ABERTAY GAME LAB

RIGHT 2 ROAM

Dr Mona Bozdog, Prof Robin Sloan

Right 2 Roam is an original tabletop board game that was designed in response to media coverage and personal stories of the risks women face while walking alone in public spaces.

The final game has been produced as a physical artefact that has subsequently been used in our engagement with festivals and local communities.

This document presents an account of the research process involved in the development of the game.

Contents

Outline

70% of women overall and 97% of women in the 18-24 bracket in the UK have experienced sexual harassment in public (UN Women UK, 2021). One in two women feel unsafe walking alone after dark in a quiet street near their home as well as in a busy public place, and four out of five women feel unsafe walking alone after dark in a park or other open space (ONS, 2022). It is these frightening statistics, alongside the seemingly daily senseless acts of violence against women walking, that led us to create Right 2 Roam.

Right 2 Roam is an original tabletop boardgame for 2-4 players based on the gendered lived experiences of walking alone. Through a rigorous process of making, playtesting, and reflection, our research aimed to explore how board game design can be used to prompt discussion around the inequalities of movement and safety in public places. The game is a purposefully imbalanced game of chance to mirror systemic injustices and imbalances of power.

Right 2 Roam makes a significant contribution to game design, board games as activism, and games for civic engagement. It demonstrates the power of board games to represent the systemic imbalances and inequalities linked to gendered experience, and how critical play can be used to catalyse discussion around lived experience of- and equitable access to- public space. The game has been deployed in contexts in which players can both i) learn more about the experiences of others, and ii) link play to their local communities and public spaces, with routes to impact on civic engagement and community-driven co-creation of safer and more equitable public spaces.

Research team

Dr Mona Bozdog is a Lecturer in Immersive Experience Design. Her research is practice-based and focuses on the convergence of contemporary performance practices and videogames. She is interested in designing hybrid forms of storytelling, games which draw from lived experience and social herstory, performative games, mixed-reality and immersive experiences, and games for public spaces and heritage sites.

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Prof Robin Sloan is a Professor of Game Design and Culture. He is an artist and game maker with interests in research using game engines, digital art packages, tabletop game design methods, and traditional media. His research tends to explore the aesthetics of games through the critical lenses of media archaeology, technological nostalgia, and the history of gaming cultures.

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Practitioner statements

Never listen to music or podcasts. Always charge phone before going out. Always cross the road when you hear steps behind. Keep keys always in outer jacket pocket. Always have jacket with pockets. Lighter always in hand. Wear comfortable shoes. Phone always in hand. These are reflexes. I haven't thought about them consciously before starting this project. I thought everyone is afraid of and dreads walking alone. But roughly only half of us do.

I wanted to make a game about this systemic unfairness which also captures behaviors and situations encountered when walking alone, enabling players to understand these realities through performing in-game actions. Comparing lived experience, field notes and photographs with Robin and collating stories on- and of-line informed an iterative design process which sought to solve this design challenge.

I am hopeful that R2R enables us to start this important conversation about safety in public places from a more considered and empathetic position.

 - Mona

Practitioner statements

From early on in this creative process, collaboration with Mona has challenged me to examine the safety of public spaces, learn about the diversity of experience of those spaces, and rethink how and where I walk. In addition to engaging with desk research, game design, and playtesting, I found that walking was an invaluable part of my creative inquiry.

Confronted with the reality of others' lived experience, I was now seeing my own town in a very different way. I would take photos of the streets I walked at night and found myself noting the quality and inconsistency of lighting. Where I would previously use shortcuts through unlit woodland, I now thought twice. Sharing my photos and video with Mona highlighted the inequity of public spaces. I have been keen to reflect this inequity in the mechanics and visual design of the game.

- Robin
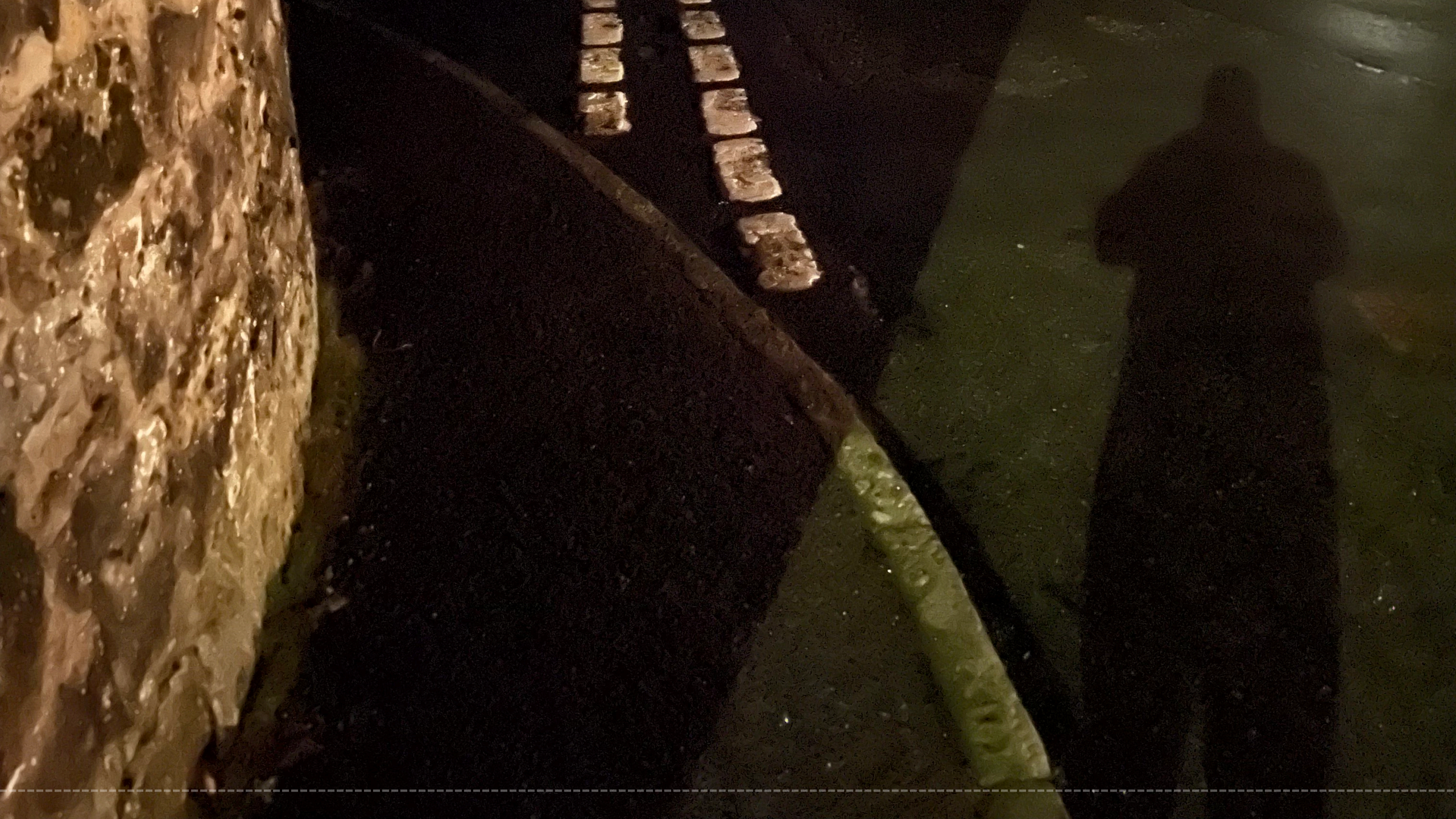
Research aim & questions

The aim of the *Right 2 Roam* project was to **design and produce an original tabletop board game** that could i) reflect the inequalities of walking alone in public spaces, considering (but not limited to) the gendered experience of walking alone, and ii) generate an archive of lived experience through game customisation and capture of player discussion.

We sought to respond to the following research questions:

- How can boardgame design capture the lived experiences of public space?

- How can we use the systemic and social nature of boardgames to identify and address systemic inequalities and imbalances of power?

- What are the challenges of balancing boardgames based on imbalanced lived experience, and how do we balance gameplay for real-world imbalance?

- How can we approach boardgame design with an aspiration of democratising access to public space and promoting conversations about walking alone?

- Can a boardgame about the lived experience of walking be used to facilitate public engagement on equitable access to public spaces?

Right 2 Roam: Research and development

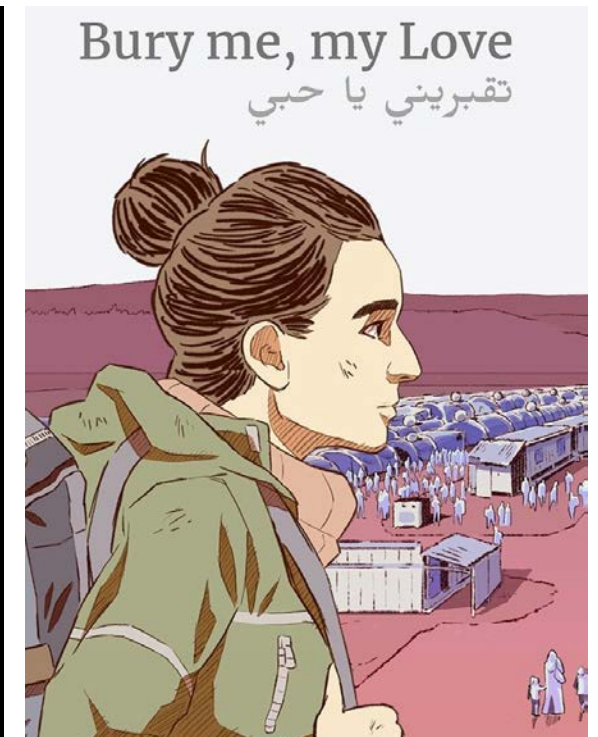# Research and development process

From the earliest stages of concept development, our aspiration was to draw on existing best practice in persuasive games and procedural rhetoric.

Train, Brenda Romero, 2009

Papers, Please, Lucas Pope, 2014

Bury me, my Love, The Pixel Hunt, 2017

We also looked to personal and documentary games, critical play, and feminist and queer play while discussing our critical frame for game design and our aspirations for what player's would experience and take away from the game.
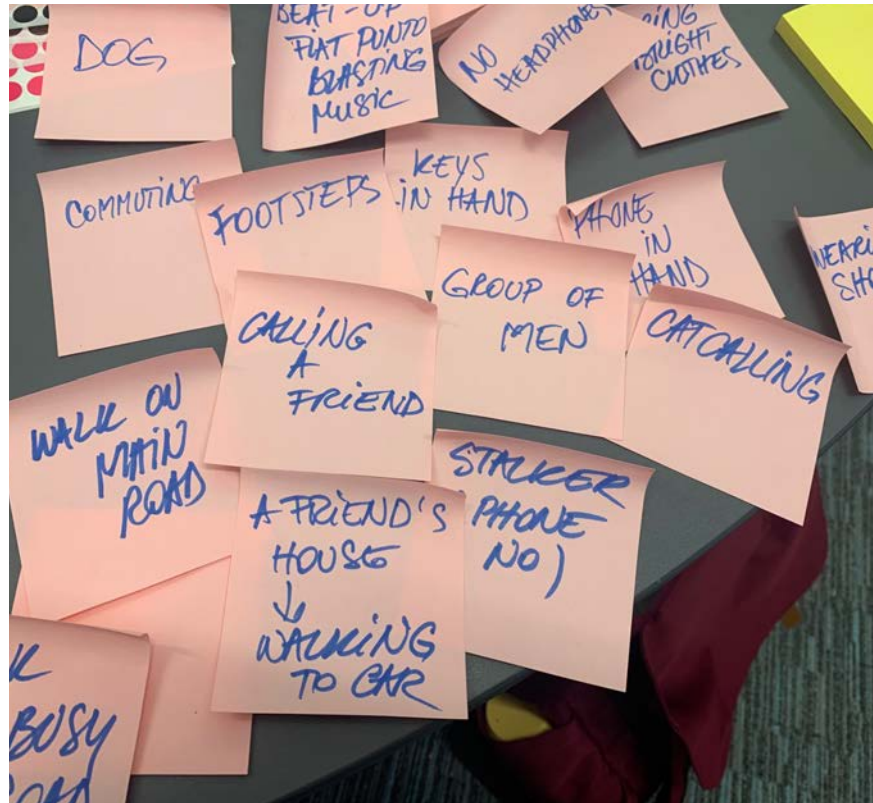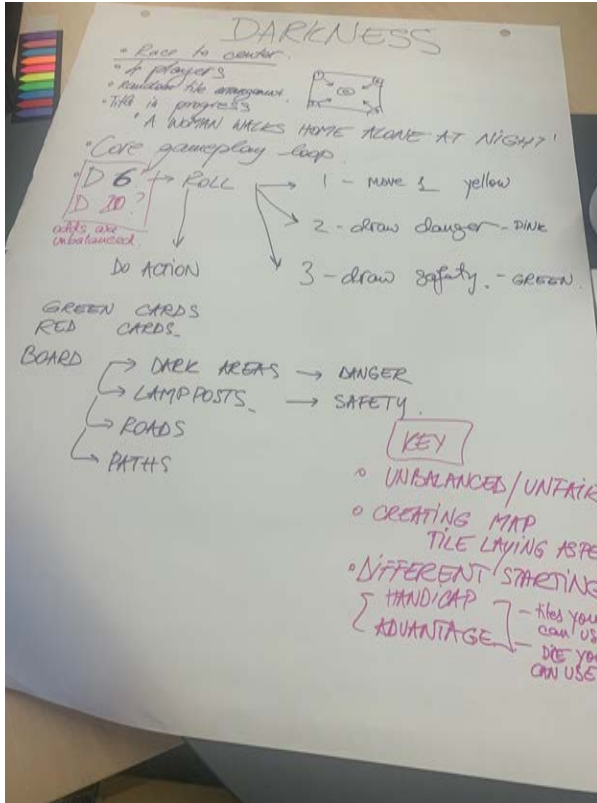

Dys4ia, Anna Anthropy, 2012

The Game: The Game, Angela Washko, 2018

That Dragon Cancer, Numinous Games, 2016

Right 2 Roam, early concepting (left) and potential cards (right)

The concept was developed during a tabletop game jam that we ran with students in 2022, in response to the theme 'Darkness'.

We wanted to make a game about the causes of the numerous tragic stories of women being abused when walking alone at night.

This developed into a game about safety inequality in public spaces which include gender, age, ability, social and economic status.

Our established design pillars were:
- Reality-inspired
- Intentional unfairness through gameplay and starting states
- Safe, dangerous and threatening spaces and events
- Identical player space
- Level of abstraction in the board
- Multiple paths
- Cooperative
- Dice-based movement
- Card-based events
- Player Input -> Customisation opportunities
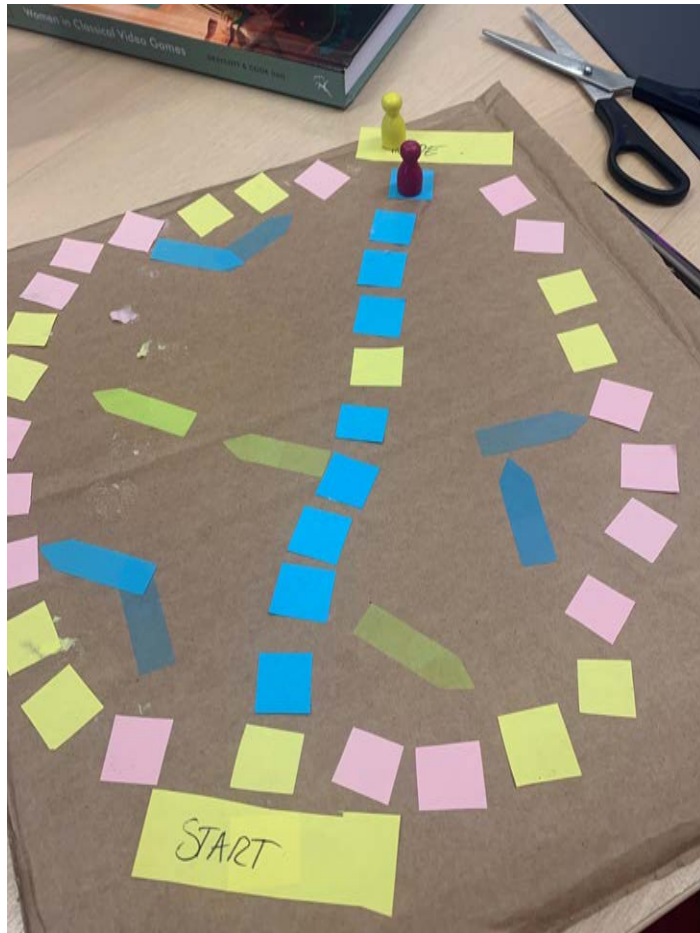
First playable prototype

Second playable prototype

Third playable prototype

A focus for us throughout the design process, from early concept through to final game, was the idea of different routes that can be walked by players. Here, we wanted to reflect the reality of lived experience, both from our own discussions in terms of our differing gendered-perceptions of safety, and from the stories of others.

As can be seen on the final board (page 21), we settled on a design that involved three choices of route for each player. Each route has a different number of spaces to traverse (10, 14, or 18), and each route has a different composition. The shortest route is dominated by unlit spaces, making it a threatening route to choose even if it appears quickest. The 14 and 18 space routes then offer increasing degrees of 'safety', with more lit spaces and more sanctuaries, as well as opportunities to access shortcuts or buses.

Our intention is to make route choice a considered one, and for it to be a choice that is made with reference to the player they have drawn. A player with a D6 may feel less certain about gambling on the dark short path, for instance.

We went through considerable design revisions before arriving at our final route design. We wanted to ensure that route choices were not a forgone conclusion: that all players could make any route work, and that the only difference was the balanced odds of success inherent in the cards, dice, and nature and number of spaces. Early versions resulted in routes that were simply never taken by players, or routes that always led to defeat. The final version retains an experience of individual inequality (imbalance in experience) with a sense that any player can succeed (gameplay balance).
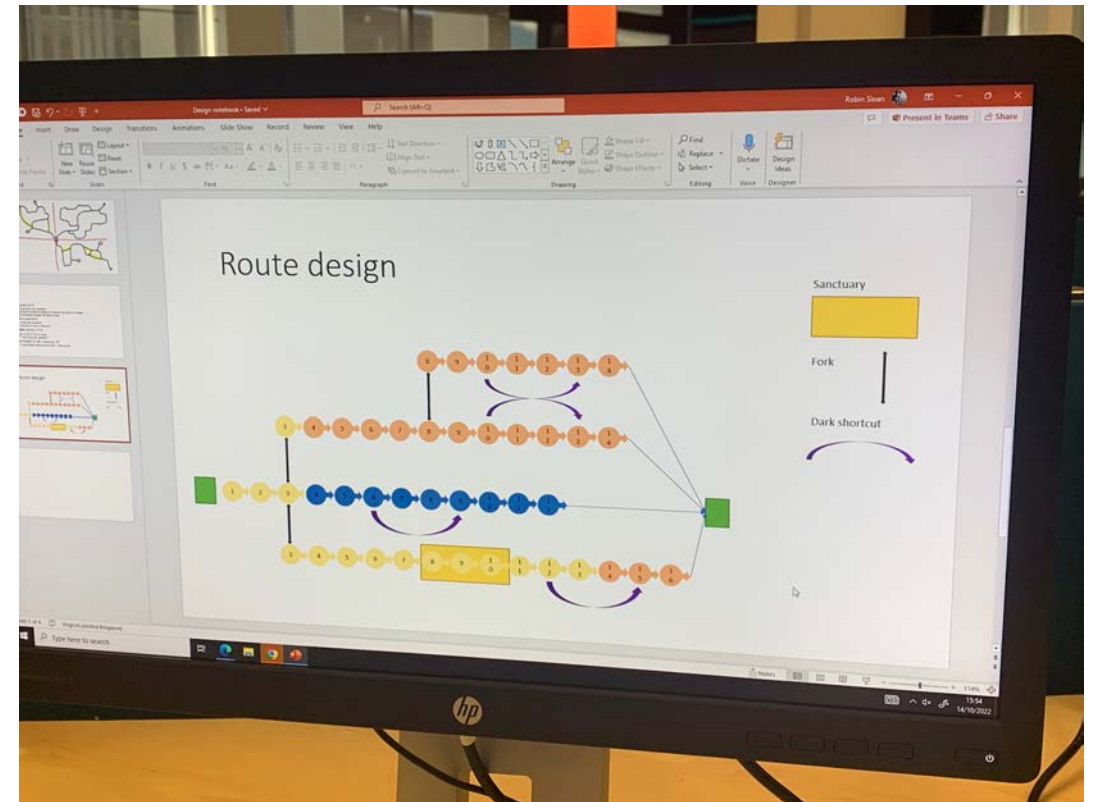
Right 2 Roam, early route balancing

In development, we encountered significant design challenges around the balancing of what needed to be, according to our design pillars, a purposefully imbalanced system of play.

Paper playtesting between ourselves demonstrated the need for a tightly calibrated ruleset related to how dice and variation in chance affected play, progression, and outcomes. While we were focused on accurately reflecting the inequity of lived experience and ensuring players were directly confronted with unfairness, we did not want the game itself to be received as unplayable. Our desire was always to aim for a a play experience that would support replayability and enjoyment, that would encourage players to recognize within the rules different strategies that could be developed and deployed to 'beat the game' cooperatively. In short, we wanted the game to be acceptable as a consumer board game that would be desirable to play, whilst also embedding into both the game rules and presentation a clear message around inequity that would incite discussions of lived experience.

Much of our development work in both the early stages and throughout prototyping returned to number-crunching in spreadsheets, working out various potential outcomes based on dice rolls dependent on whether the di was a D6 or D10. Iterations of the dice led us to consider different types of outcome that would determine player progression.

DRAW ORANGE CARD

		Purple, Tier 2	Purple, Tier 1	Lit, Tier 2	Lit, Tier 1	Purple	Lit	Sanctuary
1	Move 2				10	10	10	10
2	Move 1		10		10	7-9 roll	5-9 roll	5-9 roll	5-9 roll
3	Still	10	7-9 roll	7-9 roll	4-6 roll			
4	Back 1	7-9 roll	4-6 roll	4-6 roll	1-3 roll			
5	Lit or Sanctuary	4-6 roll	1-3 roll					
6	Sanctuary	1-3 roll		1-3 roll				
7	Draw Card					1-4 roll	1-4 roll	1-4 roll

First Roll

ORANGE	GREEN		MOVE 1	MOVE 2
	1	3	5	10
	2	4	6	
			7	
			8	
			9	

Second roll*

RUN	SAFETY		IGNORE	MOVE 2
	1	4	7	10
	2	5	8	
	3	6	9	

* NEEDS green card in hand, otherwise run
* OR NEEDS 10 sided di

Shortcut

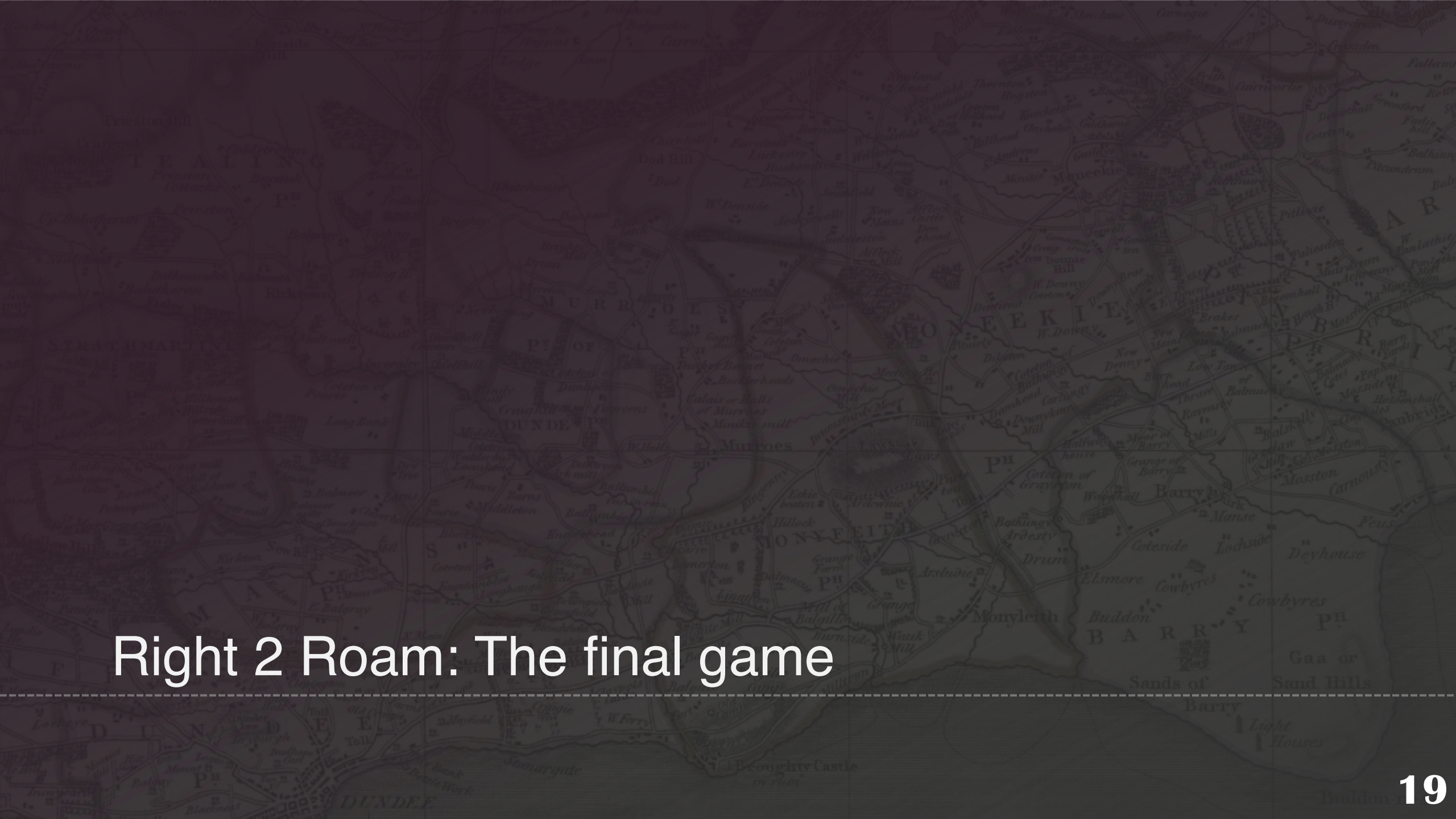| ORANGE	GREEN		MOVE 1	SHORTCUT
	1	3	5	7
	2	4	6	8
				9
				10
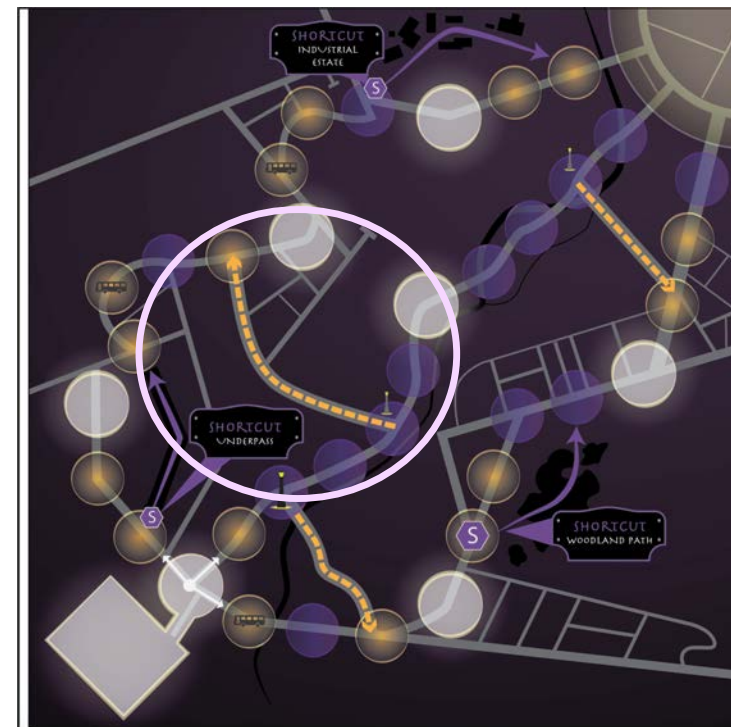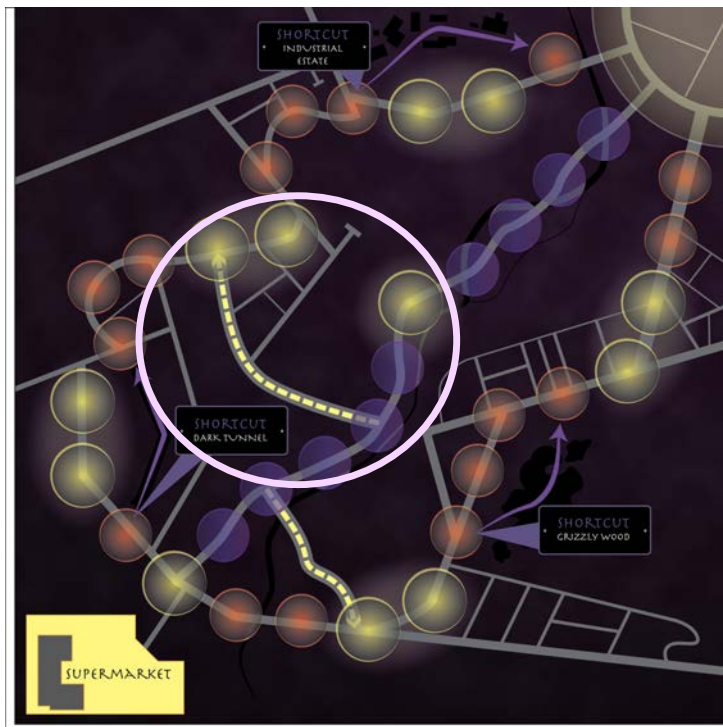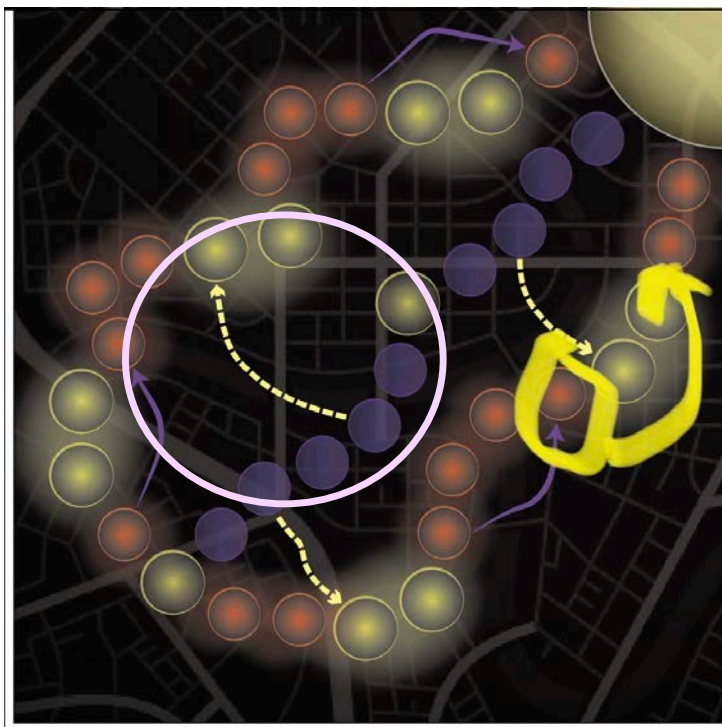
A standout example of how our game fundamentally changed while exploring balance was in our approach to a 'snakes and ladders' inspired board layout, where players could access both shortcuts (if they held the appropriate privilege) and be sent down alternative routes if confronted with adversity (which would more commonly happen to those with less power). Rounds of testing of game balance/imbalance made it difficult to retain the snakes-inspired board element. Although we wanted to retain a reflection of reality – that some walkers, particularly women, may need to take long routes and change planned routes based on circumstances they are presented with – we ultimately removed the alternative path option (highlighted in the circles above) to ensure the game was not overly complex.
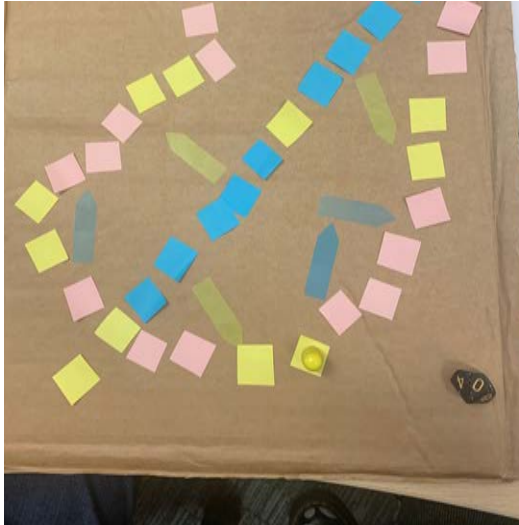
Playtesting was used throughout the development process for balancing gameplay and player experience. Examples of changes made as a result of playtesting include:

- Changing the second dice from D20 to D12 and eventually to D10
- Adding Guardian cards to player starting hand to ensure D6 players have opportunities for movement
- Adjusting Safe spaces and Sanctuaries so that being unable to counter a Threat cards is not excessively punishing
- Aligning dice rolls for bus and movement to make the system more intuitive

- Removing dice rolls for resolving Threat cards to streamline gameplay loop
- Adding features to support cooperative play by adding opportunities for players to gift cards to each other in place of taking a personal action
- Adding the custom setup feature so that players can generate their own spaces and cards following discussion with their group
- Adding the False alarm card to better align with the reality that not all dark spaces hide threats
- Increasing the Guardian deck based on observation of how quickly players had to reshuffle
- Adding the timer and the two Panic modes create tension
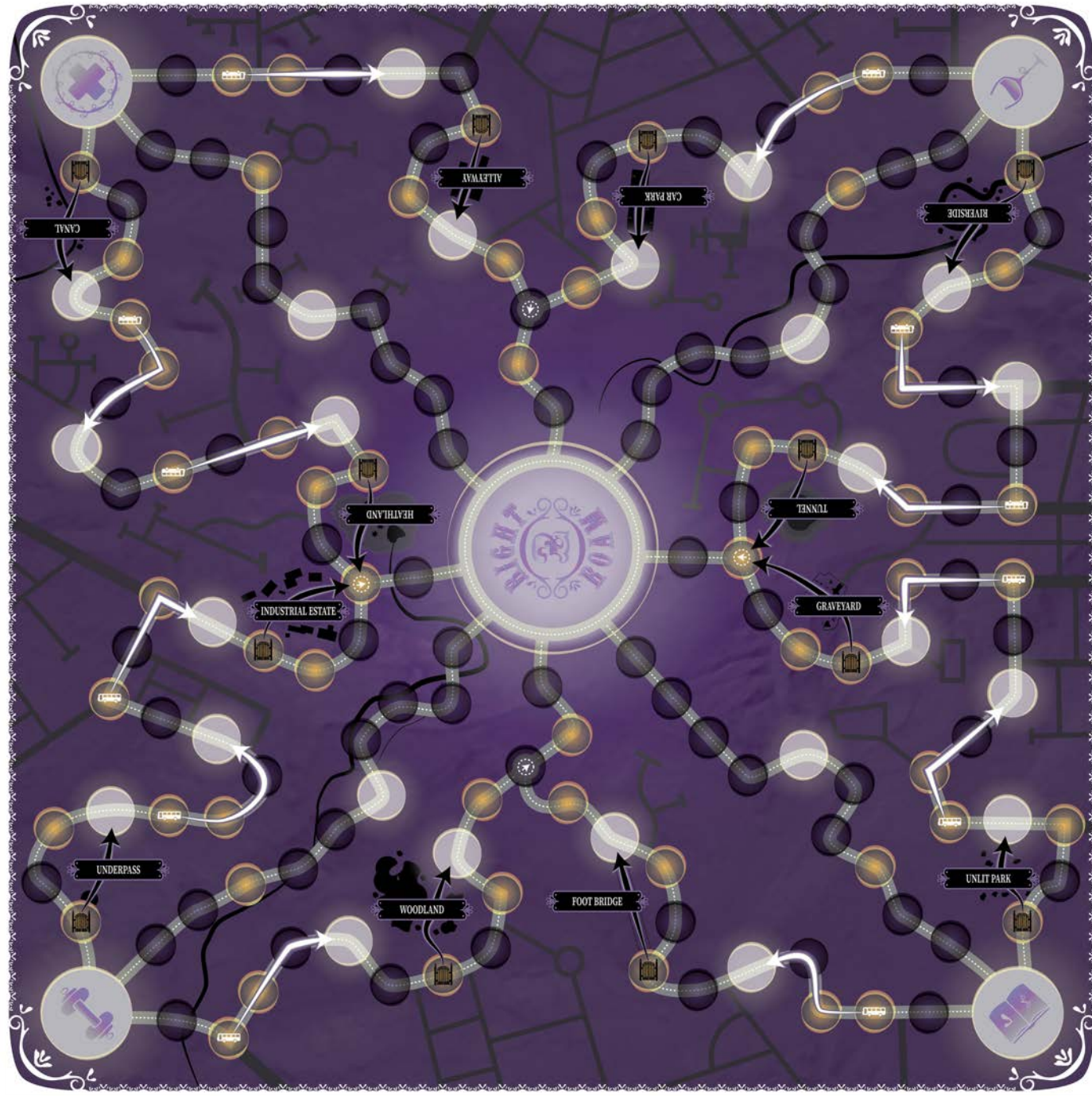
Right 2 Roam: The final game

Final game

Right 2 Roam

The following pages outline the rules of the final version of Right 2 Roam that has been manufactured for play and that is available to download and print from the game website.

Game board

Game components

The items shown right are the components that are included in the box.
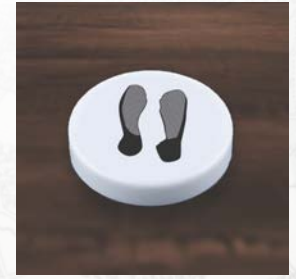

1 x game board

4 x players

2 x 6-sided dice

2 x 10-sided dice

2 x shortcut coins

4 x starting space cards

36 x threat cards

36 x guardian cards

1 x timer

4 x blank starting spaces & cards

12 x blank threat cards

12 x blank guardian cards


12 x blank shortcut tokens

24 x blank sanctuary tokens

Objective

Each player starts in a corner of the board, at either the **pub**, the **gym**, the **library**, or the **hospital**. It's time to walk home to the centre of the board. But which route home should you choose?

Longer routes look relatively safe with lit spaces and chances to take shortcuts or hop on a bus. Darker routes are shorter, but tread carefully... threats lurk in the shadows.

Players take turns rolling the dice and progressing across the board. You only win if all players get home safely.
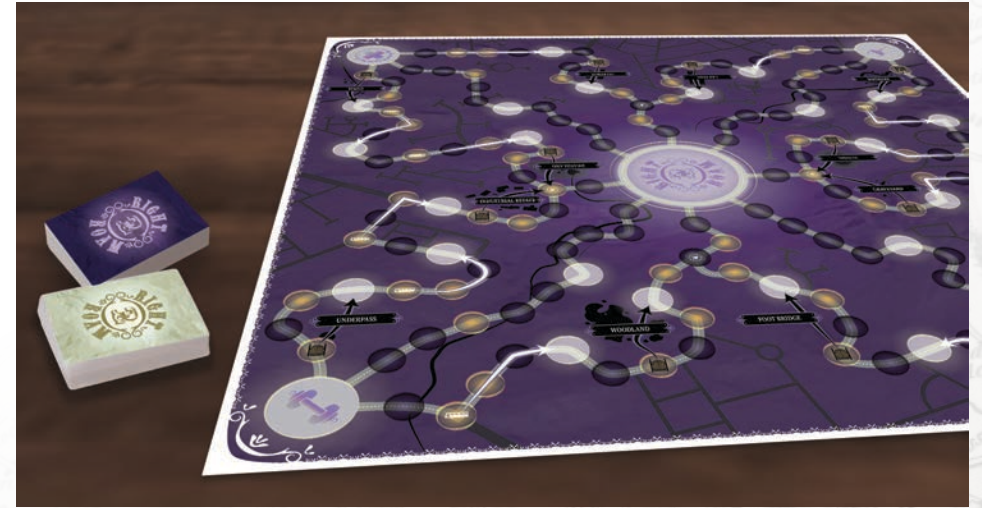
Standard game set up

Players place the board in the middle. They take out the threat and guardian cards, keeping them as separate decks. Both decks are shuffled and place them face down next to the board. These are then the threat draw pile and the guardian draw pile.

Players then take turns drawing a coloured player piece from the player bag until they each have one. The player who last walked home alone should go first, followed by the other players in a clockwise direction.

The colour of the player piece determines which dice that player is allocated, whether or not they are allocated a shortcut coin, and how many guardian cards they are allocated. The allocations are shown right. The concept here is to embed player inequality, with differences in dice and coins reflecting different odds of success during play.

Blue player	Orange player	Yellow player	Green player
6-sided dice	6-sided dice	10-sided dice	10-sided dice
4 Guardian cards	3 Guardian cards	1 Shortcut coin	1 Shortcut coin
		2 Guardian cards	1 Guardian card

Dice and shortcut coin icons
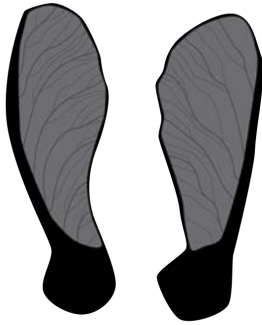
Stay still

If the player rolls this symbol on the di or flips this symbol on the coin, they must stay still. Their turn ends.

The idea is that they have deemed progression to be unsafe... something has spooked them and made them pause.

Discard to walk

On the di only, the player has the option to discard a guardian card from their hand to walk forward one space or use the bus.
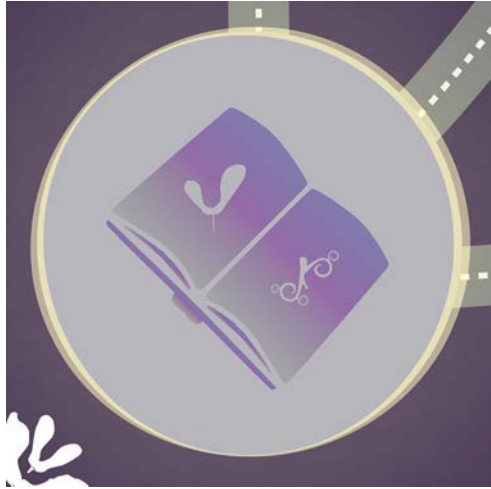
Walk

On the di and on the coin, this icon indicates that the player is free to walk forward one space, use the bus, or use a shortcut.

Players with a D10 have a greater chance of rolling a walk icon than those who have a D6, reflecting inequality in confidence and safety in public.

Spaces on the board

Starting space

Players draw cards to determine their starting space in the corner of the board. All locations are decontextualized, but draw from real world stories of locations people were leaving before walking home. While on a starting space, players can choose to draw a card from the guardian deck or pass a guardian card to another player instead of rolling to move.


Home space

When players reach the home space, they are safe and can no longer roll to play. However, they remain active in the game, and on their turn can draw or pass guardian cards. Our intention here is that the home is a shared home, and that drawing and passing cards to other players is the act of trying to track down friends or loved ones who are late.
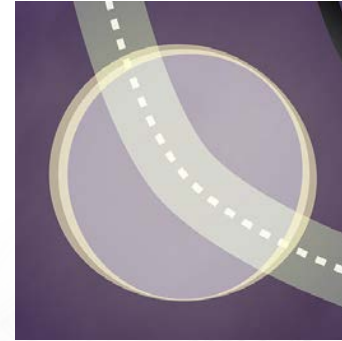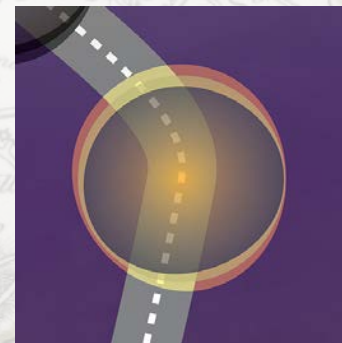

Sanctuary

Sanctuaries are undefined safe spaces where players can choose to draw or pass guardian cards instead of rolling to move. In the real world, these would be well-lit and populated places.
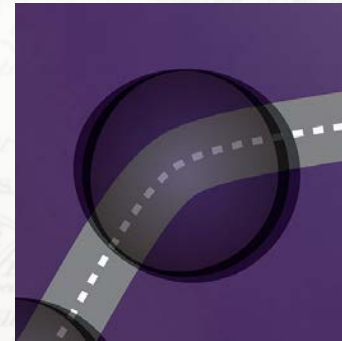
Unlit spaces

These are potentially dangerous spaces. When entering an unlit space, players have to draw a card from the Threat pile. Dependent on the cards they draw and have in their hand, players can find themselves having to retreat backwards as a result.

Lit spaces

Neutral spaces on the route home. On entering a lit space, the player's turn ends. In the real world, these would be relatively safe areas that have lighting, but which do not feel as safe as sanctuaries.

25

Shortcuts

To highlight the reality that some routes in the real world are perceived as too dangerous to consider using, the game board has several shortcuts that allow players to skip ahead and make faster progress home.

But these shortcuts also reflect real-world inequity. Only two players begin the game with a shortcut coin, which they can toss to see if they can use the shortcut. The other two players do not have a shortcut coin, and so the dangerous shortcut is simply not an option for them.

Bus stops

Bus stops also provide opportunities to skip ahead. And all players have a chance to enter the bus by rolling their di. However, those players with a D10 have more chances of being confident enough to use the bus, again reflecting the inequity of buses as safe spaces.

Our inclusion of buses was influenced by a story reporting that women should "wave down a bus" if concerned about being approached by a lone police officer. We wanted to highlight not only the insensitivity of this advice, but also highlight that buses can be unsafe spaces too.

Threat cards

Threat cards are drawn when you walk on to an unlit space. Every threat card has the potential to disrupt your walk home. There are three types of threat card that players can draw:

- **False alarm**: You stay where you are.

- **Distress card**: Will send you back one space unless countered with a comforter or defender card.

- **Danger card**: Will send you back to a lit space unless countered with a defender card.

Guardian cards

Up to four guardian cards can be in your hand at a time, and can be used to counter threat cards or be discarded to move. There are two types of guardian card:

- **Comforter card**: Can counter a distress card.

- **Defender card**: Can counter a distress or danger card.

Threat and guardian cards were developed with the intention of reflecting the reality of women's lived experience of walking alone. This drew from our own conversations as well as from playtesting feedback and from stories collected from news and media.

The intention is that the brief narrative contexts of these cards will induce discussion between players about these events/items and how our experiences of walking and safety can different significantly from each other.
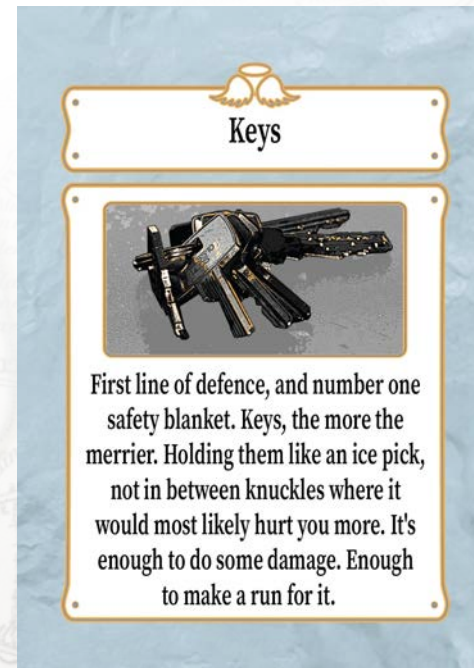
Phone battery dying

The battery icon turns to red. You put it on low power mode ages ago. If you had to guess, you'd blame the GPS. You'd never be careless enough to listen to music or podcasts. Everybody knows that you don't deprive yourself of hearing at night. But it's plain stupid to walk alone with a dead phone.
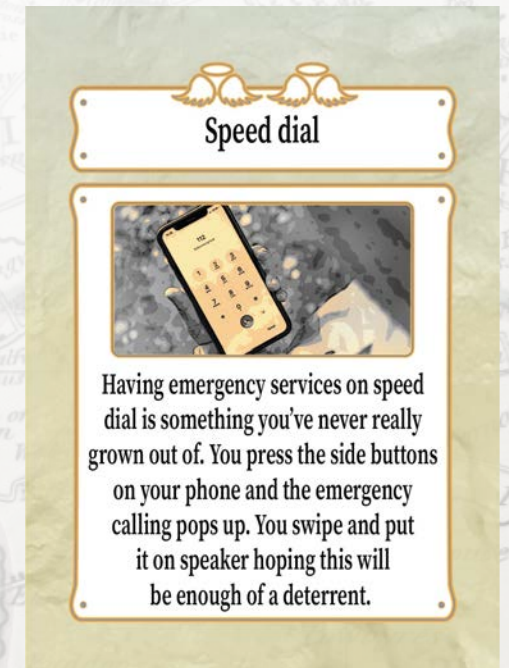
Parked van

Up ahead you spot a parked van. Your heart starts beating faster and you feel the panic starting to creep in. You try telling yourself it's only an empty van but you can already see an arm flung out of the open window. It's not an empty van. There's no one around and you feel your panic spiralling out of control.

Keys

First line of defence, and number one safety blanket. Keys, the more the merrier. Holding them like an ice pick, not in between knuckles where it would most likely hurt you more. It's enough to do some damage. Enough to make a run for it.

Speed dial

Having emergency services on speed dial is something you've never really grown out of. You press the side buttons on your phone and the emergency calling pops up. You swipe and put it on speaker hoping this will be enough of a deterrent.
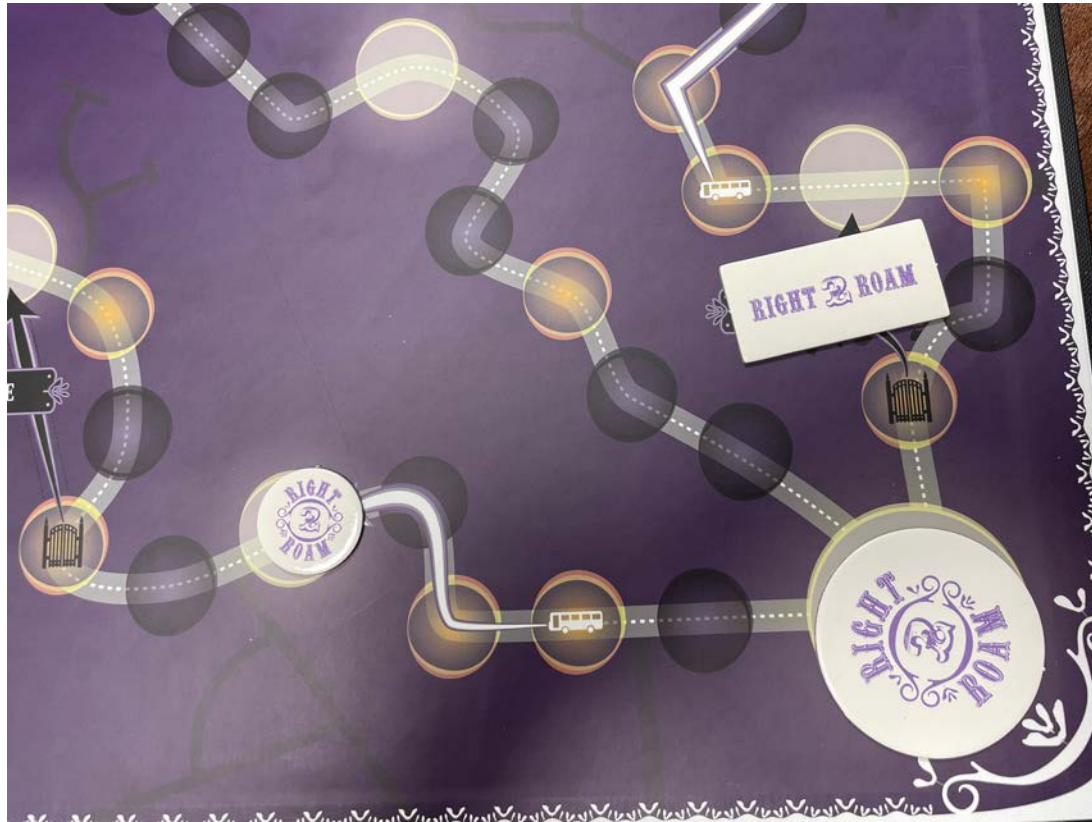
Customised game

We include blank starting cards, blank guardian and threat cards, and blank tokens that can be placed over starting spaces, sanctuaries, and shortcuts. These are used for the customized game mode, in which players can define their own play components drawing on their lived experience. This game mode allows for discussion between players, engagement with their home town or city, proposing what threats they encounter, and identifying what makes them feel safe.

Play modes

We defined three standard play modes in the ruleset. The safe mode allows everyone to play with no timer and in which all players can get home safely. Our two panic modes include a three-coloured timer, and the concept behind these modes is that fear and panic can set in the longer it takes to get home. In these game modes, it is conceivable that a game will end with one or more players not making it home.

Findings

How can boardgame design capture the lived experiences of public space?

In the early phases of the design process, our decisions around gameplay mechanics and narrative were partly influenced by the harrowing stories we read in the press. We were often startled by the seemingly normal circumstances women were in when they were confronted with danger. Our first attempts at incorporating lived experience involved a degree of reflection on these realities, abstracting the distressing stories we were reading by extracting locations or threats into game elements.

Not long after we had made our first paper prototypes, we found that our iterative rounds of playtesting were generating thoughtful reflections and contributions from our players. Particularly eye-opening were playtests where players of different experiences and perspectives were brought together. Often these were players who were friends or colleagues, who knew each other relatively well, but who nonetheless were discovering new things about each other through 15-20 minutes of playing a board game. To an extent these views were gendered, and often echoed the discourse between ourselves as designers who had different perspectives of our own safety walking alone. Over time, our playtesting and open sharing of our design process (we worked in open labs so students, fellow academics, and other passers by could interact with us) became integral to our final product. Many of the final decisions around game board spaces, cards, and narrative were informed by conversations we had with those who came to play the game or simply to speak with us.

Right 2 Roam is therefore a game that has captured the lived experiences of public spaces through a combination of desk research and open design process. On reflection, Right 2 Roam would not have been as successful a take on the true experience of women (and men) in their daily lives if we had not spent 6-8 months working on the game in a public space, where we could draw on those who kindly came to interact with us not only for playtesting, but also for their contributions.

How can we use the systemic and social nature of boardgames to identify and address systemic inequalities and imbalances of power?

Within the final design we have demonstrated how a game system can be used to reflect the complexity of real-world experiences tied to identity and differences in power. While ultimately a simplification of the diversity of lived experience, we have incorporated a degree of abstraction that allows players to project their own experiences and perspectives on to the player pieces and the events that can take place during play.

Player pieces, for instance, have not been presented as explicitly gendered. While in our minds as designers, we saw archetypal 'female' and 'male' players representing the two extremes, the final four players are presented simply as colours and associated with different levels of 'power'. Players with a D10 and shortcut coin hold more power than those that hold a D6 and no coin. The nuance introduced by varying starting card allocations (players are allocated between 1 and 4 starting guardian cards, allowing for slight distinctions between the two 'female' and two 'male' players) means that players can observe and interpret varying degrees of confidence or anxiety that anyone may experience as they are about to embark on a solo walk through a dark town or city.

The use of the timer in the end game is another means by which we have represented inequality, with our two panic modes offering a critique of how safe different people actually are when walking alone, and that thinking strategically about whether walking swiftly or cautiously will offer more security.

In play, the game naturally lends itself to discussion about what's happening to the players in the game. The cards players draw when they land on unlit spaces trigger anticipation, as all players wait to see what happens. When a player with power rolls a D10 to once again find they can move, while a D6 remains stuck, the game system itself serves to prompt discussion about lived experience of inequality.

What are the challenges of balancing boardgames based on imbalanced lived experience, and how do we balance gameplay for real-world imbalance?

As documented throughout our development process, one of the challenges we faced with Right 2 Roam was delivering a gameplay system that authentically represented inequality. It was important to us that the game system was the primary channel by which we communicated the reality of walking alone from the perspective of different demographics. An iterative approach to balancing the game system (adjustments to the board, cards, and dice) was essential to ensuring the procedural rhetoric we were curating did not undermine the experience of the game as entertainment.

One of the ways we resolved to address imbalance in play was through the implication that Right 2 Roam is meant to be played *cooperatively*, not *competitively*. At no point in the game presentation or rulebook is it explicitly stated that Right 2 Roam is a cooperative team game, and on examination of the board and objectives it would be natural to assume the game is in fact competitive. By refining our game modes to encourage a collective focus on every player making it home, and introducing a mechanic that allows players to help each other, we have observed that players typically resolve to support each other. While advantaged players (rolling a D10, accessing shortcuts) will often (but not always) reach home first, this does not end the game, and all players continue to engage.

Additionally, the short play time supports playing multiple rounds, which in turn means that players have a chance to experience playing from different 'perspectives': a player may draw a D6 role in her first round, but draw a D10 role in her next round.

How can we approach boardgame design with an aspiration of democratising access to public space and promoting conversations about walking alone?

We approached the design of Right 2 Roam with the intention of ensuring all aspects of play - from the board to the cards to the differences in player inequities - served as prompts for response and discussion.

Additionally, we have extended the design of the game to include the design of a workshop format. Our 'Right 2 Roam workshop' is intended as a toolkit that community leaders, planners, charities, and other groups can use to facilitate public consultation and information gathering through play.

The workshop can be delivered in 2-hours with the following structure:

1. Introduction to the session: 5 minutes

2. Guided play session in custom mode: 40 minutes

3. Comfort break: 10 minutes

4. Focus group: 60 minutes

5. Wrap-up: 5 minutes

We aim to make both the game (as print to play) and workshop format freely available, and to run the workshops ourselves with relevant stakeholders.

Can a boardgame about the lived experience of walking be used to facilitate public engagement on equitable access to public spaces?

We have had opportunities to test the potential of Right 2 Roam as a game that can engage the wider public.

In November 2023, we brought the game to a public event in the Overgate shopping centre, Dundee, as part of the city's participation in the international 16 Days of Activism against Gender-Based Violence campaign. Not only did this allow us to demonstrate our commitment as practitioners to the campaign, but also it demonstrated that Right 2 Roam can be used as a playable conversation-starter about gendered experiences of safety in public.

As a result of our current practice-based research, we have established two outcomes: 1) the board game itself, which includes the custom play mode that implicitly generates player accounts of their own experiences (with regards locations, safe/unsafe routes, potential threats, potential securities), and 2) the workshop format of playing the game, which follows a play session by facilitating explicit sharing of player experiences.

Our next steps will be to bring Right 2 Roam in board game and workshop format into an extended user study. We will aim to collect qualitative data comprising players' customized cards, their individual contributions of experience, and the nature of group discussion. This work will enable us to evidence the potential efficacy of our design as an applied tool for public engagement, consultation, and involvement in discussions and decision making around public spaces.

Originality and significance of Right 2 Roam

Right 2 Roam builds from an existing knowledge base in the use of games to engage critically with real-world social issues, adopting perspectives on critical play as discussed by Flanagan (2009) and aiming to use game systems as a vehicle for argumentation (e.g. Bogost, 2007). Experimental board games have been used to capture and critique difficult aspects of human experience (e.g. Romero, 2008-). Outside of academia and artists' games, commercial game makers have explored cooperative play as a means of examining serious real-world topics, such as Freedom: The Underground Railroad (Mayer, 2013). Within this tradition of applied board games, Right 2 Roam is the first game to directly tackle the gendered-experience of walking in public spaces, to interrogate through game mechanics and narrative the systemic inequities that are inherent in how we access and traverse our towns and cities.

While designed as a board game that could be embraced as entertaining as a form of cooperative play, it is simultaneously an activist board game that seeks to challenge perspectives, elicit debate and understanding, and generate public engagement. Where applied games are often regarded as a means of raising awareness of social issues, the significance of Right 2 Roam lies in its capacity to be used by stakeholders to facilitate meaningful change. Through the provision of open source digital print-to-play materials alongside instructions on how to run a workshop based on the game, Right 2 Roam makes a significant contribution to game design research by demonstrating how games can be designed to be tools for grassroots community engagement with public spaces.

More broadly, we would highlight the significant contribution to game design knowledge that is presented in both the game as artefact and its supporting materials, providing a transparent resource on designer intentions, design research and negotiation between two designers with different experiences of the game topic, and design decision-making.

Game website

More details about the game including updates on potential future iterations can be accessed via the game website at: https://mona-bozdog.itch.io/right-to-roam