

Playing through Microaggressions on a College Campus with “Blindspot”

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Abstract—Blindspot is a 2D web-based game that tells a story of a Chinese student newly arrived at an American university who experiences microaggressions in her college life. A prologue gives background information of the protagonist, followed by three chapters in different campus settings complete with puzzle games whose mechanics emphasize the microaggression topic of the chapter. Based on player dialogue choices, strategies for dealing with microaggressions may be followed or not, leading to different puzzles, with a hopeful ending presented to all. The narrative and game mechanics foster empathy with the protagonist, providing benefits for players in both marginalized and non-marginalized groups.

Keywords—transformational game, computer games, game design, microaggression

I. INTRODUCTION

Blindspot is an Entertainment Technology Center (ETC) one-semester (14 week) project in partnership with the Data-Driven Diversity Lab (D3) at Carnegie Mellon University (CMU). D3 uses data and insights from psychology and behavioral economics to understand how different groups experience student success, thriving, and a sense of belonging at CMU. Using D3’s insights, an interactive browser-based game was developed to raise awareness and inspire action to counteract the negative impact of microaggressions that emerge in university contexts.

Microaggressions are the everyday slights, indignities, put-downs and insults that members of marginalized groups experience in their day-to-day interactions with individuals who are often unaware that they have engaged in an offensive or demeaning way [1]. Using this definition, Yoon argues that the buildup of these “everyday slights” has consequences on a victim’s mental and physical health [2]. The normalization of microaggressions is antithetical to a well-rounded society with equal opportunities for marginalized individuals [2]. The well-being of international students on campus can be negatively impacted by microaggressions, motivating this project’s work. Examples of microaggressions for Chinese students include statements like “you’re good at math” or “you always eat

dumplings” – examples discussed with more context later in this paper.

The game, also named “Blindspot”, is a 2D web-based game that tells a story of a Chinese young woman newly arrived at CMU and experiencing microaggressions in her college life. Blindspot begins with a prologue that gives background information of the protagonist, then three chapters that happen in different campus places, and an ending that summarizes the protagonist’s thoughts. The experience unfolds a story where the protagonist is hesitant at the beginning but becomes stronger and stays true to who she is in the end. It offers about 25-30 minutes of play.

Blindspot drew inspiration from the game “Florence” [3], an interactive love story with eye-catching graphics and relevant mechanics. As an example from “Florence,” when the couple is arguing in the game, the player won’t be provided any dialogue about the arguments. Instead, the player is moving jigsaw puzzle pieces to form a dialogue bubble and the pieces may not be easy to place. Later in that game, as the couple learns to communicate well with each other, the jigsaw pieces are fewer and simpler to place. The clever art style and clear, relevant puzzle mechanics let the player easily relate to the story.

II. DESIGN DECISIONS

The protagonist is a fictional international student, Meimei Han, who just arrived at CMU. The player experiences a day in the life of the protagonist who has problems dealing with racial microaggression. During the gameplay, the player makes dialogue choices and solves puzzles to get to know the story of the protagonist. The puzzles and the ending are tailored by the dialogue choices that the player makes so the player has real agency in the game, critical for the target audience of college-aged students. The transformational goal is to inspire a marginalized group (international students and in particular, Chinese students at an American university) to respond to threats and microaggressions actively. An additional goal is to raise awareness from non-marginalized groups about these actions. The Transformational Framework was used to aid the development process of this work [4].

The art style in *Blindspot* for the scenes is pixel art, chosen so broad sets of players can better relate to the story by not seeing the details of the faces. Also, this style let the artist create the needed assets for the three chapters within the one-semester timeframe. In addition, though, there are personal introspections by Meimei, times in the game when you are in the protagonist's subconscious and reflections. Those moments are rendered in a hand-drawn pencil animation style that supports the use of color and movement to symbolically add in messaging about the loneliness, comfort, and other emotions the protagonist Meimei goes through during her day.

Free-to-use background music clips and sound effects were used with attribution to complement the emotional tone of the different scenes and elements. An international student from China added her voice to the prologue, introspective flashbacks, and concluding cut scenes, all monologues of Meimei, to increase their authenticity and emotional tone. Voiceover is not in the main game so as to support numerous iterations during the semester in the dialogue and branch choices, to let the player engage those elements at different rates of reading and response, and to allow that text to be easily edited later by the D3 Lab.

The game offers dozens of dialogue fragments, many as questions that need a player's response, which is typically given by choosing from three options. Because microaggressions are subtle, they can be more difficult to respond to than overt racist comments [5]. Situational factors matter and can be used to moderate potential responses [5]. Microinterventions can be used by the target [6]. References [5] and [6] guided construction of story branches allowing the player as Meimei to react in different ways (e.g., passively or by educating the perpetrator). Hence, story structure and content are informed by research on both microaggressions and response strategies. Further detail on the microaggressions in the dialogue are given in the chapter discussions below.

Puzzles in *Blindspot* were meant to be compelling and metaphorical, symbolizing the issue and struggle at hand. Multiple puzzle versions exist so that a tailored level of difficulty and messaging is given based on a player's choice. For example, if the player pulls back and is passive and wounded after a microaggression, the puzzle may be more frustrating and produce a bit of annoyance or anxiety to symbolize the cognitive burden the microaggression would cause the antagonist. If instead the player applies microintervention strategies, the puzzle may instead be less anxious and annoying. Puzzles offer the player the chance to play through feelings interactively, much as the game "Florence" does.

III. MICROAGGRESSIONS AND CHAPTERS

A. Chapter 1: Ascription of Intelligence

Set in the classroom, Meimei is told she is great at math because she is Chinese. Her ability in math is not ascribed to her work and study but is considered innate talent. This presumption can get her thinking about the words used by the perpetrator more than the math problem itself. The puzzle shown in Fig. 1 is about making brain connections while the words are providing interference (both blue connections and word text animate about the brain space), designed to give players some frustration to feel the negative impacts of the offensive statements.

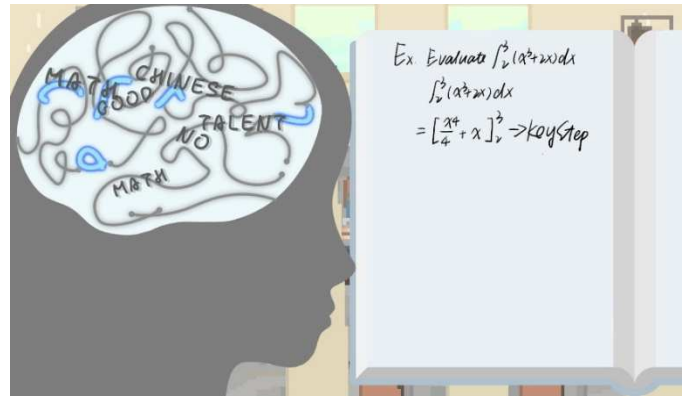


Fig. 1. Animated brain connections made challenging by interwoven words (thoughts) representing interference of a microaggression on performance.



Fig. 2. Jigsaw puzzle difficulty depends on player choice in dialogues. Shown: dialogue where choosing bottom strategy leads to an easier puzzle but choosing either of the top two deflections leads to a harder puzzle.

The other puzzle type in Chapter 1 is about constructing talk bubbles dependent on whether Meimei defends her right to contribute to a public speaking group. Timing and puzzle difficulty adjust based on the player's choices. Fig. 2 shows one such example where deflection results in a harder puzzle.

B. Chapter 2: Disregarded International Values and Needs

Set in the campus café, the story is about experiences of cultural differences and isolation. Meimei, who does not know much about American football, wants to participate in a conversation about the Super Bowl. The other students who know this topic well try to explain it to Meimei but make her feel even more confused. After this conversation, Meimei feels a sense of isolation due to cultural differences. They also have different types of food. Others are having American food while Meimei is having dumplings. They ask Meimei why she is having dumplings. It turns out that it is the time of the Lunar New Year during which it is a Chinese tradition to eat dumplings. They then start a conversation about the Lunar New Year. The endings of the story are either sharing foods with each other or not sharing foods but only introducing their cultures, depending on the player's choices.

The Super Bowl and the Lunar New Year are culture-specific, offering talking opportunities. By discussing both topics, both sides (marginalized groups and non-marginalized groups) could experience such cultural differences. The topics also have things in common. They both happen in February. They both have a festival theme, where people gather and enjoy the game, show, or food. By sharing similarities and food, the player could counteract the isolation brought by the differences.

Meimei later is presented with American campus food options like pizza but opts for dumplings, leading to a second part discussion. In Fig. 3, the first puzzle is about conversation interpretation, with words flowing into Meimei's head and her constructing a picture of the Super Bowl which is incomplete (i.e., a crystal bowl instead of the American football context). The second part puzzles are jumbled tiles of memories, which if Meimei is using microintervention strategies can lead to fond memories of Lunar New Year and the sharing of dumplings, or can be less rewarding with no sharing. That is, the composition of the puzzle depends on the player's interaction. Practicing microintervention strategies can lead to feeling less isolated, sharing of cultures, and happy memories. Being beaten down by microaggressions can lead to pessimistic thoughts.

As Fig. 4 shows, if the player has not been using strategies to deal with microaggressions, then the tiles will contain pessimistic thoughts related to those actions, rendered in cooler colors. Puzzle elements and how they are rendered reinforce the transformational goals.



Missed words flow out of Meimei's mind, and puzzle pieces as well (left to right movements).



Player selects two memory tiles to switch; when all 3 panes correct, they all will be in color.

Fig. 3. Two puzzle types: word flow and incorrect visual thought with pieces flowing left to right, and swapping memory pieces to produce messaging.



Happy festival memories with family Pessimistic microaggression thoughts

Fig. 4. Players who use strategies in dialogue choices to actively deal with microaggressions get the left happy memories image set; otherwise if players deflect or ignore the microaggressions they get the right set.

C. Chapter 3: Being Rendered Invisible

Set in a student's apartment, a party takes place with Karaoke singing, as shown in Fig. 5. Meimei at first feels excluded, overlooked as someone who would not want to sing and is more expected to be in the library studying, but then she receives help from one of her close friends and talks openly about microaggressions she just had with the friend. At first, this story design was similar to chapter 2: Meimei is not able to join

a conversation. But, instead of having another conversation that Meimei has trouble joining, here there is more introspection and viewing cut scenes of Meimei feeling excluded from activities that others assume only outgoing people would do.

In the end, Meimei gets support from a friend and invites in everyone to sing a song. Getting help from a friend is reinforced as a strategy for dealing with microaggressions with one the puzzle options in Fig. 5 showing up as a result of player action. If the player chooses to talk through common topics with a close friend, the puzzle is to wipe away most of the negative microaggression, with a few bits remaining. If the player chooses the direct supportive strategy to talk about the microaggressions just encountered, the puzzle is to shatter the negative microaggression completely and leaving a positive friend memory in its place instead.

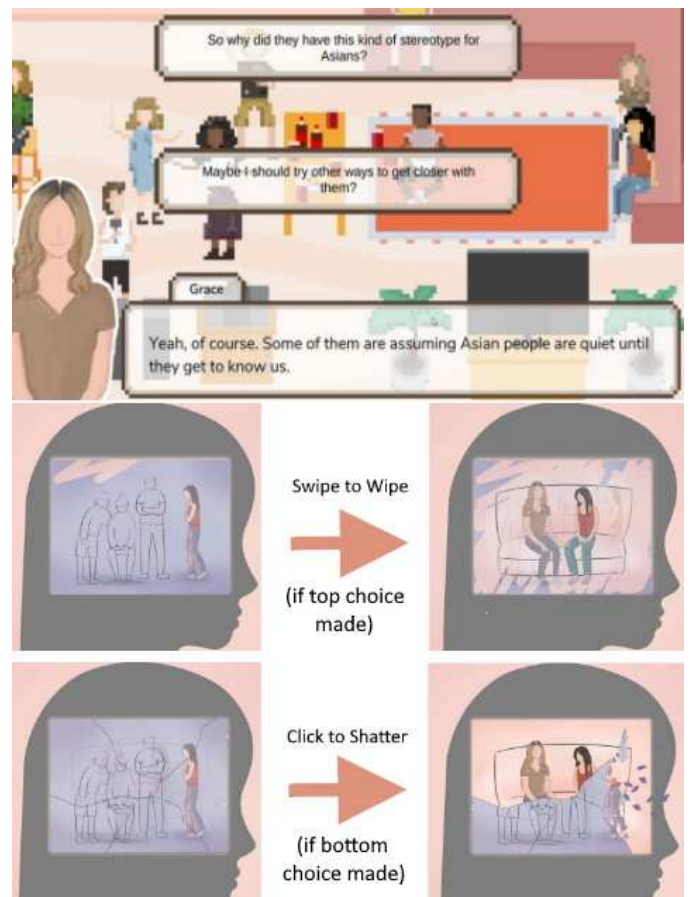


Fig. 5. 2-choice dialogue with 2 puzzle options based on player selection.

D. Prologue, Flashbacks, and Conclusion Story Pieces

A hint of the other art style complementing the pixel scenes is shown in the puzzles of Figs. 3, 4, and 5. This hand-drawn pencil animation allowed for some symbolic emphasis (like the warm and cool colors of Fig. 4), which was also used in the linear story of Meimei's background, thoughts, and conclusion. Fig. 6 illustrates this with two pieces of such flashbacks from the chapters where color and lack of color add meaning. For example, the dim blue on the left emphasizes the isolation of main character Meimei standing outside. She feels challenge to join the discussion group. The orange on the right represents

another type of isolation caused by the microaggression that Asians should be good at math but ignoring their efforts in doing math exercises.

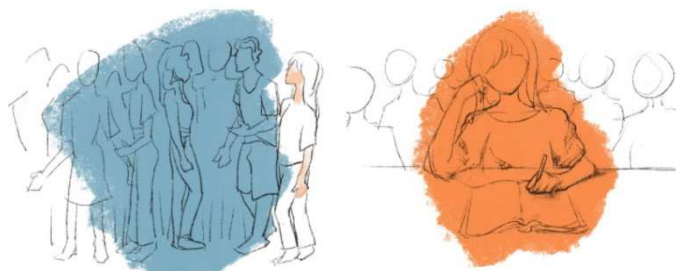


Fig. 6. Sample shots from two flashbacks using color symbolically.

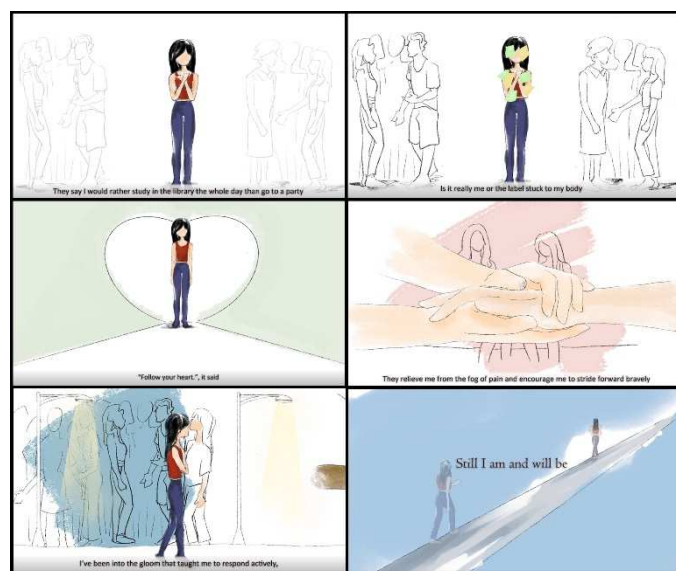


Fig. 7. Selected shots from concluding animation.

These story pieces are presented as videos with Meimei's voice-over, subtitles, and animation. To appreciate this rendering, consider the subset of six shots in the final animation shown in Fig. 7 for the concluding scene. This wraps up discussion of Meimei's introspections across situations like wondering if she is viewed as herself or a set of labels, strategies like the support of friends (the "they" of the fourth panel), and the ending feelings of hope and confidence striding forward and upward.

IV. CLOSING DISCUSSION AND FUTURE WORK

In 2017, the Center for Health Journalism explained that racism and microaggressions lead to worse health, and pointed out that discrimination can have negative influences [2]. Microaggressions matter, and the transformational goals of "Blindspot" are important. Portraying Meimei Han as a recipient of microaggressions sets the stage for player reflection, but game actions allow for Meimei to not be reduced to a helpless victim. This design helps to teach that those in the marginalized group have strategies at their disposal [5, 6]. Seeing inside Meimei's head and following her emotions as displayed through story text, visual presentation, voice-over in flashbacks and

other aural accompaniment help the non-marginalized group, both perpetrators and witnesses [7], realize that microaggressions have consequences and ideally motivates how to learn to be more aware. Future work will investigate if these transformational effects on players occur from the gameplay.

The marginalized person is not just a victim. There are ways to respond. The game allows for that agency. Playtest results with 50 students during the development semester found the vast majority believe that the stories and settings are realistic. In a final iteration with 10 playtesters, the consensus was that the overall experience was hopeful (a 1-hopeless to 5-full of hope Likert scale produced 3 middle ratings of 3, 5 ratings of 4 and 2 of 5). The experience is designed to show that the protagonist has power to deal with the microaggressions, and that her actions can lead to a better campus experience. The game offers a richness of meaningful choices in dialogue, with in-game metrics showing that all options are being considered and used (so the conversation paths are natural). Depending on choices, the puzzles and introspective video animations change, so the players have agency. The design of Chapter 3 was such that the ending is hopeful: Meimei has the ability to deal with microaggressions through her actions such as friend support. The game build from the semester is currently available at: <https://projects.etc.cmu.edu/blindspot/demo/>.

The transformational goals of Blindspot are to raise awareness and inspire action to counteract the negative impact of microaggressions in college settings. Future work includes a formal study of players to see if the game brings about these transformations. The game could be used in workshops, dorm activities, orientations, and/or as an educational activity within a class that brings up discussion. The D3 Lab under Geoff Kaufman's direction will pursue research into the game's effects when used in different contexts.

Because microaggressions are subtle, they may be more challenging to investigate, as responses to microaggressions are more difficult than with overt racist actions [5]. Yet, as shown in the research conducted to inform the design of Blindspot and cited in part here, microaggressions occur on campuses to negative effects. The game can help produce a healthier campus culture for all.

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