

Altoy!

Honours Creative Work
by **Elysse Turner** 2018

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AHOY THERE!
A TALE OF ADVENTURE LIES AHEAD:

WITH DEADLY PIRATES,
BURIED TREASURE
AND HIDDEN TRAPS,

ADVENTURE ON IF YOU DARE...

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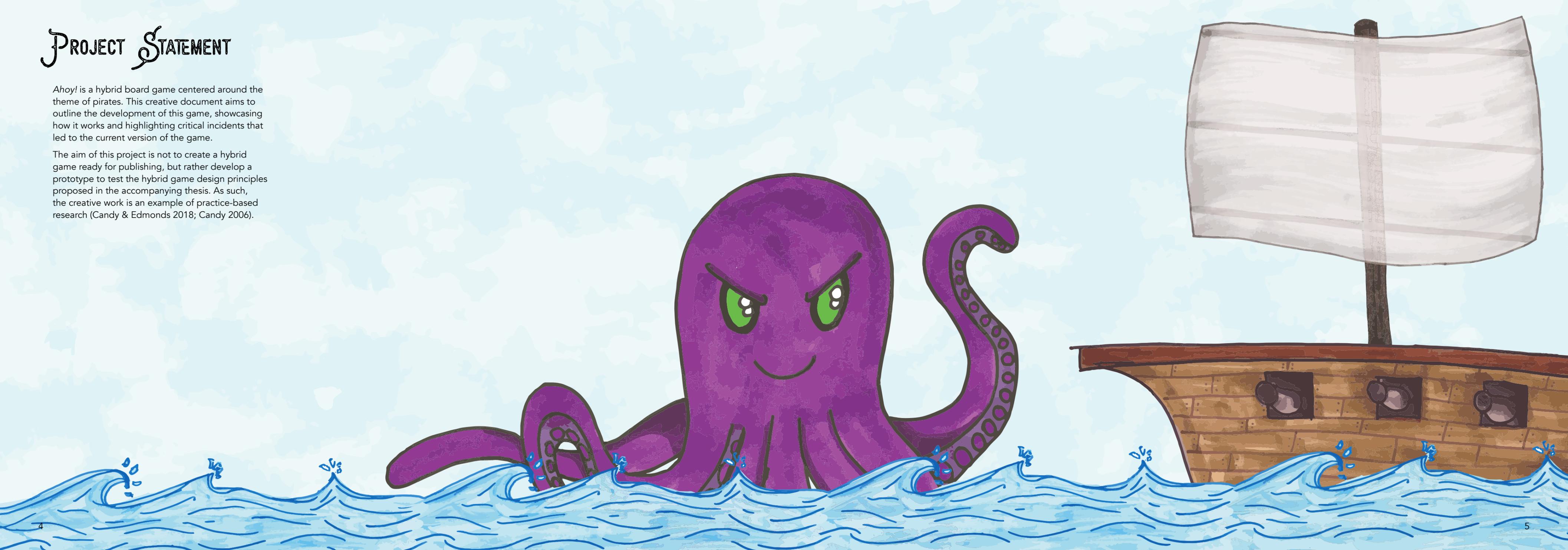
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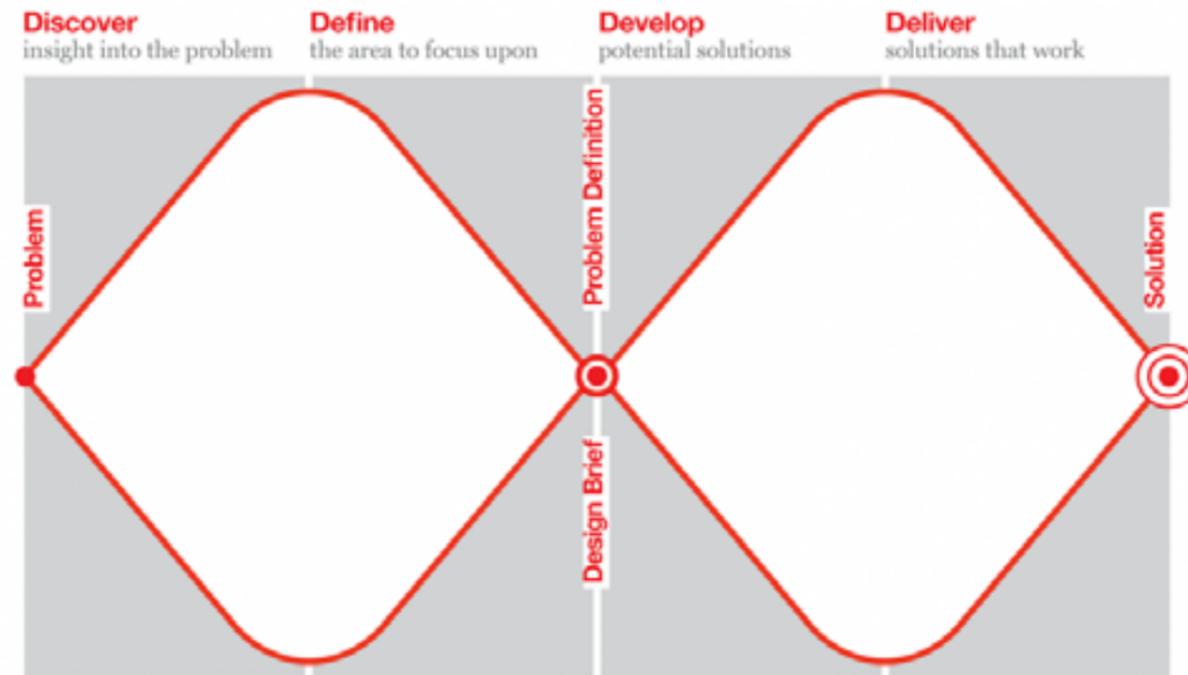
PROJECT STATEMENT

Ahoy! is a hybrid board game centered around the theme of pirates. This creative document aims to outline the development of this game, showcasing how it works and highlighting critical incidents that led to the current version of the game.

The aim of this project is not to create a hybrid game ready for publishing, but rather develop a prototype to test the hybrid game design principles proposed in the accompanying thesis. As such, the creative work is an example of practice-based research (Candy & Edmonds 2018; Candy 2006).



THE DOUBLE DIAMOND MODEL



The Double Diamond Model (DDM) uses 'design thinking', which is a form of creative strategising that emphasises solution-focused thinking (Naiman 2011). Generally, design thinking begins with a specific goal in mind and determines possible paths to that goal from both a practical and creative perspective, then explores these paths to determine the best course of action (Purdy & Popan 2016).

The DDM was developed in 2005 by the British Design Council, as a graphical way of understanding and conveying the design process. Development of the model began by observing and reporting on different design processes across 11 influential, global companies including Microsoft, LEGO, Sony, and Yahoo! (Design Council 2007). By analysing these design processes the British Design Council (2007) proposed four core stages of design: Discover, exploring previous work in relevant areas; Define, establishing which ideas are worth pursuing; Develop, actively pursuing these ideas; and Deliver, releasing a final product and reflecting on its success relative to the initial goal.

The creative work has used the DDM throughout the development process.

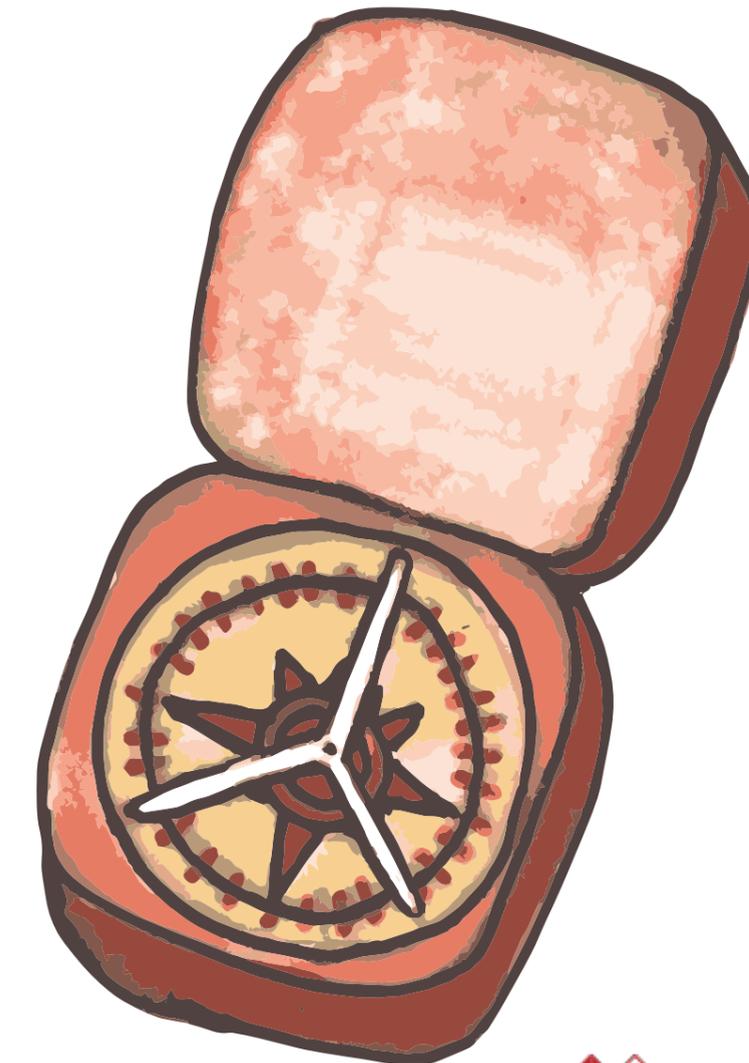
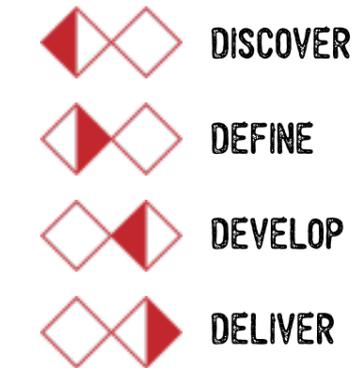
In order to highlight the relevant stages, this document uses a key to align each section with the relevant stage of the DDM. This key uses a visual representation located at the bottom of each page next to the page numbers.

Discover is used to indicate the research undertaken to expand knowledge.

Define is used to indicate initial prototype stages in order to pursue these ideas in further development, as well as identifying key areas of the project development.

Develop is used to indicate the feedback loop between playtests and prototyping. Critical Incidents are examples of moments where the originally defined features had to be changed and accommodated as a result of playtest results.

Deliver is used to indicate the play-ready designs of the prototype game, and reflection on design decisions leading to this stylised prototype.



HYBRID GAME DESIGN PRINCIPLES

The primary aim of the accompanying thesis is to provide an account of key design features of analogue/digital hybrid games. Chapter Five, addressed this through the analysis of three case studies. Chapter Six proposes a set of seven game design principles specific to hybrid game design which emerged from the key design features identified in Chapter Five. These principles have been applied to this creative work in order to guide the design process of an original hybrid game idea.

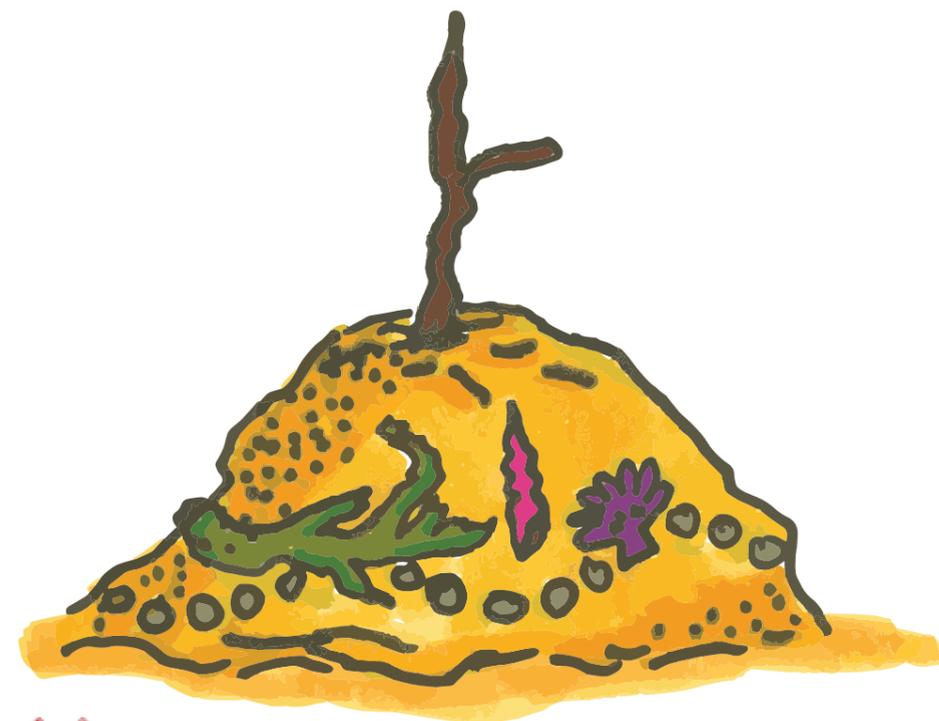
The documentation aims to highlight areas of the design process which are specific to the hybrid game design principles proposed in Chapter Six. These principles are not intended to be the only tool used when designing a hybrid game, but rather they are intended to assist the process of specifically targeting elements related to the hybrid nature of these games. As such, the creative work has also taken into consideration game design principles identified in Chapter Three.



These principles have been framed using the DDM. While no specific principles apply to the Discover stage, an innate understanding of analogue, digital, and hybrid games is essential in order to learn from the successes and failures of similar projects.



The Define stage is used to lay the foundations of your game, developing a broad picture of how it will work with loose ideas, rough sketches, and basic rule concepts to lead towards the development of an initial prototype. This prototype should be rudimentary in nature, created for the purpose of playtesting. The **Principle of Information Opacity**, **Principle of Unpredictability**, and **Principle of App as Antagonist** can be used to aid this initial prototyping process.



PRINCIPLE OF INFORMATION OPACITY

Hybrid games work across two fundamentally different spaces. The analogue space is inherently transparent: the game information is available and must be processed before play. Conversely, digital games possess an opaque quality, as the technology is able to obscure information until players need to know it (Fischer 2018; Wardrip-Fruin in Hindmarch & Tidball 2010, p. 135). These two components must work together for a successful hybrid game design. When successfully synthesised, the physical and the digital can rhythmically syncopate the flow of turn taking, manipulation of physical objects and information discovery during the game experience. The Principle of Information Opacity can be used to assess the internal structures or mechanics of the game to determine whether it should be controlled by the analogue or digital game space.

To test this principle, the game designer asks the question: does the mechanic perform optimally if the player knows everything before play begins, or can the app be used to reveal the information during play?

PRINCIPLE OF UNPREDICTABILITY

Algorithms are present in both analogue and digital games, however in digital games, the app becomes a 'co-operator'. As a co-operator, the app can leverage randomisation to produce unpredictable events in the gameplay and provide a higher degree of replayability. These events should be organised around predictable gameplay elements in order to create rhythmic tension. As Costello (2018, p. 140) suggests "such familiar and satisfying moments of repetition can also provide a stability that makes it possible to create a layer of instability".

To test this principle, the game designer asks the question: do the analogue and digital algorithms work synchronistically to provide enough variation through randomisation to sustain interest?

PRINCIPLE OF APP AS ANTAGONIST

High integration apps are able to prompt players and present challenges, effectively acting as an antagonist. This algorithmically determined persona can be assigned a personality (connected to difficulty levels), fostering an emotional connection and helping players to "feel their way into a work" (Costello 2018, p. 88). The app directs the narrative, allowing for a rhythmic flow as players make decisions and respond to the scenarios presented by the app. The Principle of Design Consistency should be considered when assigning a personality to the app in order to ensure the narrative presented by this personality aligns with the theme of the game to create a coherent flow.

To test this principle, the game designer asks the question: how can the app foster an emotional connection to the game?





The Develop stage is used to test and refine the basic idea using playtests. The **Principle of Balancing Chores**, and **Principle of Interface Blindness** should be considered when analysing playtests to refine the game process for players. As prototyping and playtesting result from iterative design, this process should involve multiple iterations using principles from both the Define and Develop stages to continuously refine and improve the game until it is ready to progress to the Deliver stage (Trefry 2010; Fullerton et al. 2004).



PRINCIPLE OF BALANCING CHORES

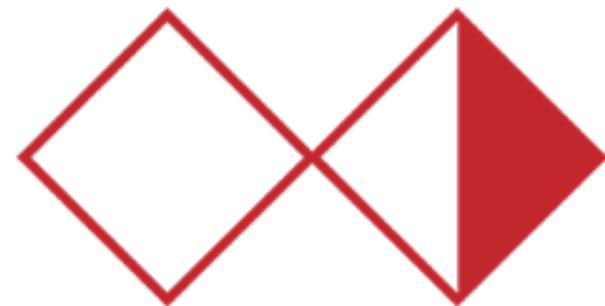
Each game has a set of 'chores' the players must perform in order for the game to progress. In many cases it is possible to automate these tasks through a high integration app. While this can reduce player tasks and minimise associated human error, it can also decrease the "awareness of other's [sic] actions" (Xu et al. 2011, p. 8) resulting in a lower engagement with the game. Having an app automate chores can structure the rhythm of play, ideally alternating between peaks and troughs of attention to the gameplay status (Costello 2018). The key is to create a balance between chores and meaningful interaction, reducing tedious processes (Lee 2018). As such, it is beneficial to think about the principle of balancing chores alongside the Principle of Information Opacity.

To test this principle, the game designer asks the question: does automating this task make it easier for the player to engage in the game, or result in the app 'playing the game' and reducing opportunities for players to make meaningful choices?

PRINCIPLE OF INTERFACE BLINDNESS

When hybridising analogue and digital mediums, game designers must anticipate the limitations of the app to track activity in the analogue space (Fischer 2018). The app can only respond to circumstances from the information it knows. As such, game designers must consider what the app needs to know and how the app will obtain that information. These considerations are more than just practical limitations of app design, as they will determine the rhythm of the game experience: "the decisions a designer makes about what is essential to a given moment combine to create the rhythmic trajectory of a work" (Costello 2018, p. 115). Inputting information into the app can become a tedious chore if information is constantly needed, and as such this principle should be considered alongside the principle of balancing chores, to ensure the game does not become a data entry task.

To test this principle, the game designer asks the question: what information does the app need from the analogue space and how is this communicated to the digital medium?



Once ready, the Deliver stage is used to transform the final prototype into the final product. The **Principle of Design Consistency**, and **Principle of Tutorial Integration** should be used to deliver a finalised, cohesive game which engages gamers.



PRINCIPLE OF DESIGN CONSISTENCY

"When people buy a game they notice it first because of its visual appearance. Then they look at the subject matter" (Zappaterra 2004, p. 17; see also: Hindmarch & Tidball 2010, p. 46). To create a cohesive game experience, the visual communication of the analogue and digital mediums must work together effectively: "[t]he way your audience is swept in by a beginning influences how they will respond to the way the rest of the work unfolds" (Costello 2018, p. 88). A game's theme, mechanics, artwork, music, sounds and physical components create a narrative for the game world, and if one element is inconsistent between the analogue and digital spaces, it can be a jarring experience for players and disrupt the rhythm of the game.

To test this principle, the game designer asks the question: do all elements of the game work together to communicate the same experience?

PRINCIPLE OF TUTORIAL INTEGRATION

The key to good design of high integration app-based tutorials is minimalism: successful hybridised games provide players with a minimal amount of information in a minimal amount of time in a way that requires minimal effort (both for the player and designer), while still allowing the player to access the full richness of the game (Selinker 2011; Hindmarch & Tidball 2010, p. 89-90, 92-95).

To test this principle, the game designer asks the question: how can the app be used to communicate the operation of the game in the simplest way possible?



BUILDING ON



1. Commissioned Image of Lasuni Character (Arcsin 2013).
- 2 & 3. Images sourced from Lasuni (2014; 2012a).
- 4 & 5. Screenshots of Lasuni (2012b; 2015).
- 6-10. Image by author.



An innate understanding of analogue, digital, and hybrid games is essential in order to learn from the successes and failures of similar projects.

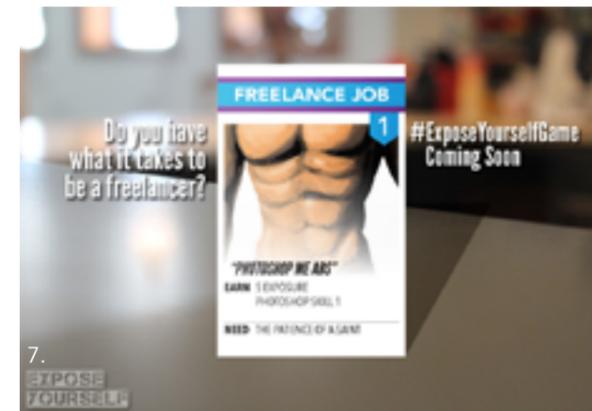
This section aims to outline the previous projects and existing knowledge this creative project is building on. Many of us have memories of playing games from a young age. Growing up, I experienced my fair share of family board game nights. In our family, we had one rule: if you start a game, you have to finish it.

Now this meant that by high school when I was hosting my own games nights, none of my friends wanted to play *Monopoly* (Darrow & Magie 1933) with me because I would refuse to let them quit.

I also engaged with digital games from an early age, beginning with *Pokémon*, before moving onto games I could play with other people, and eventually contributing to a YouTube gaming channel with my friends.

I moved beyond the experience of just playing games in 2012, when I became a Community Manager for YahRly LLC's *Lasuni*, an online Massive Multiplayer Online Community Chat (MMOCC) game aimed at teenagers between the ages of 13 to 17. As this game was still in beta stages,

my role consisted of creating fun and engaging events to garner interest and keep the community involved. This role required a variety of skills from devising unique games to implement into the world, hosting special events and campaigns to bring the community together, or even designing new items of virtual clothing using pixel graphic design skills to offer as prizes. I remained a part of the team until 2014, and during this time learnt a great deal about the way online games ran and how to engage users in this context, through the creation of new and interesting mini game events.



In 2016, I developed *Expose Yourself*, a board game prototype based on the freelance industry. The aim of the game was for players to be paid for their various creative endeavours, instead of being offered exposure as a form of payment. This project aimed to create an experience which commented on the realities of the freelance industry, drawing upon real experiences shared on websites like Clients From Hell (www.clientsfromhell.net), The Worlds Longest Invoice (www.worldslongestinvoice.net), stories from friends, and my own engagement with the industry. Working on *Expose Yourself* helped me to learn the basics of tabletop game design using design thinking, prototyping, and iteration.



HYBRID GAMES

Hybridity is the combination of two differing elements and can be seen across many areas. In nature, hybridisation can result in the new species of plants or animals through the mating of genetically dissimilar individuals (Kang 2014). Hybridisation can also be seen in man made things. For example, hybrid cars generate power from both electricity and petrol. Similarly, a hybrid games combine analogue and digital elements to create a game that operates using both mediums. A hybrid game “leverages the advantages of both physical and digital media” (Mandryk et al. 2002, p.1), with no analogue-only mode of play (BoardGameGeek 2017).

I have undertaken in depth research of hybrid games in the accompanying thesis in order to understand core design features of analogue/digital hybrid games, specifically looking at games which utilise mobile applications alongside analogue game components.



DropMix game setup (GameSpot Mobile 2017).

DropMix (Hasbro 2017) is a music themed board game designed by Hasbro in collaboration with Harmonix, the developer of the musical rhythm console games *Guitar Hero*, *Dance Central*, and *Rockband*.

DropMix operates through a deck of cards, each representing musical excerpts, which are embedded with Near Field Connectivity (NFC) chips. These cards are placed on top of the game board - a piece of electronic hardware - which communicates the cards' location, the specific song it represents, the instrument sample that is played, and how prominent the musical excerpt will appear in the 'mix'. This information is transmitted to the connected DropMix app (Hasbro Inc. 2018) operating on a smart device, where it plays the musical excerpt associated with each card.



Mansions of Madness Second Edition game setup (Fantasy Flight Games 2016).

Mansions of Madness 2nd Edition (Valens 2016) is a cooperative strategy game published by Fantasy Flight Games. Players take the roles of investigators in 1920's Arkham, exploring haunted mansions within the Lovecraftian universe in order to solve a presented mystery. The game consists of two phases: The investigator phase where each player has two actions to either move, explore, search for clues, trade with players, or attack encountered monsters; followed by the mythos phase, where the app generates game effects for players to react to. The app might cause new monsters to appear, or conditions that deal damage to players.

Mansions of Madness Second Edition is a successor to a complete analogue experience in the *Mansions of Madness First Edition* (Konieczka 2011). Since its release, *Mansions of Madness Second Edition*, has outsold *Mansions of Madness First Edition*, with its success resulting because of the way technological integration through an app solved issues present in the analogue only first edition.



One Night Ultimate Alien (Bezier Games 2016).

One Night Ultimate Alien (Alspach & Okui 2017) is a multiple team, co-operative deception game. This title is the fourth of five One Night style games released by Bézier Games to date, and follows a similar play style to its predecessors, with one key twist: the game includes 'dynamic roles' which means many of the characters have multiple actions associated with them and the app determines which action the character must enact each game.



YATZY!

Yatzy is a tabletop dice game originating in Scandinavia which exists in the public domain. The aim of the game is to roll a set of five dice to meet a set of criteria similar to those found in poker, such as multiples of the same number, a full house (consisting of two in one number and three in another number), or a 'Yatzy' (five of the same number). As this game is in the public domain, there are a number of digital app recreations.

The most commonly known adaption for this game is *Yahtzee* (E.S. Lowe 1956). This version originates with an un-named Canadian couple who asked Lowe to produce the game in exchange for rights (Reed 2010). While this game was not a success at first, it gained popularity through 'Yahtzee parties' which attracted the attention of Milton Bradley. He purchased the company and since then, the game has been a staple in Hasbro's family game night collection.



Before applying my hybrid game design principles to an original creative work, I wanted to test the principles, and push the boundaries of hybrid games, by taking an existing analogue game and imagining the creative possibilities of running it through a hybrid game design context. As such, the focus of this section is to consider how the hybrid game design principles can be applied to Yatzy to transition it from a fully analogue game into a hybrid game.

One of the ways Yatzy could be transformed is by offering a number of different competitive modes, similar to how *DropMix* has multiple modes of play. This allows the game to remain familiar, while adding new layers to transform the game into a hybrid (Ernest 2011). These modes are all designed to use a single mobile device running the app, rather than an individual device per person. As such, scoring and dice rolling still takes place in the analogue space. For each mode, the app could utilise the **Principle of Tutorial Integration** to detail how the mode works before playing each game.

FORCED YATZY

This mode utilises the **Principle of Unpredictability** to generate a random order for each player to complete their dice rolls in. Rather than allowing players to choose which category their dice roll contributes towards, players must aim to complete the each roll in the specific order given. The app may also use the **Principle of Information Opacity** to reveal which category must be completed in real time.

CAMPAIGN SPEED YATZY

This mode gives players a time limit in which to complete the game in, knocking out players who are unable to meet the required criteria until one winner remains. This mode can be played as normal, and at the end of the time limit, the player with the lowest score is eliminated. Using the app to time the game draws upon the **Principle of Balancing Chores**, using it to track the duration of play in order to ensure quick games.

To expand this mode further, the app could also draw upon the **Principle of Information Opacity** and **Principle of Unpredictability**, to reveal a smaller selection of categories the players must complete within the time limit. Players may re-roll as often as needed until the timer runs out. If players are too slow to complete all categories listed, they are eliminated.

REFLECTIONS

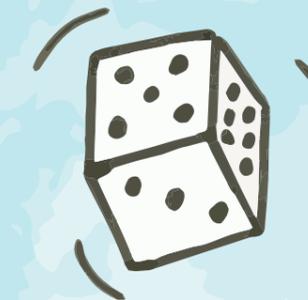
REVEALED CATEGORIES

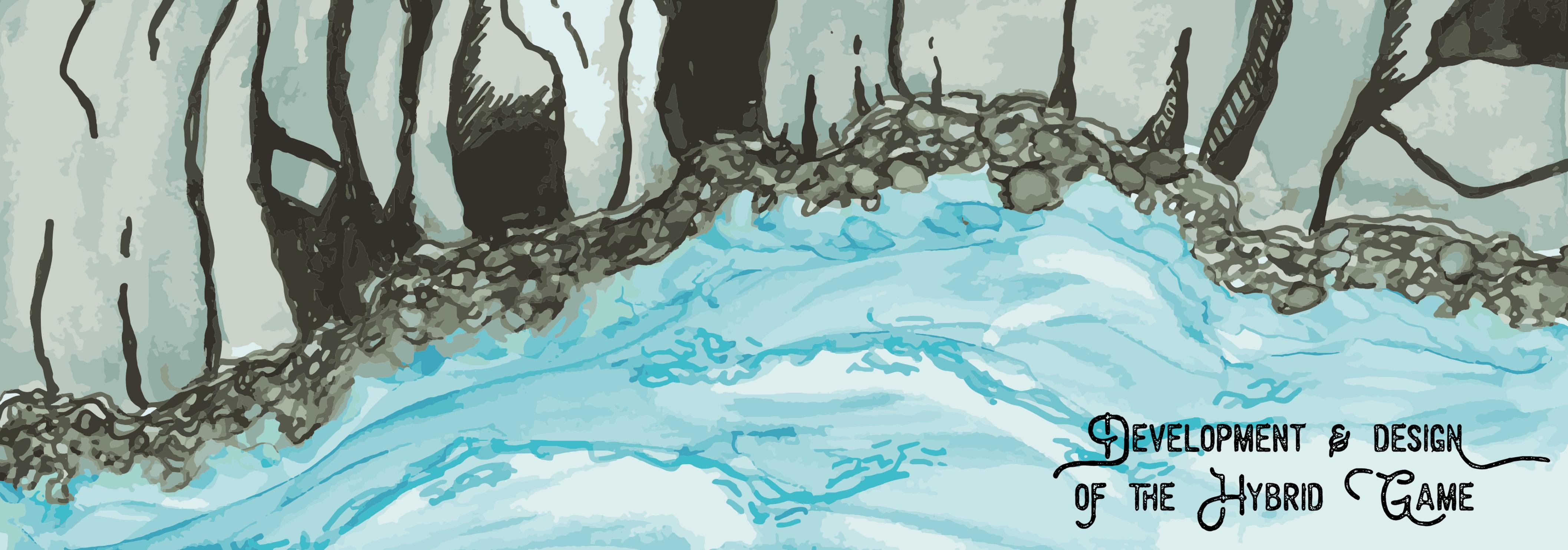
This mode utilises the **Principle of Information Opacity** and **Principle of Unpredictability**, to periodically announce the next category which must be completed. Players play the game as normal, completing categories of their choice until the app announces which category must be completed next. Considering the **Principle of Interface Blindness**, the app will not know if the category has already been completed. Any player who has already completed this category may ignore the instruction, however if this category is blank, the current series of dice rolls contribute towards the announced category, regardless of whether players were on their first, second, or final dice roll at the time of the announcement. This draws upon the **Principle of App as Antagonist** due to the nature of the app dictating which category must be completed, whether it is ideal for the player or not.

An alternative solution to the considered through the **Principle of Interface Blindness** would be to have each player using their own version of the app and inputting scores as they were obtained. This would mean their app would not announce a category which they have already completed, however one must consider the **Principle of Balancing Chores**, and whether this work load increase is worth the trade off. Additionally, one must consider the **Principle of Design Consistency** and how this would affect the way in which the work unfolds. Playing with multiple apps would mean that each player would be receiving different instructions of which category to complete, resulting in a game experience which is more chaotic for all players, making it difficult to synchronise with the rhythm of the game.

The main analogue interaction with this hybrid version of Yatzy is still the rolling of physical dice. While this could be fully digitised within an app, one must consider impact of digitising the dice through the **Principle of Balancing Chores** as "the resulting global experience is still different from the 3-D sensory feedback experienced by playing with dice, pawns, and cards" (Mora et al. 2016, p. 533). Additionally, players lose the sense of control they perceive themselves to have when performing the act of rolling physical dice in a particular way (Xu et al. 2011).

As these modes use the **Principle of Information Opacity** and the **Principle of Unpredictability** to reveal unknown information as the game progresses, these versions can be considered fully integrated modes of Yatzy. While these modes showcase high integration qualities, there is also potential for these modes to be considered low integration 'accessories' as players have access to the original, analogue-only mode of play.





DEVELOPMENT & DESIGN
OF THE HYBRID GAME

THEME

Game designs usually start in two ways – bottom up or top down.

Bottom up design focuses on the mechanics, starting with an interesting play pattern as the base of the game, and adding a theme at the end (Elliot 2015). Alternatively, some games use top down design, starting with the theme, and using this to communicate the environment of the game theme through different mechanics (Koster 2014; Elliot 2015). That is not to say that if you start with a theme, that it will remain the same for the entire duration of the design, however it can be used to inspire and develop ideas (Looney 2011). This can often make it easier to apply the **Principle of Design Consistency** as this theme driven development can create a cohesive relationship between theme and mechanics.

This game was developed using top down design, starting with the idea of a game where you dig up buried treasure. This idea quickly evolved into a pirate theme, which was used to inform decisions about how the game would operate. Rather than simulating the specifics of digging up treasure, I wanted to explore the characters of pirates and how they interact when trying to dig up their loot.



PIRATES FIND TREASURE A PIRATE CREW

Finding treasure seems like a past-time for pirates, whether it be through innocent means (like stumbling across some buried loot), or through more nefarious tactics (like stealing). The idea of hitting the jackpot by following a treasure map became the driving mechanic of this game.

In the early development of the game, players were all a part of the same pirate crew, digging up treasure for their Captain who has sent everyone out to retrieve the bounty for their ship. Being pirates however, the crew are trying to do their best to keep as much of the treasure to themselves.

This idea of the crew going out and digging up treasure was great for a co-operative game mechanic, however I wanted to incorporate the idea of betrayal into the game. To do this, I set up all games to start with players on the same team. During the game, the app will then reveal instructions which can force a particular player to start their own rebel crew. They may have the opportunity to choose one or more additional players to join their new team, resulting in each team fighting to get the most treasure.

PIRATES STEAL

Originally, the game included a role of the Captain who simply went around stealing back treasure from the other players, however this meant that the Captain's rules were different to everyone else's and made it much more complicated for new players to learn. Instead of pursuing this one-vs-many mechanic, I kept the idea of stealing and removed the Captain player so that everyone could remember a single set of game rules.

As teams emerge during the game play, the steal mechanic becomes more relevant as players want to ensure the other team has less treasure than them. Additionally, each player has a special skill related to stealing, resulting in asymmetric characters.



THE NAMING PROCESS

"Name design is often one of the most difficult parts of game design" (Looney 2011, p. 34). As the theme was about pirates finding treasure, my naming process began by exploring ways I could quickly and easily communicate this idea in a title. While I came up with many different names for treasure, there was one problem: Pirate Treasure, Pirate Booty, or whatever you wanted to call it wasn't catchy. It didn't stand out from the crowd. You knew what the game was about, but weren't enticed to play the game.

From there, I used the Discover stage of the DDM to research pirates in general, looking particularly at pirate slang and sayings in order to compile a list of potential names. This list was distilled using the Define stage of the DDM to determine which names were standing out from the others, and these were then used to 'Develop' a set of logo identity variations, before selecting an iteration to refine and 'Deliver' as a the final name.



As pirates are often sailing the seas, the second name iteration tried to look at variations of exploring the ocean. I moved on from these name ideas as the exploration for treasure occurred on land, rather than under the water.



Learning from the issues in the previous name iterations, I tried to portray the idea of searching for treasure in a less literal manner, using sayings often associated with pirates. While these names were much more subtle, I felt the link to pirates was more difficult to find.



WASHED A SHORE
HIDDEN TREASURE

SHIP WRECKED
X MARKS THE SPOT

Later on during the naming process, it was suggested that perhaps the most important message to communicate with the name was not that you were looking for treasure, but rather that you were playing a game about pirates. The names generated in this round of ideation focused more on pirate slang, rather than the pursuit of treasure.

I really liked the fluid lettering from the 'Lost at Sea' iteration, and I wanted to draw upon this further for this iteration of logos, so it looked like the letter forms could be floating at sea.

CRITICAL INCIDENT!

During the Define stage, the top names from this round of brainstorming were 'Land Ahoy!', and 'Blimey!'. Ahoy! was discovered after drawing the initial sketches for the Develop stage, as the letter forms looked more interesting together.



Blimey! Blimey! Land Ahoy! Land Ahoy!

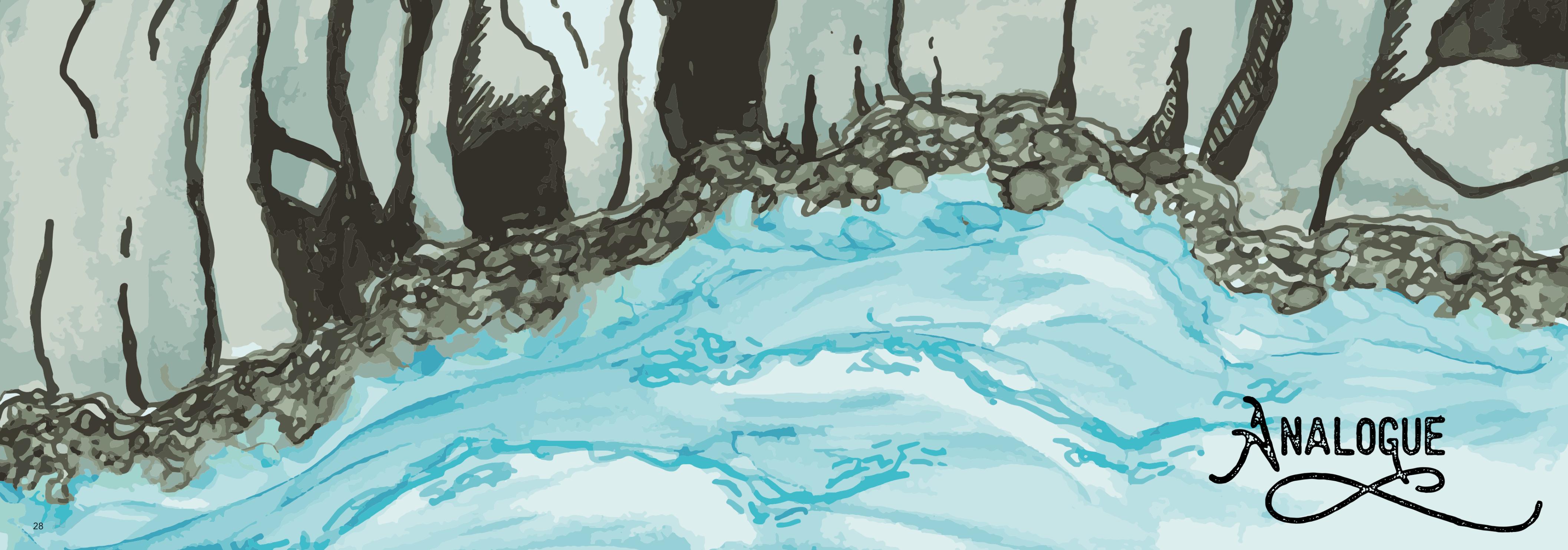
Ahoy!

LAND AHOY! TREASURE ISLAND
WHAT A TREASURE BLIMEY!
TREASURE TROVE HEY HO!
YOU'RE A TREASURE TREASURE MAP



The final logo has a semi-transparent background where the white would usually be placed, so that it can be layered on top of sea background and show some of the features of the wave through the type face. Additionally, I have designed a set of nine variations for other contexts.





ANALOGUE

WORKING IN THE ANALOGUE SPACE

During the game, players are presented with four options to manipulate the analogue space. These movements will be outlined while attempting to address why these mechanics have been assigned to the analogue space. These summaries aim to consider the question posed in the **Principle of Information Opacity**: Does the mechanic perform optimally if the player knows everything before play begins, or can the app be used to reveal the information during play?

ACTIVATE A CARD

Clue cards may be saved for later and activated at any time. Unlike the other three options, activating a card does not use up one of a player's actions during their turn, however a player must sacrifice a card in their hand to play it. As each clue card has a different effect, this will be further addressed on page 50.

MOVE

A player may navigate around the space on the board in order to move towards other players or situate their character on a new card.

Having this movement visible on the table is ideal as it allows other players to keep track of where everyone is at any point in time.

DIG

A player may choose to 'dig' up a card which reveals what is underneath. Most cards are added to a player's hand after this, however some are placed face up on the table, or require players to resolve an action immediately. As each card type has differing complexity, this will be further explored in the game cards section on pages 46-51.

Players are able to see how many cards have been dug up and their location, as well as how many cards are in a player's hand and any face up tiles on the table. Having this visible allows players to optimise their strategy and calculate future moves.

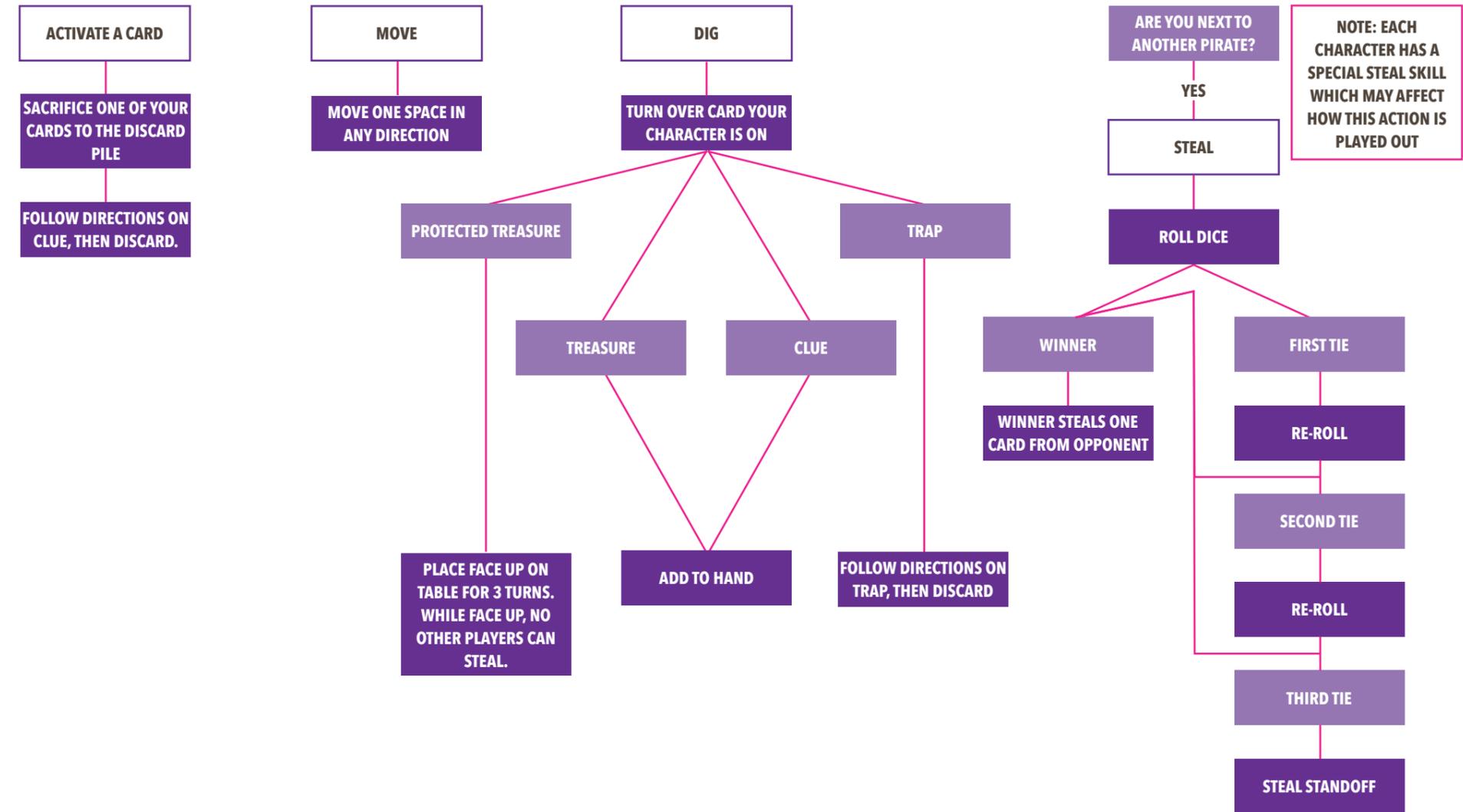
STEAL

During the game, players may attempt to steal from other players. The attacking player rolls two dice, while the defending player rolls three. After all dice are rolled, each player adds the sum of their two highest rolled dice. The player with the higher sum wins the battle, and gets to claim a card from the other player.

While it may seem like the person attempting to steal has a disadvantage, each character has a different ability relating to the steal mechanic. As these abilities are different for each character, these will be further explored in the characters section on pages 36-43.

As players can see where everyone is on the board, they are able to avoid or create conflict based on where they move in relation to other players. This is afforded by having access to this information at all times. Additionally, the use of physical dice creates a sense of control over the outcome of each player's conflict (Xu et al. 2011).

While this mechanic takes place in the analogue space, in the event of three ties in a row, the fate of the battling pirates is taken out of their hands and given to the app, using it to determine a punishment for one or more of the parties involved. This will be further explored on page 66.



ILLUSTRATIONS: THE MAKING OF

The illustrations for *Ahoy!* take inspiration from chibi-style cartoon graphics in order to appeal to a family audience, using the illustration style to entice younger players.

All the images created for this game started with a hand drawn sketch. These images were then refined and coloured using Copic markers.

After being scanned in, the images went through a refinement process once more before being converted to vector objects.

This allowed the images to keep the grungy hand drawn style the markers created through a resizable format.



DEVELOPING THE CHARACTERS

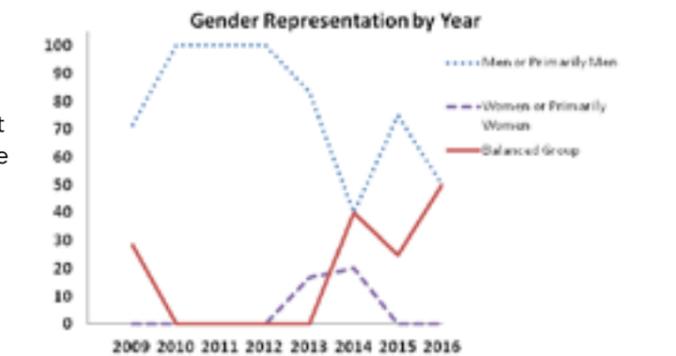


When playing *Ahoy!* each player receives a separate character. As this game has been developed using top down design, the characters are all based on different pirates from history. Additionally, these characters each have a special skill associated with the steal mechanic. These asymmetric character skills are all based on the history associated with the individual character.

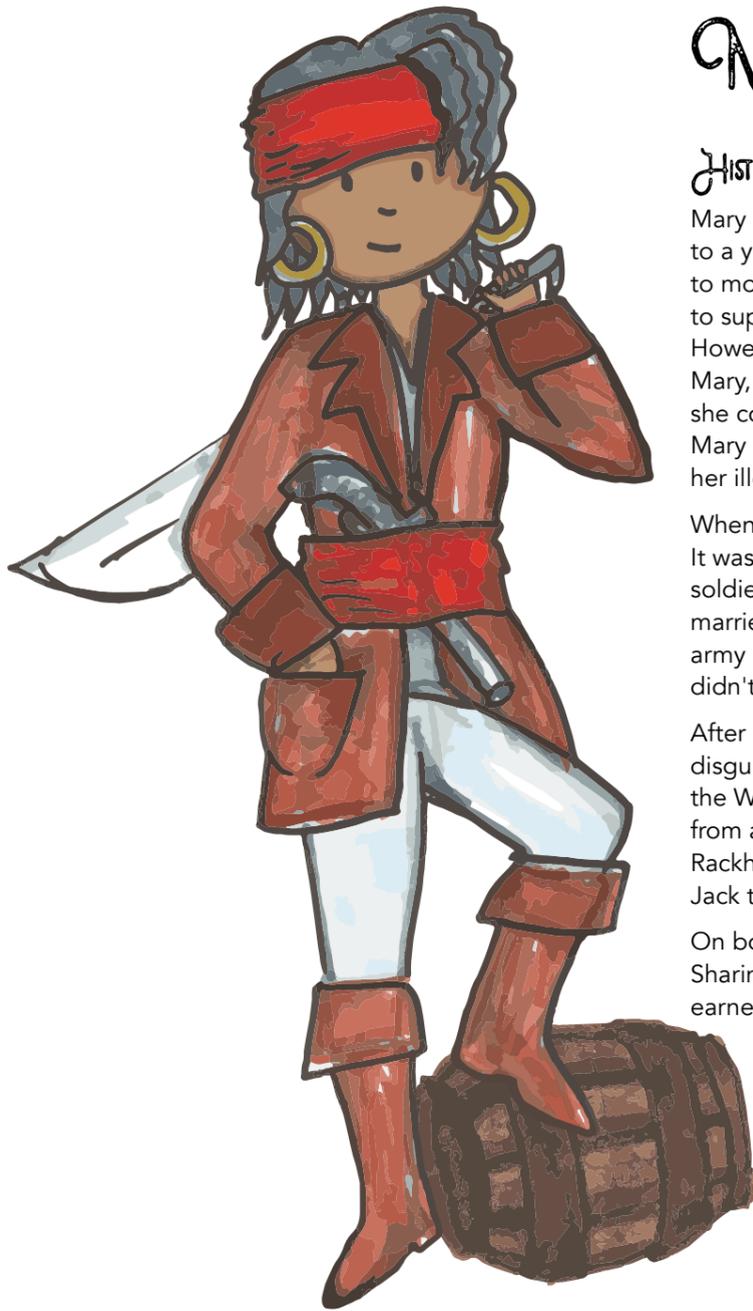
Considering the **Principle of Information Opacity**, I thought it best that all players knew what skills were associated with each character throughout the entire game. As such, each character skill is fixed and presented on physical character cards which are viewable to all players at any point during the game. This allows other players to understand what happens when each character attacks another so the players can make informed decisions about who to avoid.

Pirates tend to be associated with males, however in *Ahoy!* four out of the five presented characters are female. This is intentional. While researching pirates, I sought out information on female pirates in order to subvert stereotypes.

Highlighting female characters also helps contribute to the equal representation of women in board games. According to Ryan (2016), while representation of women in board game cover art is increasing, male characters still take the spotlight.



A year-over-year look at new games on Board Game Geek's Top 100 featuring men and/or women (Ryan 2016).



MARY READ

HISTORY

Mary was the product of an affair, born in England to a young widow. Her mother had survived thanks to money passed on from her in-laws, intended to support her legitimate son – Mary's half brother. However, around the same time she gave birth to Mary, the legitimate son died. In an effort to ensure she continued to receive payments, she dressed Mary up as her half-brother. This also served to hide her illegitimate pregnancy.

When she was older, Mary fought in the British army. It was here she fell in love with a young Flemish soldier. She revealed her true identity and got married, dropping her male disguise to leave the army and run an inn together. Unfortunately, this didn't last long as her husband died within a year.

After her husband passed, Mary went back to being disguised as a man, and boarded a ship headed for the West Indies. This ship found itself under attack from a pirate crew led by Captain 'Calico Jack' Rackham. It was at this encounter Mary convinced Jack to let her join the crew.

On board, Mary was not the only woman in disguise. Sharing this secret with Anne Bonny, the two women earned a reputation of being vicious fighters.

Sources: Codlin n.d.; Pirate Fashions, n.d.; Major 2017.

When the crew was caught for their crimes, most of them hid. Mary was infuriated by the cowardice from her fellow shipmates and she is said to have shot her pistol towards them in order to entice them into defending themselves, screaming that they should come out and fight like men!

Upon capture, Mary revealed that she was in fact a woman in disguise, and had a separate trial to the rest of the crew in order to determine whether she was forced into the pirate life or a willing participant. Sentenced to hang, Mary revealed that she was pregnant, and as such could not be hung.

Mary died from an infection during childbirth.

MECHANICS

Mary's mechanics are based on her fierce nature and firm belief in fighting to the end, as demonstrated by her attempts to rally the crew when they hid in fear after being caught for their crimes.

**Look at all you cowards.
Come out here and fight like men!**

When stealing off another player, Mary must roll before her opponent. After Mary rolls, before her opponent has rolled their defense, she may choose to re-roll both her dice.

ANNE BONNY

HISTORY

Anne was born in Cork, Ireland, born out of an affair with the maid. She was disguised as a boy from a young age to avoid scandal as she was often getting into fights.

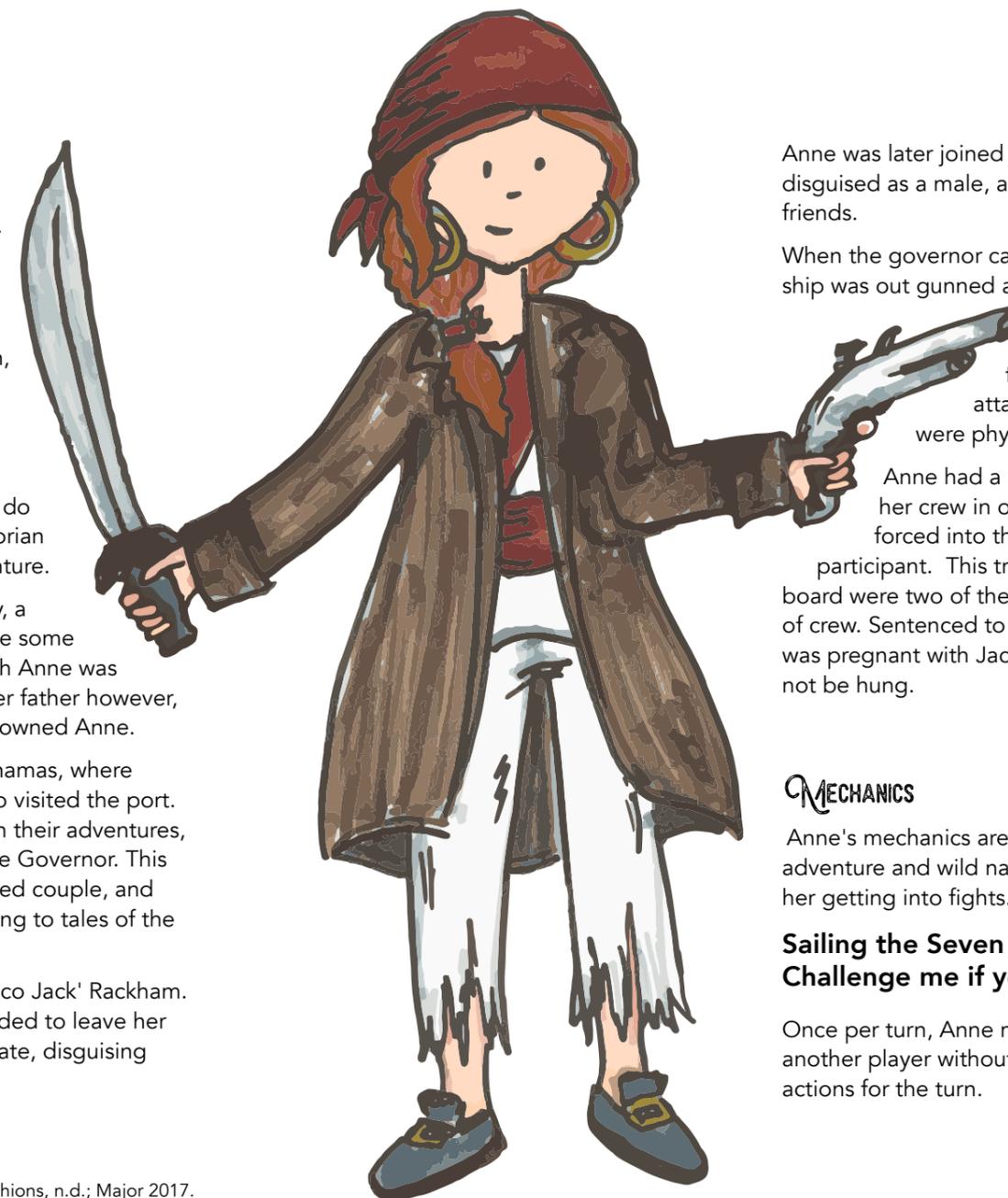
In order to salvage their reputation, the family immigrated to America to seek a better life and her male disguise was dropped. Despite her father settling into a profitable business, Anne wanted nothing to do with the stereotypical life of a Victorian woman. Instead, she sought adventure.

Anne fell in love with James Bonny, a penniless sailor who wanted to take some of the lucrative business and wealth Anne was entitled to after being married. Her father however, disapproved of the couple and disowned Anne.

James and Anne settled in the Bahamas, where Anne befriended many pirates who visited the port. While Anne wished to join them on their adventures, James became an informant for the Governor. This created conflict between the married couple, and Anne spent more time away listening to tales of the pirate life.

Eventually, Anne met Captain 'Calico Jack' Rackham. She was charmed by him and decided to leave her husband to join him at sea as a pirate, disguising herself as a male once more.

Sources: Anne Bonny Pirate n.d.; Pirate Fashions, n.d.; Major 2017.



Anne was later joined by Mary, another pirate disguised as a male, and the two became close friends.

When the governor caught up with their crew, their ship was outgunned and outmanned, however Anne and Mary provided the strongest resistance, firing their pistols at the attacking privateers until they were physically overpowered.

Anne had a separate trial from the rest of her crew in order to determine if she was forced into the pirate life or was a willing participant. This trial found that the women on board were two of the most enthusiastic members of crew. Sentenced to hang, Mary revealed that she was pregnant with Jack's child, and as such could not be hung.

MECHANICS

Anne's mechanics are based on her keen search for adventure and wild nature, which often resulted in her getting into fights.

**Sailing the Seven Seas in search for adventure:
Challenge me if you dare!**

Once per turn, Anne may attempt to steal from another player without it counting towards her total actions for the turn.



CAPTAIN JOHN 'CALICO JACK' RACKHAM

HISTORY

John 'Calico Jack' Rackham was an English pirate operating in the Bahamas during the 'Golden Age of Piracy'. He was a suave ladies man, who earned his nickname because of his fun sense of style and the colourful clothes he was fond of wearing.

He rose to captaincy after leading the mutiny which removed the previous Captain, Vane, from his position. As a pirate, he had a reputation for being one of the more annoying pirates on the high seas, who only went after easy scores which didn't draw a lot of attention. As their ship was not very powerful, they spent a lot of time targeting small fishing boats as they were unable to attack larger ships.

While most pirate flags depicted human skeletons alongside weapons, the design of the modern day Jolly Roger flag – depicting a skull with two swords crossed beneath it – is credited to Rackham.

During a battle with a Jamaican vessel, his crew secured their biggest score yet. Unfortunately, it was witnessed by the government officials stationed at the Port Royal harbour. These officials put together a crew to capture Calico Jack and his ship.

While he was not captured, this set him back, and he decided to take advantage of an amnesty the governor of the Bahamas had put out to all pirates at the time in order to minimise the criminal activities in the area. This amnesty offered pirates exemption from their past crimes so long as they gave up their life of piracy.

Rackham gave up the life of piracy for a period, however still managed to find himself in trouble by having an affair with Anne Bonny, who was married to James Bonny, an informant for the governor. When he found out about the affair, James was furious. With no peaceful solution, the pair stole a ship from the harbour and fled, voiding his Royal Pardon.

Within two months, Captain Calico Jack was causing chaos once more, and an official proclamation was issued to hunt down Rackham and his pirate crew. When their ship was caught, Calico Jack was amongst the pirates who hid.

Put on trial for crimes of piracy and looting, Captain 'Calico Jack' Rackham was found guilty and hung.

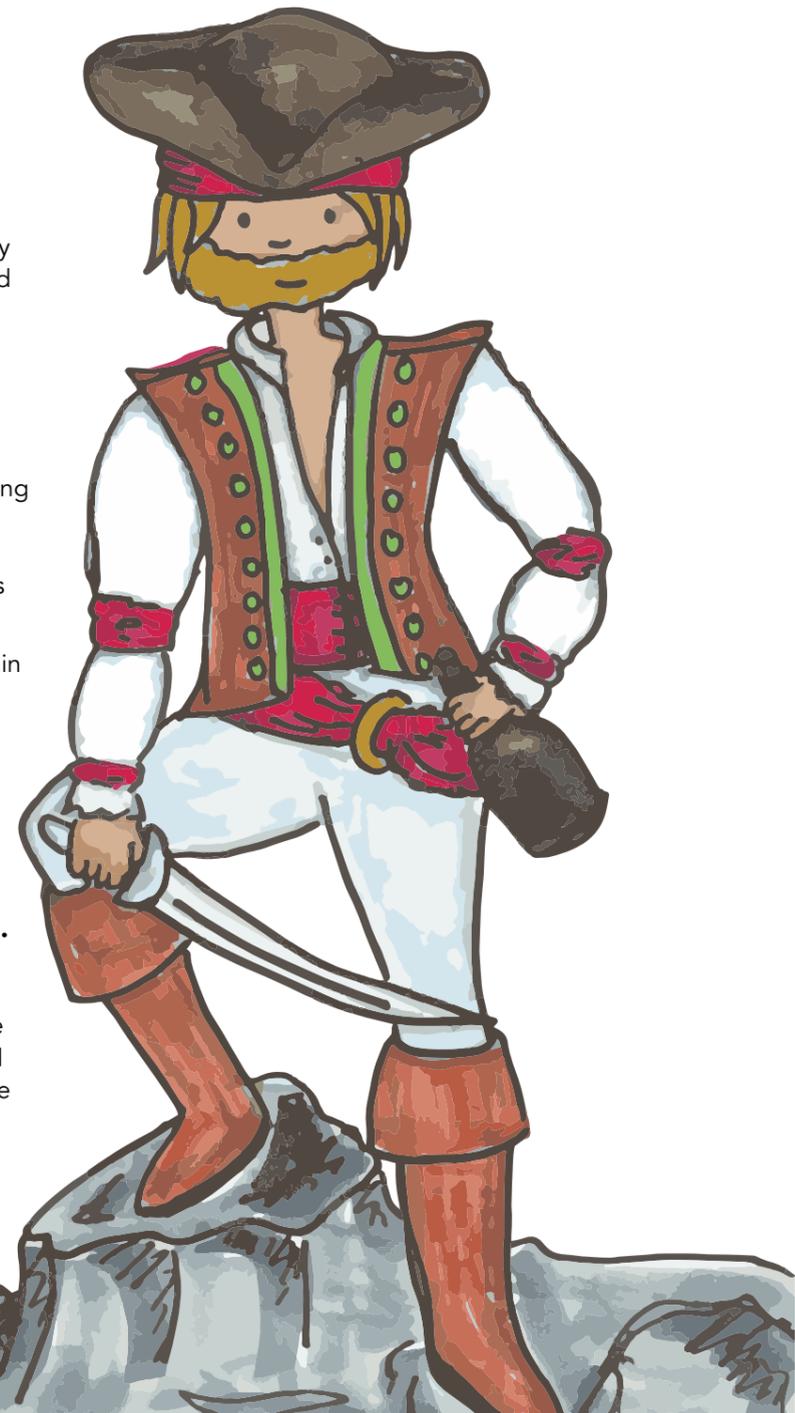
MECHANICS

Calico Jack's mechanics are based on his intentional targeting of smaller vessels who were unable to defend themselves.

Waiting for the day we find a large sum. Yo-ho-ho and a bottle of rum!

Once per turn, Jack may attempt to steal from the player with the least amount of cards in their hand without it counting towards his total actions for the turn.

Sources: Weisser 2017; Nikki 2017; The Way of Pirates n.d.; Major 2017.



GRACE O'MALLEY

HISTORY

Grace O'Malley was an Irish pirate queen, daughter to a powerful Irish lord.

Her family had control of a large fleet of ships which was known to trade (and sometimes steal) from their neighbours.

As Grace grew up, she got married twice. Her first husband, Dónal O'Flaherty, was a neighbouring Irish lord, and together they had three children. O'Flaherty is believed to have been hot-tempered, and this led to his demise as he suffered a fatal wound during a dispute related to a long standing feud.

Her second husband was Richard Bourke. They had one son together who was born at sea. Legend has it, that within an hour of giving birth, her ship was attacked, and Grace appeared on deck to lead the crew to victory.

Upon her marriage to Richard, she moved in to Rockfleet Castle overlooking Clew Bay. It was here where she commanded a fleet of ships which ran a protection racket out of the bay, where people would pay to ensure safe passage.

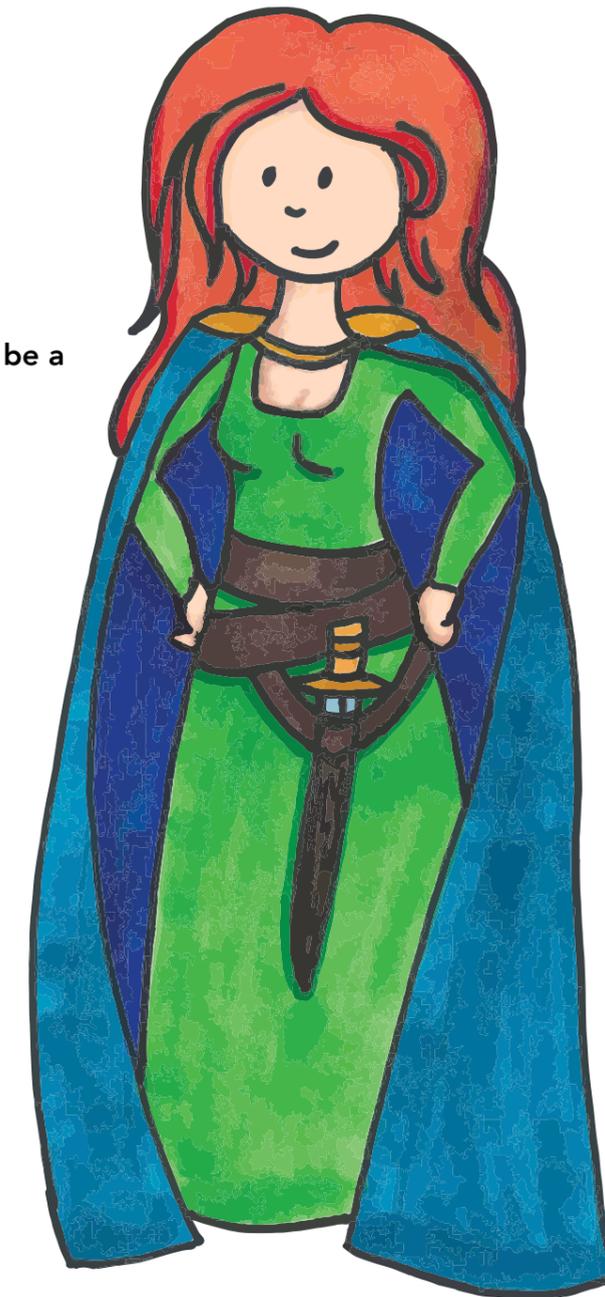
Sources: Major 2017; Murray 2005; Discover Mayo n.d.; Boissoneault 2017.

MECHANICS

Grace's mechanics are based on her time in Clew Bay. In order to safely sail through the bay, ships would have to pay her fleet a fee, or suffer the consequences.

What a nice ship you have there! It would be a shame if it were to get plundered...

In the game, before Grace steals, she first offers the opposing player the opportunity to forfeit a card without a battle. If they decline, they enter into battle like normal, however if Grace still wins, she takes two cards instead of one.



CHENG I SAO

HISTORY

Cheng I Sao was a Chinese pirate, and is credited as the most successful female pirate in history. The former prostitute married a pirate captain on the condition that they would share their power and wealth equally.

The couple grew their piracy business, the Red Flag Fleet, until her husband passed away. Rather than following the traditional role of a widow and stepping aside, Cheng I Sao kept control. This was controversial at the time, so she placed Chang Pao, her second in command, as the official captain of the fleet. She left him in charge of the day to day operations while she worked behind the scenes on the broader strategy for their criminal empire.

The Red Flag Fleet was known for having a strict code of conduct: punishments for stealing or hiding treasure, deserting the ship, and sexual activity included whipping, ears being chopped off, and death. These rules were much more severe than the laws on the mainland.

Cheng I Sao's fleet became the terror of southern China, and by 1808 the Chinese Imperial Navy lost 63 vessels in an attempt to stop them.

It wasn't until Chinese officials enlisted help from the British and Portuguese that Cheng I Sao decided to retire, and her surrender is unlike no other in history. She visited the Governor General of Canton with 17 women and children, and played the part of a soft hearted mother in order to negotiate her surrender.

Cheng I Sao offered to disband the Red Flag Fleet and turn over the ships to the officials if her sailors were free from prosecution, could keep their treasure, and were free to join the Imperial Navy if they chose to do so. In doing this, she effectively secured a pension for her crew. The Governor General agreed to these terms for the most part. Less than 400 pirates suffered any form of punishment, while the remaining 17,000 were free to return to a civilian life.

After this, Cheng I Sao married Chang Pao and gave birth to a son. She then used her acquired wealth to set up a gambling house and smuggling ring, which she ran until she passed away aged 69.

MECHANICS

Cheng I Sao's mechanics are based on her fearsome ability to build an empire and double her score despite all odds.

Do you have what it takes to defeat the terror of China? I'd like to see you try!

When Cheng I Sao attacks another player, they may only defend with two dice instead of three. Additionally, at the end of each steal battle, Cheng I Sao must offer the opponent double or nothing, regardless of who wins.



GAME PIECES



Each player receives a stand up game piece to move around the board when playing the game. These pieces are made from laser-cut chipboard, which is then slotted into a plastic base.



CHARACTER CARDS

In addition to the game pieces, each player receives one character card which outlines the details of their character's steal mechanic. These cards remain on the table in front of each player, so that everyone is able to see which character is associated with each player. Additionally, each player is able to view how everyone's steal mechanic operates by looking at their opponents' character cards.



GRACE O'MALLEY

WHAT A NICE SHIP YOU HAVE THERE! IT WOULD BE A SHAME IF IT WERE TO GET PLUNDERED...

BEFORE STEALING, OFFER THE OPPOSING PLAYER THE OPPORTUNITY TO FORFEIT A CARD WITHOUT BATTLE.

IF THE PLAYER DECLINES, ENTER BATTLE.

IF GRACE O'MALLEY IS VICTORIOUS, SHE TAKES TWO CARDS FROM THE OPPONENT.



CHENG I SAO

DO YOU HAVE WHAT IT TAKES TO DEFEAT THE TERROR OF CHINA? I'D LIKE TO SEE YOU TRY!

WHEN STEALING FROM ANOTHER PLAYER, THE OPPONENT MAY ONLY DEFEND WITH TWO DICE INSTEAD OF THREE.

AFTER EACH STEAL BATTLE, CHENG I SAO MUST OFFER THE OPPONENT 'DOUBLE OR NOTHING' REGARDLESS OF WHO WINS. THE DEFENDER MAY DECLINE.



'CALICO JACK' RACKHAM

WAITING FOR THE DAY WE FIND A LARGE SUM. YO-HO-HO AND A BOTTLE OF RUM!

ONCE PER TURN, JACK MAY INITIATE A STEAL FROM THE PLAYER WITH THE LEAST CARDS IN THEIR HAND WITHOUT THE COST OF AN ACTION.



ANNE BONNY

SAILING THE SEVEN SEAS IN SEARCH FOR ADVENTURE: CHALLENGE ME IF YOU DARE!

ONCE PER TURN, ANNE MAY INITIATE A STEAL FROM ANOTHER PLAYER WITHOUT THE COST OF AN ACTION.



MARY READ

LOOK AT ALL YOU COWARDS. COME OUT HERE AND FIGHT LIKE MEN!

WHEN STEALING, MARY MUST ROLL BEFORE HER OPPONENT.

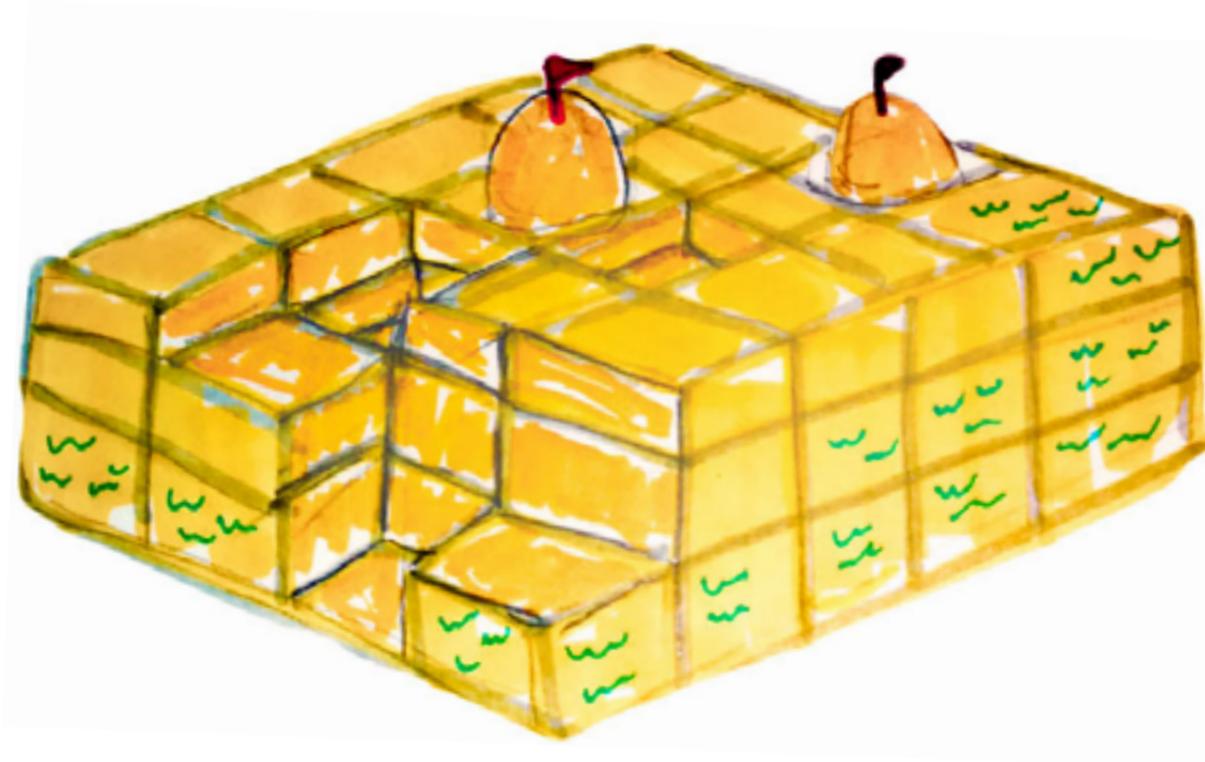
AFTER MARY ROLLS, SHE MAY CHOOSE TO RE-ROLL BOTH DICE BEFORE HER OPPONENT HAS ROLLED THEIR DEFENCE.



TREASURE CARDS

During the game, players have the option to dig up cards in the hopes of finding treasure. When a player digs up a card, they can find one of four hidden things: treasure, which contributes towards how many points a player has; blank cards, which are worth nothing; clues, which can aid the player, and traps, which have negative effects on the players who unearth them.

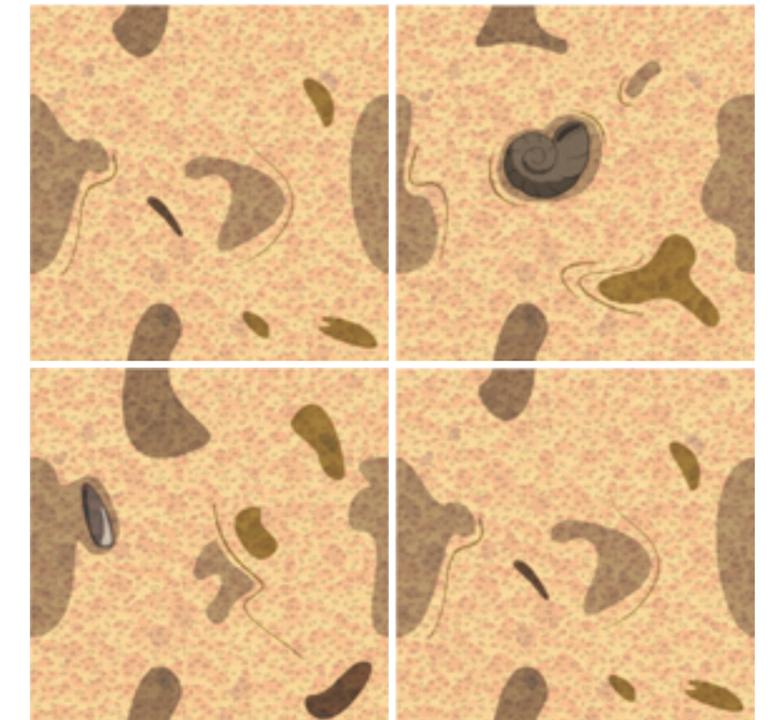
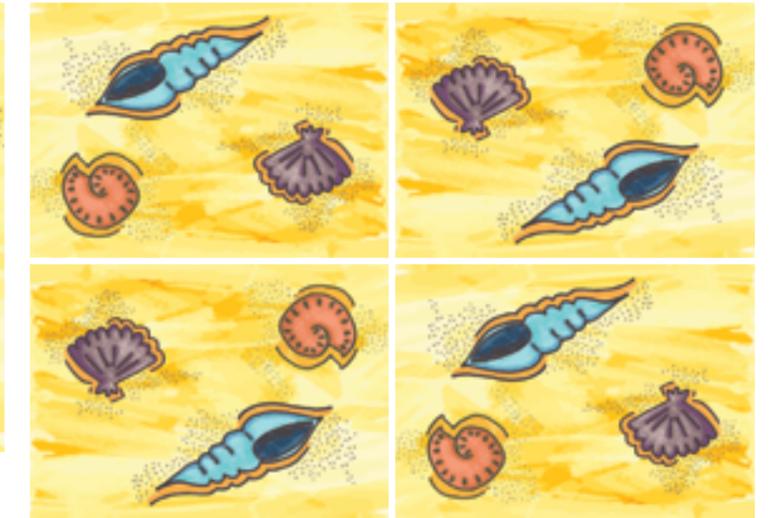
In the early prototypes, the cards were imagined as 3D printed objects which stacked up to create multiple layers. This idea was discarded as the additional layers encouraged excessive use of the dig mechanic, at the cost of player interaction through the steal mechanic. While having 3D printed pieces could be a great way for consumers to 'print and play' the game, reducing the cost of production, displaying the specific information for each tile was difficult and the final size of the game becomes rather large very quickly, making final product difficult to store for the consumer.



CARD BACKS

The back of the cards were inspired by repeat print patterns, which when laid down together take on the appearance of a beach.

Unlike the square underwater designs (Simon 2015) which served as inspiration, the card backs needed to be identical to avoid giving away what each card is. Additionally, there is no guarantee that players will place the cards in the same direction, which meant the pattern needed to have the potential for repeated from different orientations.



Repeat print underwater terrain (Simon 2015).

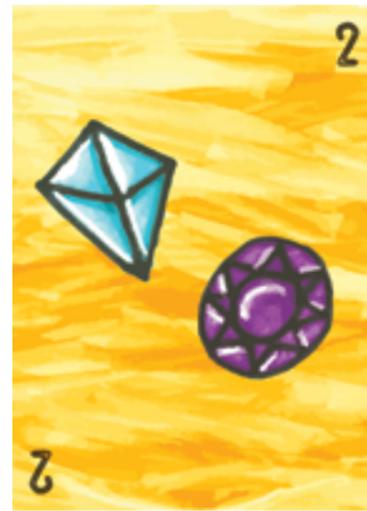
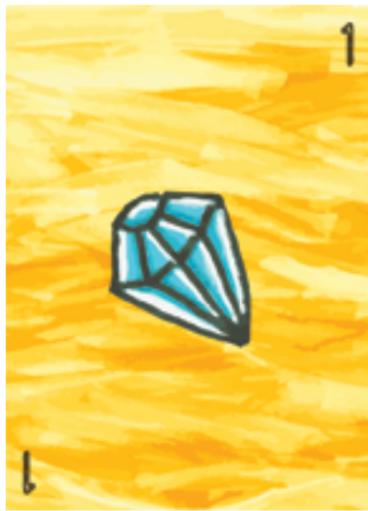
CRITICAL INCIDENT!

In one of the early playtests, the cards were 5cm² and were intended to be placed face down in front of the player so no one - not even the person with the cards - knew what treasure was in their collection. This resulted in clunky gameplay which broke the flow when players had to choose which cards to sacrifice from their own piles. As such, the decision was made to change the size of the cards so that they could be held in your hand like a traditional card game, making it easier to see what you have while still hiding your hand from other players.

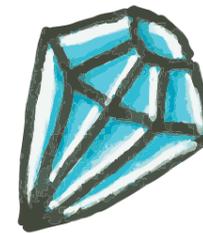
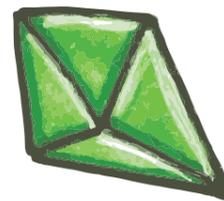
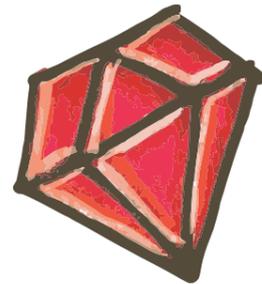


TREASURE

Players are able to dig up treasure cards, which contribute to a player's final score. Basic treasure cards range from one to three points. This is indicated by how many gems are on the card, and a number in the top right corner to make it easy to determine a total hand value at a glance.



ACTUAL SIZE



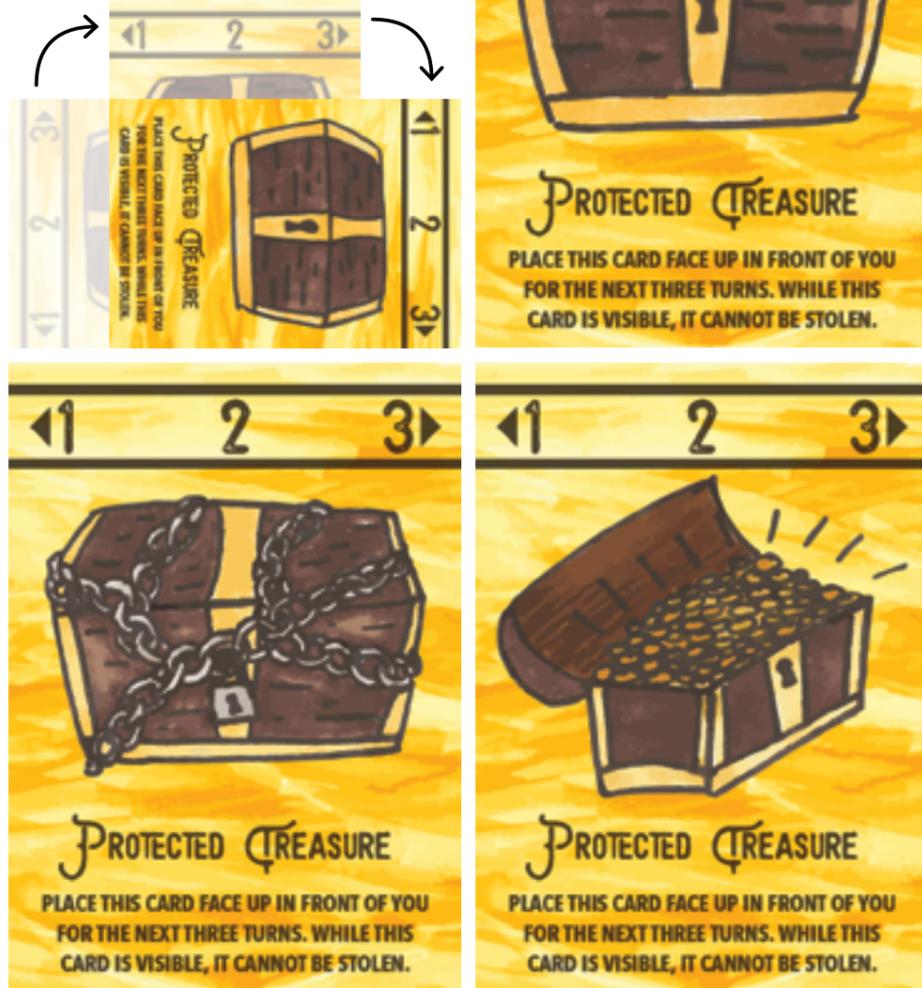
PROTECTED TREASURE

A second type of treasure card players may dig up is protected treasure. Unlike basic treasure cards, players do not know how much these cards are worth until the end of the game.

When a player digs up a basic treasure card, they place it face up on the table in front of them for all to see for three turns. While the card is face up, no other players can steal it. After this time, players add the card to their hand (like any other card).

These cards can be worth up to five points each, so they can be valuable to other players, however each treasure chest is worth a different amount based on design which is revealed at the end of the game using the app.

Although the card value is unknown, they have numbers on the cards so that players can rotate the card to keep track of the three face up turns. Additionally, lines and arrows have been added to differentiate it from the basic treasure number system.



CRITICAL INCIDENT!

Originally, protected treasure was worth a set amount, and so all players knew how much was in the treasure chest. This meant that once these cards were no longer protected, players would try and target these cards specifically because of how much they were worth. To fix this, protected treasure became an unknown quantity until the end of the game, using the **Principle of Information Opacity** to reveal the final value of protected treasure in the app.



EMPTY DIGS

Sometimes, instead of digging up treasure, players unearth a card worth nothing. These 'empty digs' go straight into a player's hand.

While it may seem useless to have blank cards in your hand, it can be beneficial for decreasing the chance of other players stealing your treasure. Like basic treasure cards, these cards use a number in the top right corner to indicate how much the card is worth.

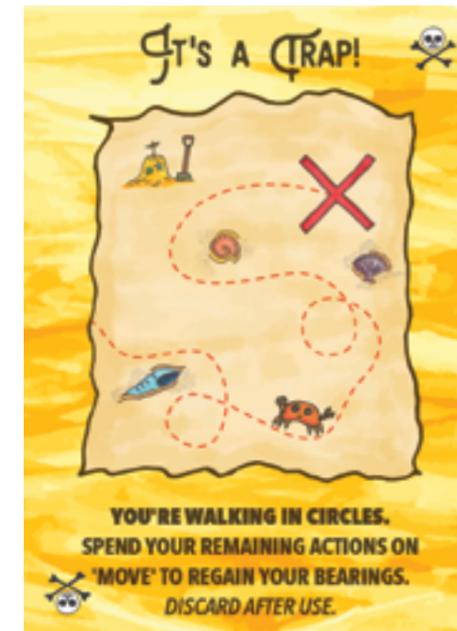
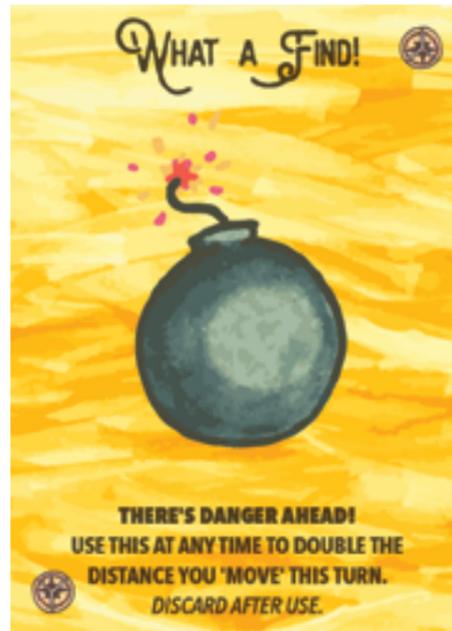
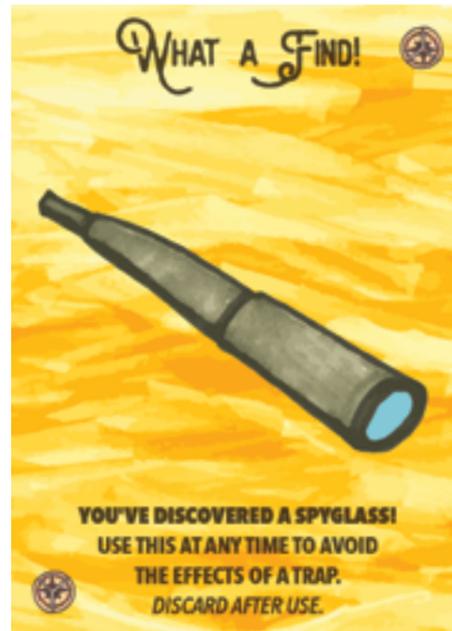
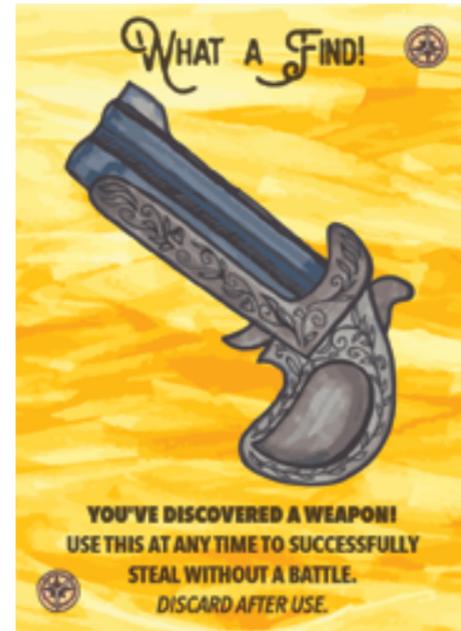


CLUES

When a player finds a clue card, it is added to their hand. These cards can then be used at any time, at the cost of one card currently in the player's possession. These cards are easily identified by a compass icon in the top right corner.

These effects offer the player who activates them a variety of advantages. Considering the **Principle of Information Opacity**, it is ideal to have players be aware of what clues exist in the game, without knowing who has them in their possession until they are activated.

The compass clue utilises both spaces in order to take full effect. Players are aware that this clue exists in the game by having it as a part of the physical deck, however the information it reveals is not clear – this is revealed by the app upon activation. This mechanic will be discussed further in the digital section on pages 64-65.

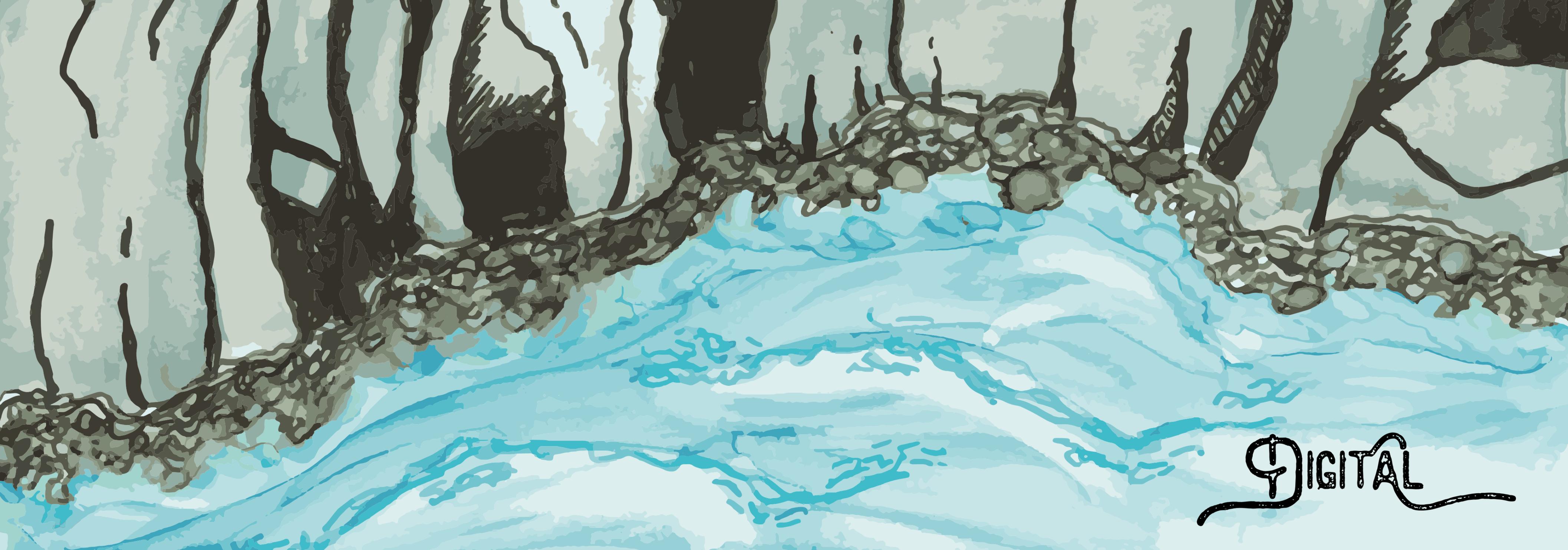


TRAPS

When digging, players may unearth a trap card. These cards result in negative effects for the player who finds them, which activate instantly. These cards are easily differentiated by the skull and crossbones sitting in the top right corner.

Considering the **Principle of Information Opacity**, one could determine that traps could be revealed through the digital space as they do not need to sit in a player's hand at any point in time. The reason this has not been integrated into the game is to assist with the flow of the game, sitting in harmony with the **Principle of Balancing Chores**. Regardless of whether the trap type is built into the app, a card is still going to be turned over. Having to then consult an app to determine what trap it is becomes an additional chore for players to engage with, interrupting the process of play to determine minor details.





DIGITAL

THE MOBILE APP



'Inbuilt apps are fundamentally part of hybrid games, representing a form of high integration where the use of both analogue pieces and the mobile application is necessary for the complete game experience (i.e. the game will not function where one is not present).



Ahoy! uses hybrid integration of the mobile app with the tabletop game experience, making the app essential for the gameplay to function. The app has been assigned mechanics which have used the **Principle of Information Opacity** to consider whether they are best suited in the analogue or digital space. The main role of the app is to use the **Principle of Unpredictability** to reveal different in-game events as the game progresses, while hiding the complexity of the varying choices.



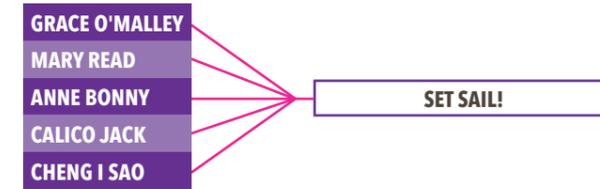
REVEALED EVENTS

In hybrid games, algorithms are present in both the analogue and digital space, giving the app the role of the co-operator alongside the players. This role is leveraged in *Ahoy!* using the **Principle of Unpredictability** in order to add complexity, using the app to reveal new events as the game progresses.

This is achieved by giving the app a role which is like an additional character: the app has its own turn, which differs from the players. Instead of moving around the board and digging up treasure, the app reveals a new obstacle that players must overcome.

There is a broad range of potential obstacles the app could subject players to, making it difficult to predict what the next twist will be. The **Principle of Information Opacity** suggests this works more effectively in the digital space as the players are not aware of all the possible permutations which could be presented, which helps create tension and uncertainty. Additionally, the **Principle of Balancing Chores** suggests that hiding this complexity within the app assists with the flow of the game.

The app also uses the **Principle of Unpredictability** to vary the starting player with themed instructions. While the starting instructions do not offer as much variation as the revealed events, the different scenarios offer a simple way to quickly set the scene for players as they begin the game.

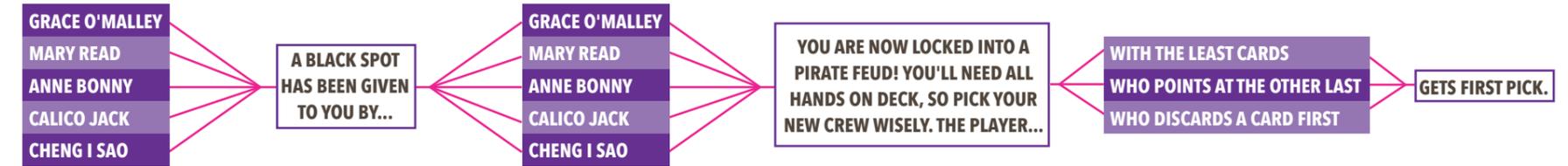


WHICH OF YOU PIRATES HAVE BEEN MUNCHING ON THE BILGE RATS? WHOEVER ATE LAST, BEGIN YOUR ADVENTURE!

BLIMEY! YOU'D THINK YOU'RE ALL LANDLUBBERS BY THE LOOKS ON YOUR FACES. WHOEVER WENT SWIMMING LAST, TAKE CHARGE AND LEAD YOUR CREW.

AHOY! WHICH OF YOU SMELLY BUCCANEERS TOOK A DIP LAST? WHOEVER IS CLEANEST CAN START LEADING THE CREW TOWARDS SOME FRESH ISLAND AIR.

REVEALED EVENTS: TEAM SCENARIOS

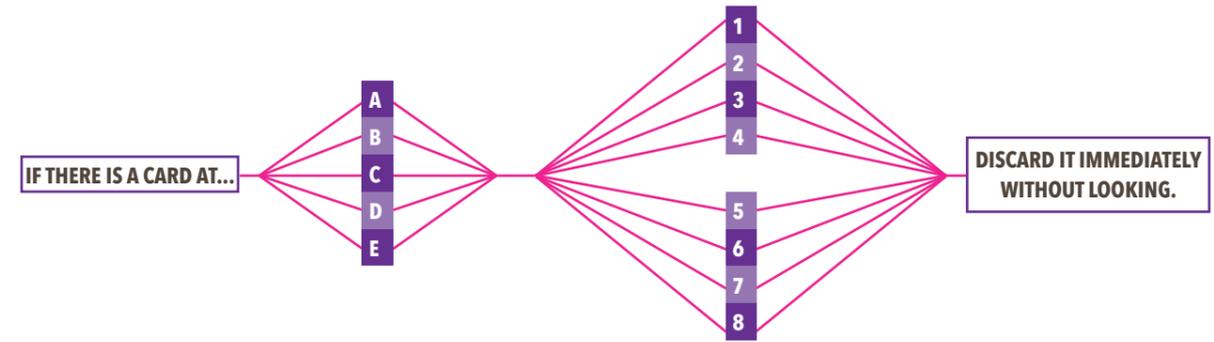
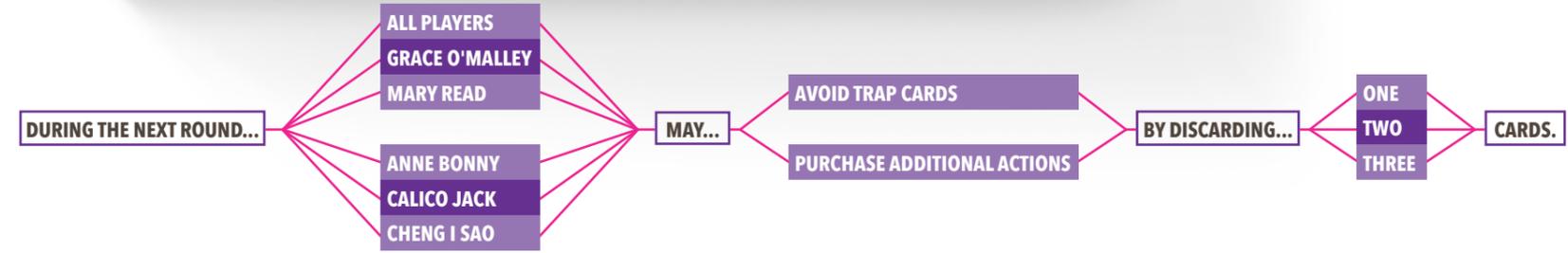
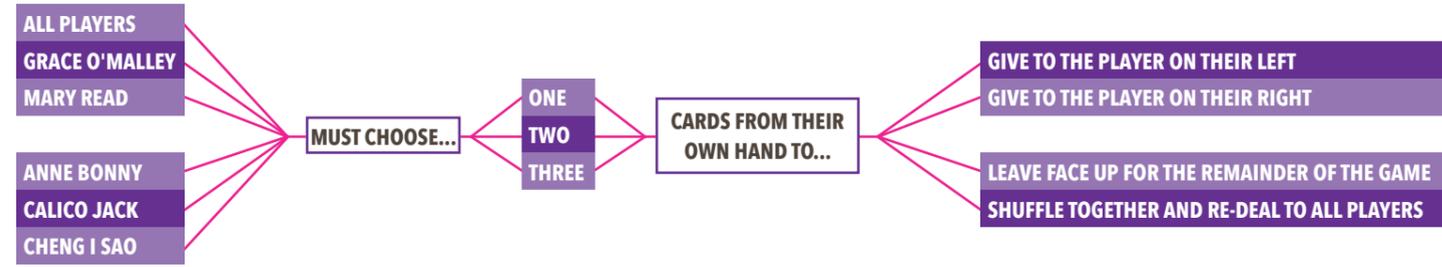
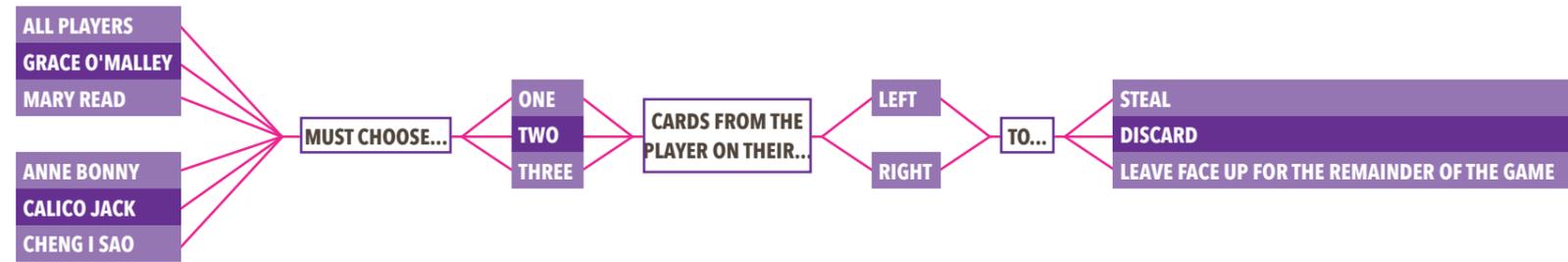


YOU'RE ALL WATCHING YOUR BACKS AND CAN'T TRUST ANYONE! ALL CREW ARE DISBANDED - IT'S EVERYONE OUT FOR THEMSELVES!

WHEN YOU'RE ALL TOGETHER IT'S CHAOS! WELL YOU'D BETTER WORK OUT YOUR DIFFERENCES FAST, BECAUSE ALL PLAYERS ARE NOW ON THE SAME TEAM TRYING TO BEAT ME - I'D LIKE TO SEE YOU TRY!



REVEALED EVENTS: CHAOTIC SCENARIOS



WILLAINOUS PERSONA

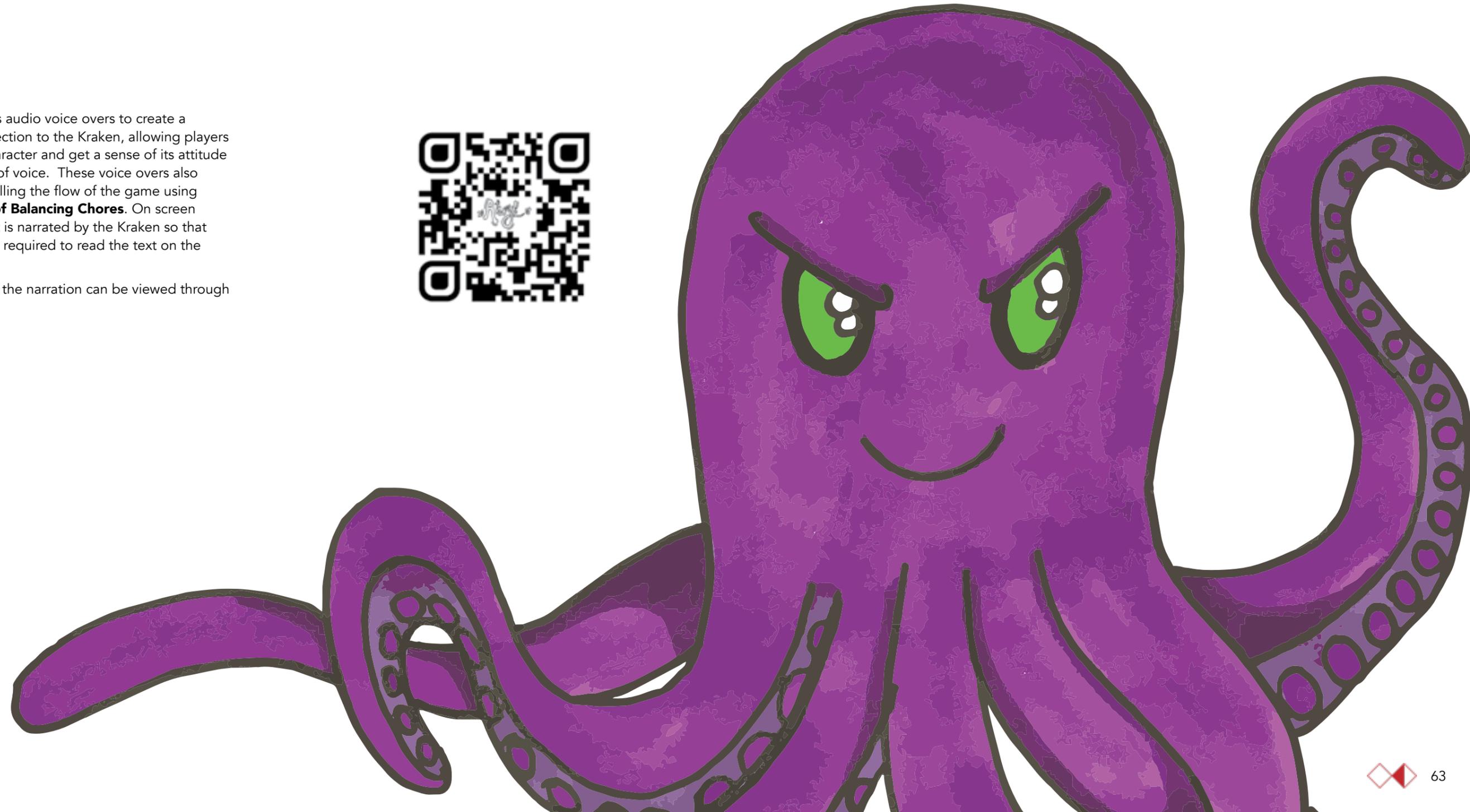
The revealed events often result in difficult choices which make the game more difficult for players, and this has been further emphasised through consideration of the **Principle of App as Antagonist** which positions the app as a villainous character.

The apps' persona is represented by a Kraken who enjoys causing chaos and watching feeble human pirates struggle to determine the best way to navigate around the choices given.

Each revealed event has been phrased in order to further emphasise the personality of the Kraken, giving players a common opponent to focus their frustrations towards. This minimises the accountability players must assume when making difficult decisions which may affect other players negatively. The blame is instead shifted to the mischievous Kraken who forced the decision upon the individual player by controlling the direction of the emerging narrative.

The game uses audio voice overs to create a stronger connection to the Kraken, allowing players to hear the character and get a sense of its attitude from the tone of voice. These voice overs also assist in controlling the flow of the game using the **Principle of Balancing Chores**. On screen instruction text is narrated by the Kraken so that players are not required to read the text on the screen.

An example of the narration can be viewed through the QR code.



CRITICAL INCIDENT!

Initially, the app was designed to be like a talking parrot, however the parrot didn't have the frustrating effect that the game was trying to achieve through the **Principle of App as Antagonist**. Rather than having an annoying talking parrot, the apps character was instead redesigned to be a Kraken - a giant sea creature known to attack ships. Assigning the app with a character that seeks out pirate ships aligns with the idea of the app taking on an antagonistic role, thus using **Principle of Design Consistency** to ensure the theme is working together with the mechanics the app utilises.



ACTIVATING THE COMPASS CLUE

Clues are activated at the cost of one card in the players hand. Once activated, players follow the instructions on the card to receive their advantage, delivered through the app.

In order to activate the compass clue, players must select the compass icon on the Player Phase screen.



The app then lists a location on the board allowing the player who activated the clue to take a look at the card at that location.

It should be noted that the co-ordinates given may not have a card at that location, as the app is a blind interface. When considering this mechanic alongside the **Principle of Interface Blindness**, the potential solution to solve this problem was to input which cards had been dug up as the game progressed. This idea was not pursued as it meant players would need to input information constantly, creating a tedious process which did not align well with the **Principle of Balancing Chores**.

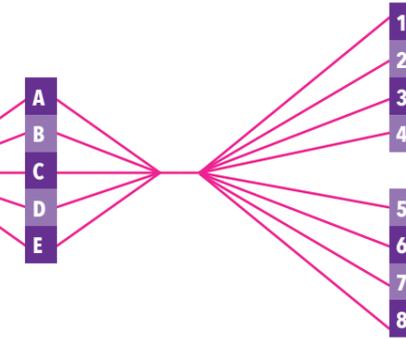
The player who activated the compass has ten seconds to view the card and place it back down on the board. After this, all players are asked whether they too would like to see the card, however, there is an unknown cost for viewing. Once a player says yes to this, they must incur the cost generated by the app. The cost of looking varies, using the **Principle of Unpredictability** to reveal the price: some turns it may be free, other turns it may result in discarding a card.

After additional players have incurred the cost and looked at the card, the app then chooses what happens to the card players have looked at. In some cases, players who choose to look may have to pay the cost, and the app may then direct players to leave the card face up for all to see regardless of whether they chose to look or not. This leaves players with a sense of risk as the information is revealed as the turn progresses.



1. Activate and view

WELL, WELL, WELL... LOOK WHO'S COMING TO ME FOR HELP! THE PLAYER WHO ACTIVATED THE COMPASS CLUE MAY LOOK AT THE CARD LOCATED ON...



2. Opportunity for others to look

DO ANY OTHER PLAYERS WISH TO VIEW THE CARD AT <PREVIOUSLY GIVEN CO-ORDINATES>?

YES
NO

PLAYERS WHO SAID YES MUST...

- DO NOTHING
- DISCARD ONE CARD
- DISCARD TWO CARDS
- GIVE ONE CARD TO THE PLAYER WHO ACTIVATED THE COMPASS
- GIVE TWO CARDS TO THE PLAYER WHO ACTIVATED THE COMPASS

BEFORE VIEWING THE CARD.

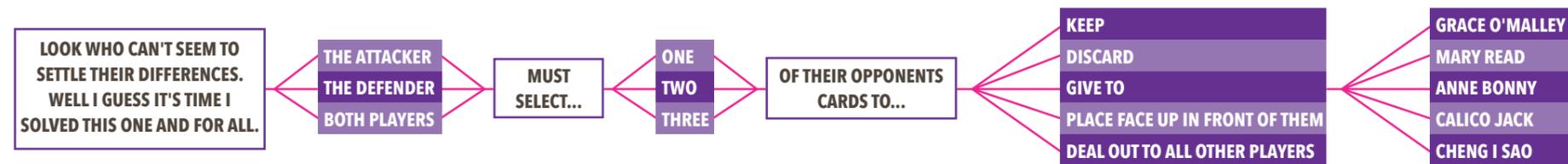
3. End state

AFTER ALL PLAYERS HAVE VIEWED THE CARD...

- PLACE IT BACK FACE DOWN
- LEAVE IT FACE UP
- DISCARD IT WITHOUT SHOWING ANYONE ELSE



STEAL STANDOFF



During the game, players have the option to steal from other pirates, entering into battle to gain additional treasure.

While this mechanic primarily engages with the analogue space, if players are unable to reach a result in three turns, they are left with a Steal Standoff.

If this happens, player must select the Steal Standoff button in the app, which will decide the fate of the battling pirates by placing it in the hands of the Kraken. The app uses the **Principle of Unpredictability** to choose a punishment for one or more of the parties involved, using the **Principle of App as Antagonist** to inspire penalties which cause suffering.

By having the app determine the fate of the battling pirates, there is a shift between known and unknown information as seen when considering the **Principle of Information Opacity**. In the analogue space the outcomes are limited to one player losing some treasure. But once the Steal Standoff is triggered, the results could affect one or both players in a range of ways, with penalties that are often harsher than just losing the battle.



TUTORIAL INTEGRATION

Rather than having a physical rule book, this game incorporates digital tutorials through the app to walk players through the instructions. These instructions have considered the **Principle of Tutorial Integration** to teach the rules in the simplest way possible.

The tutorials can be accessed in two ways:

From the home screen by selecting the 'How to Play' button, where players are then able to make their way through the tutorial sections.



Or from the '?' button on the in game screen, which will navigate players to the relevant tutorial section.

In order to simplify the experience, the tutorials have been broken up into a few key sections:

SET UP

These instructions detail what a player must do before beginning the game, and then outlines how the game starts

HAVING YOUR TURN

These instructions outline the structure of a round. Following this, they explain the Player Phase and the Kraken phase.

CARDS

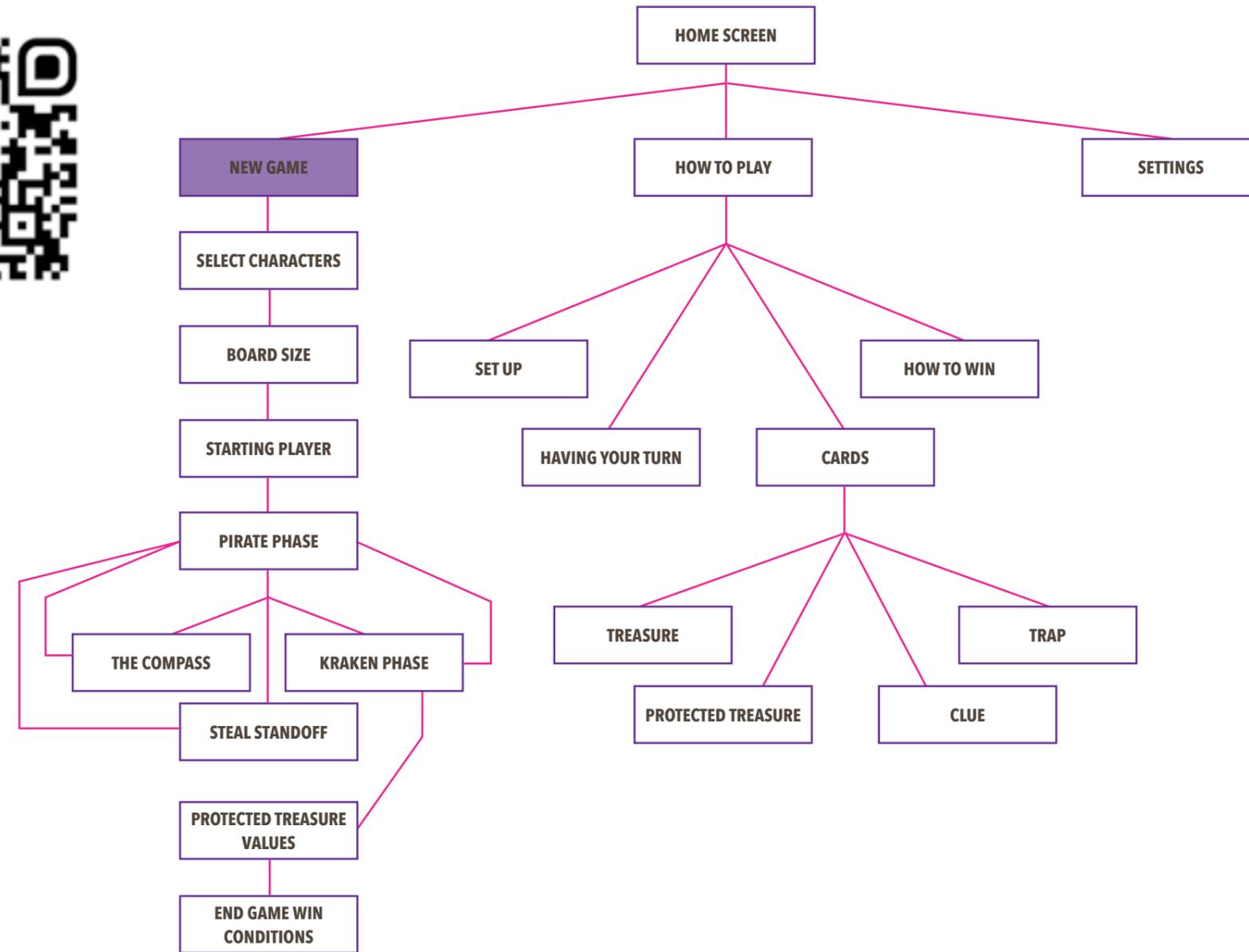
These instructions give further detail about each different card type, outlining how they can be used.

HOW TO WIN

These instructions outline how the game ends, and associated win conditions.



APP NAVIGATION OVERVIEW



HOME SCREEN



When opening the app, the game runs through a quick loading animation, where the Ahoy! logo zooms out to full size. Once full size, the screen displays the logo for three seconds, before fading out.

Once the logo has faded out, the island floats into the screen from the left, while the 'New Game', 'How To Play' and 'Settings' buttons fade in.



NEW GAME: SELECT CHARACTERS



Each game starts by having players select which players are being used. This has been added in response to the **Principle of Interface Blindness** as the app is unable to determine which characters are in play for generating revealed events without players inputting this information manually. This is the first thing done to help players with setting up the game, guiding them through the initial steps while gathering vital information for the app.

To select characters, players tap the image of their character. Once selected, the frame changes from white to black. When all players are selected, the next step can be reached using the 'All Players In!' button.

NEW GAME: BOARD SIZE & STARTING PLAYER



Continuing to guide players through the set up phase while collecting vital information for the app to respond to the **Principle of Interface Blindness**, the next screen is the selection of the board. Based on the characters selected, the app automatically selects the recommended board size, however players are able to alter this by pressing the other option. Once a board has been chosen, players navigate to the next step using the 'Board Chosen!' button.

After selecting the board size, the Kraken gives a prompt for the starting player, using the **Principle of Unpredictability** to give variation and surprise. Once calculated, players are able to progress to the Pirate Phase screen using the 'Let's Play!' button.



NEW GAME: PIRATE PHASE



The Pirate Phase screen has quick links to the two app integrated mechanics of this section: The Compass Clue and the Steal Standoff. Players are also able to use the '?' button to remember specific information about having a turn and the different card types. Once all players have completed a turn, the next phase is reached using the 'Kraken Phase' button.

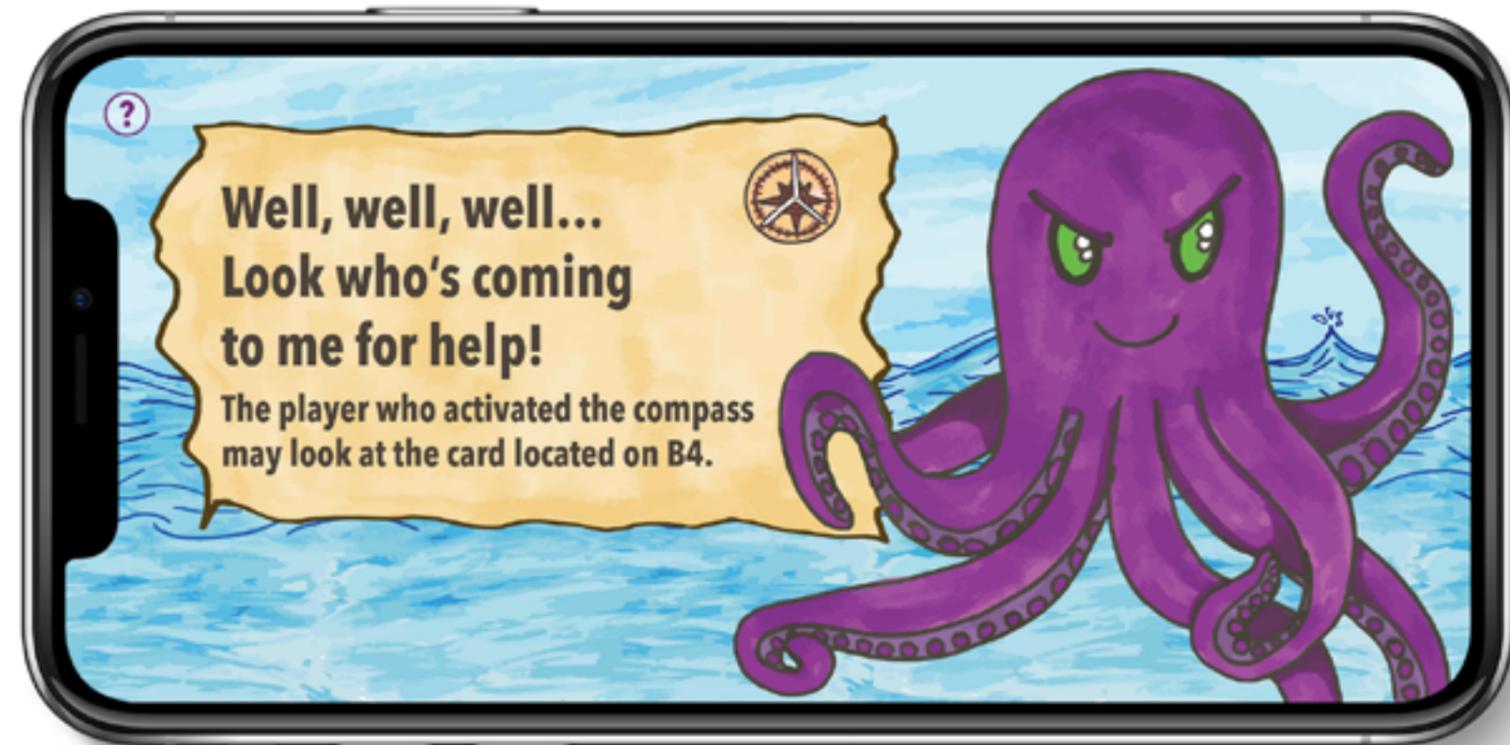
NEW GAME: STEAL STANDOFF



The Steal Standoff uses the **Principle of Unpredictability** to offer a punishment for one of the parties involved in the unsuccessful steal battle. Once the punishment has been completed, players can navigate back to the Pirate Phase using the 'Back To The Dig' button. The reason this button refers to the dig, rather than the Pirate Phase is to emphasise the connection to the theme of digging up treasure, aligning with the **Principle of Design Consistency**, while also differentiating it from a new round beginning.



NEW GAME: THE COMPASS



The Compass app screens are spread across three stages. It starts with the direction for the player activating the clue, and this screen is held for the duration of the narration plus three seconds. After this, it moves on to the offer for other players to look. If any players say yes, then the 'Yes' button must be selected to continue. If no player says yes, then the 'No' button is used to navigate to the final stage. In the final stage, the app offers one last instruction, directing the player who activated the compass clue to do something additional to the card after all players who wanted to view it have looked. To return to the Pirate Phase screen, players use the 'Back To The Dig' button.



NEW GAME: KRAKEN PHASE



The Kraken Phase offers a challenge determined by the app using the Principle of Unpredictability. Once the challenge has been completed, players return to the Pirate Phase to have another round. Here, the 'Pirate Phase' button refers to the phase by name, unlike when returning back to the main screen from the Steal Standoff or Compass screens. This is to differentiate the transitions between each.

NEW GAME: PROTECTED TREASURE



After ten rounds, the game comes to a close. After the 10th Kraken Phase, instead of prompting navigation to the Pirate Phase, it will instead direct users to the Protected Treasure Values. Here the amount of treasure the designs are worth is revealed, getting players ready for the final tally. This screen uses the iconography to differentiate the protected treasure types, aligning with the Principle of Design Consistency.

NEW GAME: END GAME



There are three different end states for the game, depending on the randomised instructions produced in the Kraken Phase which can change the way teams are structured. If all players end the game on the same team, they are attempting to beat the Kraken with more treasure in total than what remains on the board and in the discard pile. If players are on teams against each other, they simply add up the total of their own teams and compare with each other.

Although the Protected Treasure values have already been revealed on the previous screen, these values are added to the bottom of the screen as a reminder for players who have forgotten.

How To Play



How To Play: Set Up



How To Play: Having Your Turn

The game lasts for 10 rounds.
A round consists of two phases:
The Pirate Phase &
The Kraken Phase.

◀ HOW TO PLAY NEXT ▶

In the Pirate Phase each player completes 3 actions. These actions can be repeated or varied as the player chooses.
Actions to choose from are:
Dig, Steal, or Move.

DIG STEAL

MOVE

◀ HOW TO PLAY NEXT ▶

A player may can try to steal from another player. In order to steal, players must be next to each other.
Each character has special conditions for steal which apply to the attacking player. These conditions are outlined on the character cards.

DIG STEAL

MOVE

◀ HOW TO PLAY NEXT ▶

A player may choose to 'dig' up a card revealing what is underneath. Most cards are added to a players hand, unless otherwise instructed.

DIG STEAL

MOVE

◀ HOW TO PLAY NEXT ▶

When trying to steal, the attacking player rolls two dice, while the defending player rolls three. After all dice are rolled, each player adds the sum of their two highest dice. The player with the higher sum wins the battle and gets to steal a card from the losing player.

DIG STEAL

MOVE

◀ HOW TO PLAY NEXT ▶

In the event of a tie, players re-roll.
If players are unable to reach a result after three rolls, a Steal Standoff is triggered, where players select the 'Steal Standoff' button in the app and the Kraken gives a punishment to one or both of the parties involved in the Steal battle.

DIG STEAL

MOVE

◀ HOW TO PLAY NEXT ▶





How To Play: CARDS



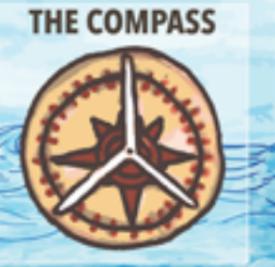
Clues offer advantages to players and can be activated at any time by sacrificing one card from a players hand to the discard pile. Clues can be identified by the compass icon in the top right corner. Once activated, players follow the instructions on the card.



◀ HOW TO PLAY

NEXT ▶

Unlike the other clues, the Compass Clue uses the app. After activating, players select 'The Compass' button.



◀ HOW TO PLAY

NEXT ▶

The app will reveal information about a card on the board to the player who activated the card and additional players at an extra cost.



◀ HOW TO PLAY

NEXT ▶

Traps trigger instant negative effects for the player who digs them up. Traps can be identified by the skull and crossbones icon in the top right corner. Once activated, players follow the instructions on the card.

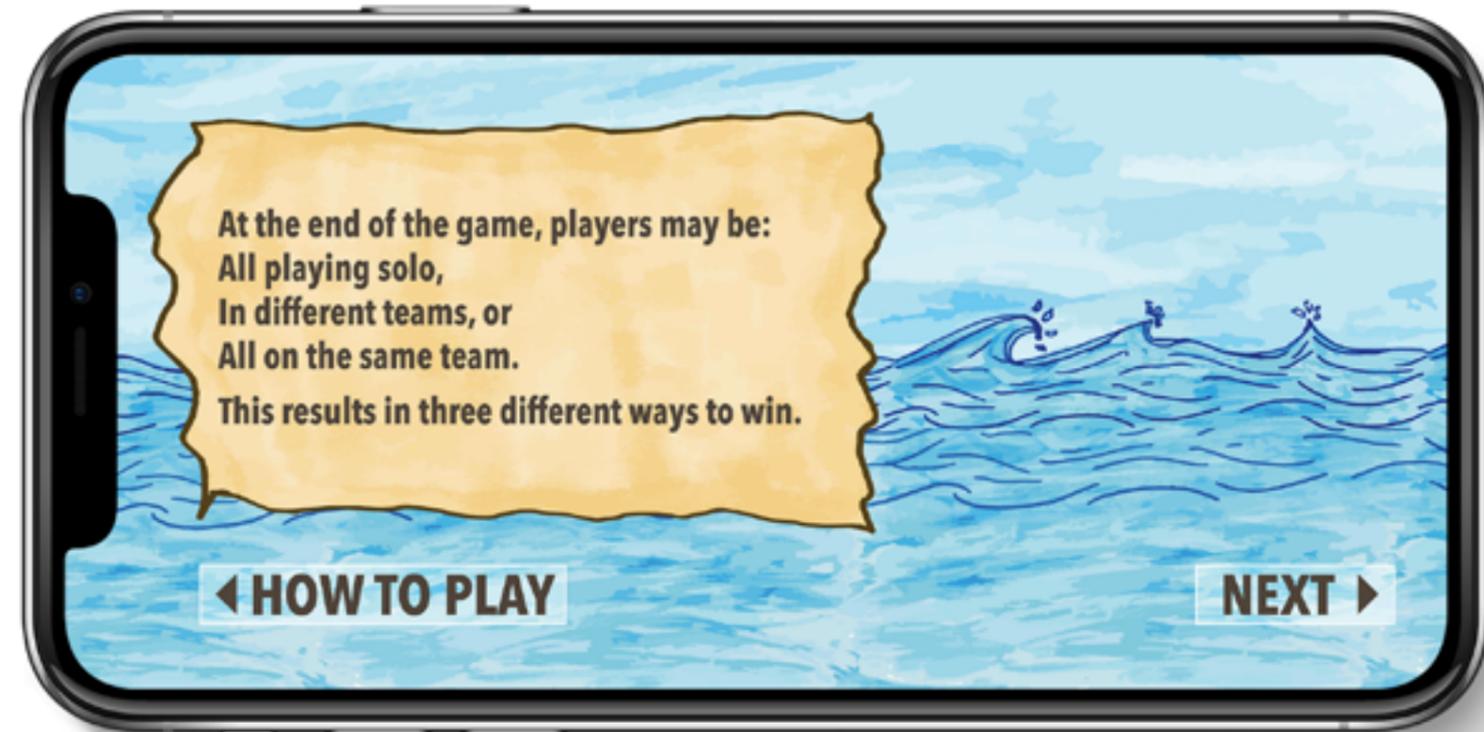


◀ HOW TO PLAY

NEXT ▶



How To Play: How To Win



How To Play: SETTINGS



The settings screen offers players the option to use audio elements in the game, and customise elements of the game which use the Principle of Unpredictability, without revealing the scenarios the game can include. Turning off teams would ensure players remain on their own team. Changing the difficulty of revealed events would alter the likelihood of getting difficult tasks allowing players to adapt the game to suit skill levels. The selected setting is indicated by the dark shading on the options presented.

FUTURE DEVELOPMENT

As *Ahoy!* is a prototype there is room for future development of the project. This development take the form of continued prototypes and playtests to further refine the game idea and develop it further. Future development could also open the door for further research. A fully playable prototype could be compared against other hybrid games testing to see if elements from the proposed hybrid game design principles are present in each game.

While this prototype got a few playtests, it was only by other university students. It would be ideal to get some playtests with children and adults in order to understand how the different audiences interact with this game aimed at families.

Although I was unable to playtest with children, I was able to discuss the project with a group of kids in Years 5 and 6 while leading on a camp. This dinner conversation began with the children asking what I do outside of camps, and ended with them commenting on all the character designs I presented them with. Their feedback was positive – the girls loved the high female ratio in my characters, while the boys were excited about the theme. In addition to commenting on the visual designs, they gave feedback on the hybrid nature of the game. Some of the Year 6 boys suggested having the app connect to other mobiles so each player had a copy of the app that synced together. Their lack of confusion at the combination of the analogue and digital technology was a positive outcome from the conversation. It was also beneficial to discover that the game has an appeal with the target market before they have even played it.

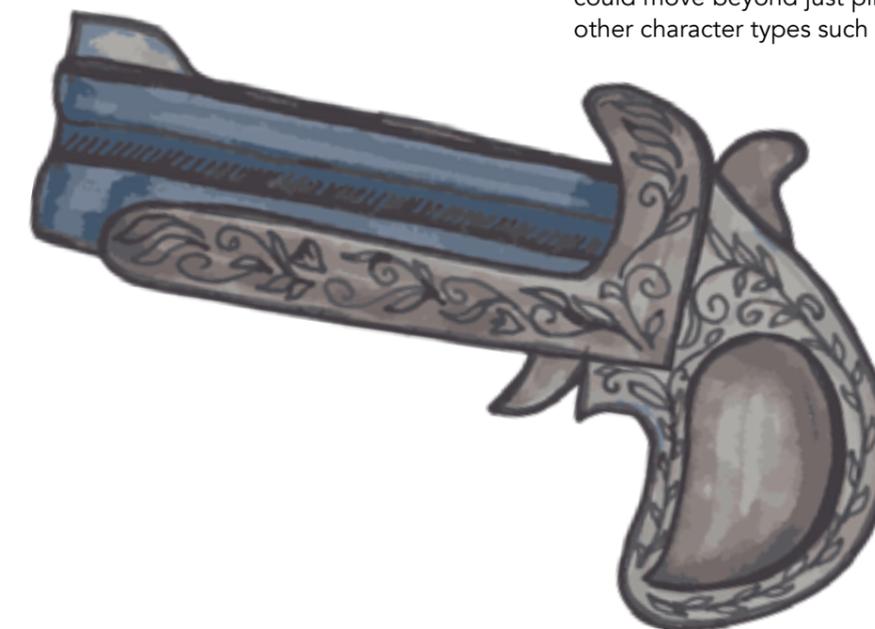
One of the elements which could be furthered during future development is attention to the audio qualities of the game. While the prototype encompassed aural narration of instructions from the app to incorporate the Kraken persona, little attention was given to music and sound effects.

The music for the app could be developed using a series of loops, adding layers to the sound track as each round progresses to build up tensions towards the end state of the game.

Additionally, considering the **Principle of Design Consistency**, sound effects such as waves, seagulls, ship creaks etc. could be added to help connect the theme with the game experience.

Towards the end of the current development, I noticed that teams could potentially be confusing as there is no easy way to keep track of players on different teams, particularly if they change more than once during a game. Development of tokens to track the different teams would be an ideal solution to this, potentially using ships to align with the **Principle of Design Consistency**. These could be designed to have different shapes to allow for greater accessibility, rather than just colouring them differently.

Future development of the game leaves room for additional characters, clues, and traps. These could be added to the prototype and developed as a part of the base game, or created with the idea of expansion packs in mind. Additional characters could move beyond just pirates, and incorporate other character types such as mermaids.



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