (e.g. biases regarding sexuality).

Ideally, in the next steps following this project, we would like to have tested the true impacts of the game on implicit biases and associations that players have. Our current product focused on testing implicit biases through explicit measures, which may not truly reflect the way the game impacts unconscious associations. In a more formal setting with time permitting, we would like to incorporate the IAT before and after players play the game.

References

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