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Title

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Permalink

<https://escholarship.org/uc/item/3bc1f9jw>

Journal

Analog Game Studies, 9(1)

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Publication Date

2022-01-10

DOI

10.5070/V7.IX6222

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MINIMIZING CULTURAL BIAS IN ESCAPE ROOMS

Shannon McDowell & Scott Nicholson

Abstract

Escape rooms are live-action games set in immersive environments. In creating these environments, many designers base their games off of real-world settings or specific fictional worlds. While these settings offer much to a designer to create challenges that are authentic and embedded in the world, they also carry a risk that some players who do not have the cultural background needed to succeed will be frustrated and unable to engage with the game. Reducing experiences of cultural bias is even more pertinent at the time of writing this paper, as the global COVID-19 lockdown has prompted the design of remote and virtual escape rooms that have the possibility of hosting multicultural teams of players from any location around the world. In an attempt to reduce these negative experiences for players, particularly those players who play escape rooms while traveling, this paper identifies best practices and provides solutions for escape room owners and designers looking to minimize cultural bias in their escape room designs.

Keywords

escape rooms, cultural bias, player experience, immersion, design, language, symbols, norms, artifacts, knowledge, Covid-19

Escape rooms are live-action games set in immersive environments. In creating these environments, many designers base their games off of real-world settings or specific fictional worlds. While these settings offer much to a designer to create challenges that are authentic and embedded in the world, they also carry a risk that some players who do not have the cultural background needed to succeed will be frustrated and unable to engage with the game. Reducing experiences of cultural bias is even more pertinent at the time of writing this paper, as the global COVID-19 lockdown has prompted the design of remote and virtual escape rooms that have the possibility of hosting multicultural teams of players from any location around the world. In an attempt to reduce these negative experiences for players, particularly those players who play escape rooms while traveling, this paper identifies best practices and provides solutions for escape room owners and designers looking to minimize cultural bias in their escape room designs.

In our previous study, we reported the results from a series of interviews with escape room enthusiasts and finalists for the Red Bull Escape Room World Championship.¹ Participants discussed their experiences with cultural bias or specific knowledge in escape rooms, i.e. instances when the escape room designer assumed a degree of common knowledge based on their own cultural standards. In describing their experiences with cultural bias in escape rooms, 64% of experiences were reported negatively, using words such as “confusing”, “unfair”, and “frustrating.” Encountering cultural bias in escape rooms caused players to:

- Lose the game flow, i.e. remove players from the immersiveness of the setting and experience,
- Lose confidence in the game design, second guessing future design choices, and
- Involuntarily skip challenges when players already possess the knowledge needed to solve them.²

Analyzing player experiences of cultural bias resulted in the conceptualization of five primary categories of experiences, based on various socio-cultural models and adapted to the specific environment of escape rooms. These categories are as follows:

- Language – a system of communication used by a particular country or community
- Symbols – representation of a letter, word, or concept
- Norms – standards and expectations of behavior
- Artifacts – objects that constitute a society’s material culture
- Knowledge – information acquired by a person through education or experience

We use these categories as lenses in order to help structure our discussion in this work, which is based on the concerns and experiences voiced by players in our interviews.³

Within the context of best practices for escape room design, this paper will analyze general and specific occurrences of each category as they apply to the three major components of escape room design:

- Interactions with game masters, hosts, and actors, i.e. introductions, briefings, in-game interactions, and delivery of hints,
- Challenges, i.e. puzzles or activities that players must overcome to succeed at the room, and
- Set design, i.e. elements in the room that add to the player’s experience and immersiveness.

Interactions with Hosts/Actors

This section considers the cultural biases most often experienced in pre-recorded or in-person interactions between escape room staff, including game masters/hosts and actors, and players. These interactions include the game introduction, briefing, in-game interactions, and hints, and is considered through the lenses of language, symbols, and norms.

When considering cultural biases that exist in a game’s interactions between escape room staff and players, it is also important to note that these interactions provide the greatest opportunity to improve the game experience for players when they encounter difficulties, as staff can set

¹ *Red Bull Escape Room World Championship*, London, 2019, <https://www.redbull.com/gb-en/events/red-bull-escape-room-world-championships-final>.

² S. McDowell and S. Nicholson, “Players’ Accounts of Cultural Bias in Escape Rooms,” *Well Played* 10, No. 1 (2021), <https://press.etc.cmu.edu/index.php/product/well-played-vol-10-no-1/>.

³ Ibid.

expectations for the game as well as adapt the game to the needs of the players. This is especially challenging in escape games with public bookings, where different groups with different cultural backgrounds are coming together to play the game.

Language

Ideally, escape room briefings and hints would employ no language at all, but this may not be practical to implement. Spoken narration is the primary source of language barriers in interactions. These could be pre-game or in-game recorded content or live presentation of content by the game master or actors. One way this is commonly dealt with is for the escape room to create scripts in multiple languages and to allow the team to choose the language for the game. Another route is to create written translations of the content in multiple languages; while not the same as seeing something presented verbally, it can still help players to figure out what is going on. The best route is to reduce the reliance on language and ensure there is nothing the players need to know that is presented via language.

Interactions with actors in-game can also be a source of frustration, as even players who are fluent in the game's language may experience difficulties with local slang, regional dialects, and unfamiliar vocabulary. If in-game actors can identify when players are experiencing problems, they can rephrase their hints, use gestures, or interact with artifacts in the room to indicate where players should be focusing.

Spoken language hints can be misunderstood for non-native speakers, and even native speakers can have difficulties with spoken hints through low sound quality speakers or portable radios. This can be mitigated by removing language from hints and using symbols or artifacts instead. For example, the 2019 Red Bull Escape Room World Championship used language-free hints that were timed animations playing on a screen inside the room that demonstrated how to manipulate artifacts in the room.⁴ As another example, in a situation where players need a hint to find a key in the room, instead of directing players verbally, the game host can use a light or color symbol for signposting, such as a spotlight shining on the area of the room players should be paying attention to.

Symbols

Symbols in briefings and introductions are primarily used to identify safety measures, such as "Do not touch" stickers and "Exit" signs that players will encounter in the room. Game introductions are the best time to introduce symbols to players so they understand the meaning and relevance to the game. An example of a problematic bias surrounding a symbol is the "do not touch" symbol; in some escape rooms, items may still contain visual information for the players but be marked as "do not touch," but in other games, items with that symbol are completely out of play. In cases like this, it is important to be clear with the players what the symbols mean.

Symbols may also be introduced as part of the narration and in gestures used by the game master or actors. When using gestures with actors and game masters, particularly when avoiding the use of language, make sure that the gestures do not have different or offensive meanings in other cultures. For example, a thumbs-up symbol means "yes" in some cultures, but is an offensive sign in other cultures.

⁴ Red Bull Escape Room World Championship, 2019.

As mentioned above, use of symbols in hints can avoid the use of language. Always be sure to pair color hints with a distinct shape or sound to assist colorblind players and ensure the symbol is clearly introduced to players outside of time constraints so they can easily identify the message while playing and under time pressure.



Figure 1: "Escape" by i_yudai @ Flickr. CC BY 2.0.

Norms

Under the category of norms, cultural bias most often occurs due to differences in folkways and genre. Multiple problematic experiences were reported of players being greeted in character by actors or game masters, also known as a cold start. In an example of a cold start game, a player approaches the escape room location, knocks on the door and is greeted by an aggressive bouncer who demands to know why they are there, then grabs their arm and drags them into the building. This in-character interaction can be uncomfortable for players, particularly if they are not expecting that type of interaction, or if the actor is aggressive or loud. Interactions involving personal space or touching also have different expectations and comfort levels for players from different cultures.

Reducing these issues if the aforementioned interactions are necessary to the game's narrative and experience requires clearly informing all players of what they can expect in the game, including

actors yelling, cold start, and touching. Some escape rooms use policies similar to those found in intense haunted houses: teams choose their intensity level before beginning so that every person is aware of the amount and type of interaction that will be experienced. It is also important to provide players with a safe signal, such as crossing their arms above their heads in an X or shouting a specific phrase, to let them indicate if the game has gone in a direction they are not comfortable with.

In regards to genre, narrative tropes such as vampires, magic, ghost stories, or local legends are not the same across all cultures. Even a player from the game designer's culture may not be familiar with a theme or story due to different upbringings. While this difference causes the most problems for players within the game, it can be mitigated during the game introduction by ensuring that all background for the game narrative is clearly outlined for players and that any information players need to know about a genre to succeed at the game is provided to players. Noting a lack of familiarity with the theme will also help in delivering hints to players that are more straightforward, rather than thematic in a way that will be difficult to understand. For example, speaking in character when delivering a hint may be less effective for players who are unfamiliar with the theme.

Top Tips for Improving Interactions

- Train staff to identify when players are having difficulty with a cultural reference and how to intervene.
- Take the time during the introduction/briefing to introduce symbols, locks, safety procedures, and narrative and make sure that all players understand.
- For games containing cold starts, actors, or cultural taboos, place warnings in the game description that players must acknowledge before scheduling a game.



Figure 2: "Bomb Defusal Puzzle" by Dennis van Zuijlekom @ Flickr. CC BY-SA 2.0.

Challenges

Challenges in escape rooms, such as puzzles and physical activities that require the players to successfully complete them to continue with the game, are the primary experience for which players play and were the focus of the previous study on cultural bias in escape rooms. To minimize the incidences of cultural bias in the design of challenges, this section will briefly describe the difficulties found in all five cultural bias categories, i.e. language, symbols, norms, artifacts, and knowledge.

Language

Written language is most commonly encountered in challenges, although there are cases of spoken language as well. For players who are not fluent in the language of the game, the existence of language as part of a challenge can impede their understanding, the context in which it fits into the narrative, and the ability to solve it. For example, a puzzle that relies on following a set of instructions precisely may frustrate players who do not understand the meaning of a particular word. One player commented on a puzzle that involved writing a Chinese character where the order of the strokes was important: "So that seemed particularly unfair, because if you just didn't know it then..."

Interpretation of cursive handwriting is also a skill that varies with the age and experience of the player, even in native speakers. As some regions have stopped teaching cursive in schools, game masters will have to adapt to their teams' needs, which may involve sacrificing immersion to replace historically accurate handwriting with a printed font that is easier for players to read.

If it is not possible to remove language from the challenge or replace the challenge, translation is a possible option. Some rooms allow players to choose the language they wish to play in, although players did report incidents when translations were poor and did not convey the story or puzzle instructions as well as the original text. Clever word puzzles and riddles may be more challenging or even impossible for players who are not native speakers; when wordplay is involved, a simple word-for-word translation may not be sufficient.

Symbols

In challenges, symbols are most often seen used as icons or objects. In this case, cultural bias occurs when players do not recognize specific symbols in order to connect them to a puzzle or to identify the meaning they represent. For example, using the colors of a flag as a symbol in a challenge to represent a country is not effective if a player does not know the flag colors or the associated country. These issues can be avoided by using highly recognizable objects as symbols, as opposed to objects specific to a certain location.

Another option is to create a set of symbols used in the game storyworld and then introduce those to the players and use them consistently. For icons, ensuring that there is a reference in the room or environmental storytelling will assist players who do not know the meaning of the icon; this can be a way that the players can be taught about the meaning and importance of real-world symbols and icons. A third solution is to provide an information resource for the players to help them interpret the symbols, but the designer must account for the extra time it will take players to discover, learn to use, and then cross-reference a resource in overcoming the challenge.

Indicating that a character within the escape room has travelled to a location without naming the country could use a symbol of a flag, but not all players may recognize it. Instead, consider a map

on the wall with markers at the locations visited, or a plane/train ticket with a clear logo indicating mode of transportation and the final destination.

In a science fiction themed escape room, creating a unique set of symbols for players to learn can create storytelling moments and moments of discovery. For example, when players press a button with one symbol, they hear lasers firing. Another symbol powers the lights on and off. In a case such as this, keep new symbols for players to learn few in number. Ensure symbols are simple in design and distinct from each other, i.e. one round symbol, one square symbol, one lightning bolt shaped symbol, etc.

In a room requiring players to read a Roman numeral, the designers included tombstones that had years in both Arabic and Roman numerals. The examples were chosen so that they would provide players with all of the information needed to determine the Roman numeral needed to succeed at the challenge. This design still did have an assumption that players understood the basic concept of how Roman numerals worked so that they could interpret the numbers on the tombstones.

Norms

Players experienced cultural bias in challenges due to differences in folkways (informal standards of behavior), mores/laws, taboos, and genres, with the additional category of rituals which had no examples but could also be encountered in escape rooms. In these cases, encountering an unexpected norm caused players to hesitate during the game and second guess their answers. Here are several examples of problems with cultural norms and potential solutions:

An example based on folkways is a puzzle requiring players to take off their shoes at the door before entering a house. Set design and environmental storytelling can help indicate that a player should remove their shoes if they are from a culture where shoes are worn in the house. Build a shelf containing pairs of shoes by the door, for example, to subtly indicate that shoes should be taken off.

Some rooms create challenges that require players to break the stated rules to accomplish. For example, players may be expected to break something when they have been told not to use force. The structure of escape rooms is that there is a social contract with the players – the players will play within the confines of the rules provided, and in exchange, the game will be fair and winnable within those confines. Players should not be asked to circumvent the game's rules or to break laws. This may appear to result in an interesting decision for the players, but in our study players who experienced this were frustrated and had a negative impression of the challenge. If a designer wishes to play with this concept, then there should be a clear distinction between game rules that are unbreakable (those presented by the game master outside of the game space), and "rules in the narrative" that are breakable (those presented by a non-player character or posted on the wall within the game space).

An example involving taboos is a puzzle that required an answer that was a term some might find morally offensive. Researching words, gestures, or pictures to ensure there are no negative implications in another culture can mitigate this. Taboos are difficult to identify, but possible taboos or triggers should ideally be removed from the game or warned for before players register to play. Taboos surrounding objects, such as some players' aversion to handling guns and weapons, can be partially mitigated by reducing the realism, i.e. ensuring guns have an orange cap and weapons are obviously fake.

Cultural bias due to genre in challenges can also be reduced through set design and environmental storytelling. Subtle signposting that directs players into taking the appropriate actions even when they do not understand the theme is key to a well-designed puzzle. Hinting may also need to be increased if players are completely unfamiliar with theme tropes. While players may miss some of the in-jokes and clever references, ensuring they enjoy the game is paramount.



Figure 3: "Lock" by Rebecca Trynes @ Flickr. CC BY-NC 2.0.

Artifacts

Cultural bias due to artifacts in challenges can be categorized into sensory artifacts, tools, recreational artifacts, and media artifacts. Within these categories, players reported experiences with smell and song identification puzzles (sensory), puzzles using unfamiliar locks or devices (tools), puzzles requiring knowledge of unfamiliar video or board games (recreational), and puzzles requiring use of the Internet or finding passages in a bible (media). Perhaps not surprisingly, all of these categories of artifacts are difficult to interact with, especially on a time limit, if a player grew up in

another country, had never experienced those tools or games, or was old/young enough that certain technology was unfamiliar to them.

In the case of artifacts, evaluate the use of artifacts to identify any specific to a time period or location that are not necessary to drive the theme. For artifacts that are strongly associated with the narrative, ensure there is environmental storytelling to clue players to how they can use the artifact. A storytelling tool to use in this situation is some record of past activities in the game space using the artifact, such as older footage from a security camera, a still photograph showing the artifact being used, a drawing in an old book, or even a ritual painting on the wall.

Sensory identification can be made easier, for example, by providing a list of the smells or song titles that a player needs to identify or another instance of the smell or sound elsewhere in the room. For example, there was a room that required players to identify the smell of camel dung; for players without that cultural knowledge, having a hitching post earlier in the game with a saddle or blanket that also smelled the same would provide the cultural reference needed.

In a puzzle requiring players to insert giant batteries into a large machine, not all players may know that batteries should be inserted in different directions. Place positive and negative symbols on both the machine and the batteries to subtly direct them. In the case of locks, they can and should be introduced prior to the game to ensure that players can comfortably operate them.

Knowledge

Knowledge is divided into two categories concerning cultural bias in escape rooms, trivia and riddles. Trivia, such as the names of popular celebrities, or the location of a particular city, should be eliminated for games truly free of cultural bias. Very few pieces of trivia are universal knowledge, although games can assist players again through environmental storytelling, for example, with a celebrity poster or a map on the wall for players to reference. A general rule of thumb should be to avoid trivia unless there is a way for players to learn it within the room and it is important for the narrative or immersion.

Riddles reference wordplay that can be found in particular types of language puzzles, such as cryptic crosswords or using homonyms. As one player stated: "You're not solving riddles, you're remembering riddles." Particularly for players who do not speak the language of the game, wordplay is difficult to understand, difficult to translate, and difficult to hint without outright giving players the answer. Many of the solutions regarding riddles are similar to dealing with language in challenges.

Top Tips for Improving Challenges

- Ensure all knowledge needed to solve the challenge is contained within the room.
- Use environmental storytelling and visual signposting to suggest actions or solutions to players.

Set Design

Elements of set design in escape rooms are part of the player's experience of the game, but not part of any challenge. Set design adds to the immersion and narrative of the game; as David Spira (2020) said, "It is difficult to sell a story if the environment doesn't match it."⁵ While elements of set

design can distract players from the goal of the game, a skilled designer can use set pieces as environmental storytelling to lead players through the game.

Language

Language in set design can be found in paper material within the game such as books on a shelf, posters on the wall, discarded newspapers, or instruction manuals. Any written language within a room will be interpreted as part of a puzzle until players are able to eliminate it. Books are a common distractor in rooms; if books are needed for set design, drilling a hole through the books and running a rod through them or gluing the pages closed will keep players from looking through the books for a solution to a challenge.

If writing is in a foreign language, players who speak that language may be distracted trying to translate for their teammates. Even nonsense languages may be perceived as an anagram or symbols to be decoded. Eliminate as much language as possible that is not needed for puzzles. It will be less to translate and less to distract players.

One frustrated player explained: "We had a fragment of newspaper ... and it was racing course results and they had little colored codes next to them and numbers so it looked like a quality clue. We were in this room staring at it for ages going, how do we use this? ... But, the problem with this was that it looked like it had so much information until we finally managed to make it into the next room, which was full of just scraps of newspaper that was then obviously just filler that we weren't meant to read." This problem can be resolved by blurring all the words in the newspaper pieces so they cannot be read at all, or by ensuring that the scraps all remain together so a stray piece does not distract players.

Symbols

Any icons as part of the set design should be recognizable to players if introduced during the game introduction, such as "Do not touch" symbols. Symbols can also be more subtle. Light in certain areas of the room or sounds played from an embedded speaker in a prop will focus players' attention to the objects in that area. For example, when players solve a puzzle, they hear the sound of a music box coming from another room. The music leads them to a dollhouse which has lit up to show a clue for the next challenge.

Avoid using symbols that can become red herrings for frustrated players seeking guidance. For example, in a room set in Ancient Egypt, it may be tempting to cover the walls in hieroglyphs as environmental storytelling. If there is a puzzle that is based on hieroglyphs, then all of the surfaces of the room become red herrings to frustrated players if the symbols appear to be similar enough to be part of the puzzle.

Certain colors may indicate "Danger!" to some players, although players from a different culture may not have the same association. Some laser mazes include red and green lasers, where red beams need to be blocked or "stopped." While this might be clear to many cultures where red lights mean stop while driving, incorporating symbols will assist players in determining the meaning, such as a buzzer when a green light is blocked. These symbols should be introduced outside of time constraints, such as during the introduction.



Figure 4: "Escape Room Trunk with Chains" by David Hofmann @Flickr. CC BY 2.0.

Artifacts

Artifacts are a key aspect of environmental storytelling. A pirate themed escape room may have the scent of salty air and the sound of waves splashing against the hull of a ship alongside cannons and a skull and crossbones flag that are not part of any puzzle. These artifacts add to the immersion of the game and can also subconsciously direct players to the goal of the game. It is also important to consider the narrative and immersive impact of introducing artifacts that don't fit in an environment; while adding unusual objects is a tool to direct the player's attention to certain things for gameplay success, those same additions can be a distraction if they aren't part of the game.

For example, the aforementioned pirate game may have a map on the wall with an X to mark the spot of the treasure. While the map may not be used as a specific component of a puzzle, players likely won't be surprised to encounter a challenge involving a treasure chest. In a room set in a castle, the set designers had filled the room with items purchased from a local thrift store. Some items clearly did not fit in the time period or environment of the game, so ended up being a distraction to players who were immersing themselves in the cultural space of the game. If the item doesn't fit in the environment, and isn't part of the game play, then it shouldn't be in the room.

Top Tips for Improving Set Design

- Carefully evaluate the purpose and necessity of every object and its effect on players.
- Make impactful use of environmental storytelling but ensure that it does not create red herrings by being too similar to components used in challenges.

Creating Rooms inspired by Specific Intellectual Properties

One caveat to this discussion is when the escape room is designed for an audience that already has a specific cultural background. For example, an escape room that is designed and marketed to fans of *Star Wars* may have elements that are inspired by actions in the movie. Players engaged with the room will expect to be able to live in that “movie world” and will appreciate being rewarded for applying their knowledge of the movies to the game. For example, *The Doctor Who Experience*, a pop-up room that ran at science-fiction conventions required players to have *Doctor Who* knowledge.⁶ On the other hand, *The Game is Now: Sherlock*⁷ and *Murdoch Mysteries Escape Game: The Secret of Station House No. 4*⁸ were set in the worlds of the television shows and allowed players to have interactions with characters and challenges inspired by the show, but did not require knowledge of the show for players to be successful. A conscious design decision needs to be made about the cultural barriers in a game designed for fans of a genre, and that decision should be communicated to the players before they sign up to play the game.



Figure 5: “The Escape Room” by Jordan Jivkov @ Flickr. CC0 1.0.

Conclusion

Minimizing cultural bias in escape rooms is ultimately about responding to the needs of the players. An immersive, challenging, and enjoyable game can be created that appeals to players of different cultural backgrounds. Lowering the cultural barriers to playing the game helps lower the barriers and makes the games more approachable to all.

- Interactions with escape room staff should set expectations for the game and actively influence the players' engagement with the game and narrative world.
- Challenges within the game should be fair for all players, using only knowledge found within the game and having been tested by players from a variety of cultural backgrounds.
- Set design should add to the immersiveness of the environment and supplement, rather than detract from, the in-game challenges.

Keeping these principles in mind when designing an escape room will minimize the possibility that players will have negative experiences such as losing the game flow, losing confidence in the game design, and involuntarily skipping puzzles.

Escape room owners, designers, and staff can also minimize negative experiences. The ability to identify when players are experiencing cultural bias and adapting introductions, hints, and gameplay elements to accommodate player needs can transform a negative experience into a positive experience.

While it was beyond the scope of this study, the issue of accessibility is also important for positive player experience in escape rooms. Pairing colors with sounds or shapes to assist those who are colorblind, including wide paths or alternate routes for those with mobility issues, and having an adequate light level for those with vision issues are only a few of the accommodations that should be considered to improve accessibility for all players, and is a path for future research.

Overall, by analyzing an escape room's elements through the lenses of language, symbols, norms, artifacts, and knowledge, it is possible to identify sources of cultural bias and thus be aware of where players may experience difficulties. Minimizing or eliminating these sources of cultural bias will create a more enjoyable experience for players of different ages, cultures, and socioeconomic backgrounds.

Overall Tips

- Before opening, test your game with players of different ages, education levels, and cultural backgrounds.
- Minimize the use of language or have translations for most common languages in your area.
- Keep symbols (images, sounds, colors) consistent throughout the game.
- Pay attention to the players and where they are having negative experiences.



Shannon McDowell, lead author, is a Canadian board game inventor and puzzle designer. She designs board games, puzzle hunt challenges, and was a member of the design team for the 2019

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