

Gameplay Design
Assignment 2
Analysis of *7 Wonders* and *Ricocheting Robots*

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1 Gameplay description 7 Wonders

7 Wonders was released in 2010 and the goal is to build a civilisation in an ancient setting. The game consist of several card types and a player unique game board showing the status of a player's civilisation. The different cards represent different buildings which each contribute to the civilisation in some way. There are resource spawning, such as iron, chemicals or wood. *Military cards* which are used to battle with one's neighbours, these battles give points to the victors and deduct points from the losers. *Science cards*, which generate points at the end of the game. There are three different types of *Science cards*, each with a unique scientific tool. The amount of points given by *Science cards* is based on the amount of complete science tool sets that has been collected as well as the number of cards you have of each unique science tool type. Another card type is *Utility cards*, they have an immediate effect on the game state. These cards are either played to collect money instantaneously or used to establish trading posts that give discounts while trading with one's neighbours. The last card type is *Point cards*. They either consist of buildings that gives a fixed amount of points or buildings that gives a dynamic amount of points based on ones own and neighbouring civilisation statuses. The game is divided into three ages, each age is divided into six turns. Each turn every player picks a card which is either played, discarded or used as a resource to build a wonder. Wonders have different impact on the game, they can either generate resources, points, science, currency or military power. The effect of wonders are unique for each civilisation. The rest of the cards are passed to the next player in a drafting fashion. To play a card some resources must be paid, they can either be resources generated by ones own civilisation or they can be bought from neighbouring civilisations, provided they possess them. After the three ages have passed points are counted for each player's success in each card type area, such as military, science and point cards. The amount of currency currently in each player's possession is also counted and rewarded with points. The player that has the most points at the end wins the game.

1.1 Gameplay of 7 Wonders using the component framework

In this section we are breaking down the gameplay elements of 7 wonders by using the component framework (Björk & Holopainen, 2003). Not all concepts will be listed, only state the *game instance*, *game session*, *player session* and *goals and subgoals* in the assignment. To give an compact overview of which game elements are available to the player.

1.1.1 A typical Game Instance of 7 wonders

- Wich cards that a game should uses is decided by number of players
- Players choices civilisation by picking a player unique game board
- Game session begins for each player simultaneously
- Outcome is determined by counting points based on card types and currency
- Clearing the game stat

1.1.2 A typical Game Session of 7 wonders

- Pick civilisation
- Draft of the first age
- Picks a card, chose to one action of either play it, discard it or build a wonder using it. Pass rest of cards to opponent.
- Drafting session of the second age
- Picks a card, chose to one action of either play it, discard it or build a wonder using it. Pass rest of cards to opponent.
- Drafting session of the third age
- Picks a card, chose to one action of either play it, discard it or build a wonder using it. Pass rest of cards to opponent.

1.1.3 A typical player session of 7 wonders

In this game the player session is the same as the game session. All player sessions are simultaneously due to the drafting mechanics.

1.1.4 Goals and subgoals

- Get as high score as possible
- Complete scientific tool sets
- Gather as many scientific cards of the same type as possible
- Have higher military power then the neighbours
- Complete the civilisations wonder
- Get a high score by strategically timing the dynamic point cards
- Have enough resources to play the perfect cards

2 Gameplay description Ricocheting Robots

Ricochet robots is a game where players challenge each other to move a robot to a certain point. The game consists of a board with a grid layout. Some of the grid tiles are unique goal tile. The goal tiles have a color matching one of the robots(except the optional support robot) and a symbol. The board also have walls placed between some tiles. A robot cannot move through these walls, instead they ricochet along the wall in the direction of the players choice. Each turn a random goal token is revealed. Then each player simentainusly tries to figure out the path with the fewest moves to move the robot with corresponding color as goal token to the goal tile indicated by the goal token.

When one player have found a legit path, that player state the amount of movements required to carry out the task. The other players have one minute to try to beat the first player number of movements. This is done by bidding the amount of moves needed to complete the path. A players bid can never be increased, but could be lowered if he finds a better solution. A player could also bid a higher amount of movements then the original player, in case he can not show his solution. When the time ends, the player with the fewest movements that can show his solution gets the point and a new turn begins.

When all goal tokens are collected by the players, the player with the most goal tokens wins the game.

2.1 Gameplay of Ricocheting Robots using the component framework

With same motivation as stated in section 1.1, this section only contains *game instance*, *game session*, *player session* and *goals and subgoals* to give an overview of the game play elements.

2.1.1 A typical game instance of Ricocheting Robots

- Decide if using optional support robot
- Place Robots randomly on board tiles
- Game session begins for each player simultaneously
- Outcome is determined by counting points based on amount of goal tokens
- Clearing the game stat

2.1.2 A typical game session of Ricocheting Robots

- Goal token revealed
- Figure out path given a specific robot and a goal tile
- Bid the amount of movements for that path
- During the time limit try to improve ones solution
- Repeat until all goal tokens are taken

2.1.3 A typical player session of Ricocheting Robots

In this game the player session is the same as the game session. All player sessions are simultaneously due the mutual controlled game pieces, and that each turn is in real time.

2.1.4 Goals and subgoals

- Get as high score as possible
- Find the path for given robot and goal tile with as few movements as possible
- Beat the other players movement bids

3 Analysis using game design patterns

We have analyze using Game Design patterns framework (Björk, Lundgren, & Holopainen, 2003). Some of the patterns is fetch from the wikipedia for Gameplay Design Patterns gdp2.tii.se. Others are defined by us. At the end of this section a comparison of both games is presented. One weakness of the Game design patterns is that every patterns either needs to be defined in every analysis so one could not misinterpret it or universally defined(in a database or wiki). One negative thing about universally defining patterns is that one could lose their own analysis of the gameplay and instead try to fit certain predefined patterns and could miss other key patterns. In the other hand if they are not universally defined, it could be time consuming defining them one self. Björk et al. argues for universally defined set of patterns a in their discussion due to the time consuming job it is if every designer will define them themselves. To

identify which patterns the game play consist of we have been using the Component framework (Björk & Holopainen, 2003) mention in section 1.1 and section 2.1 and playtesting. The framework has offered some help mostly in the case of providing different in approaching the gameplay from certain given directions. One disadvantage of the component framework is that of finding patterns outside the game instance. For example in Ricocheting Robots we found out that time pressure ended up in less social interaction and challenging gameplay. Two pattern we did not find using the component framework. Thus one should not only rely on the framework for an analysis even though it offers a quicker way to analysis games, one should use playtesting as well to find patterns. Using play testing alone is also a disadvantage, since it is both time consuming and all parts of the game play may not be tested under the playtest session. Thou play testing gives an ability of finding abstract game play patterns which is hard to find using the component network.

3.1 7 Wonders analysis

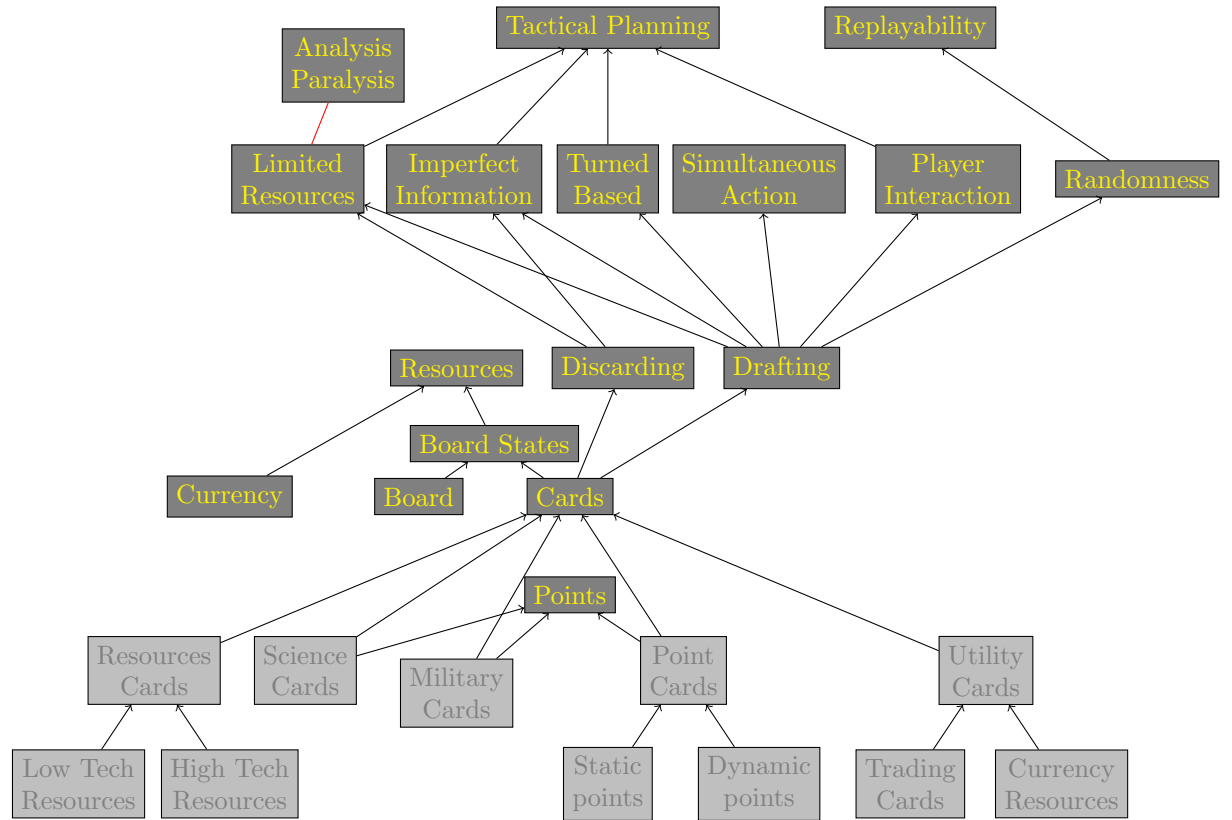


Figure 1: Analysis of 7 Wonders using Game Design Pattern. Light gray boxes indicates gameplay mechanics unique to 7 Wonders. Dark gray boxes are abstract mechanics found in other games. Edges with arrows indicate that the pattern being pointed to is instantiated by the other pattern connected to the edge. Red edges indicates that at pattern is in conflict with another pattern.

3.2 Ricocheting Robots analysed using Game Design Patterns

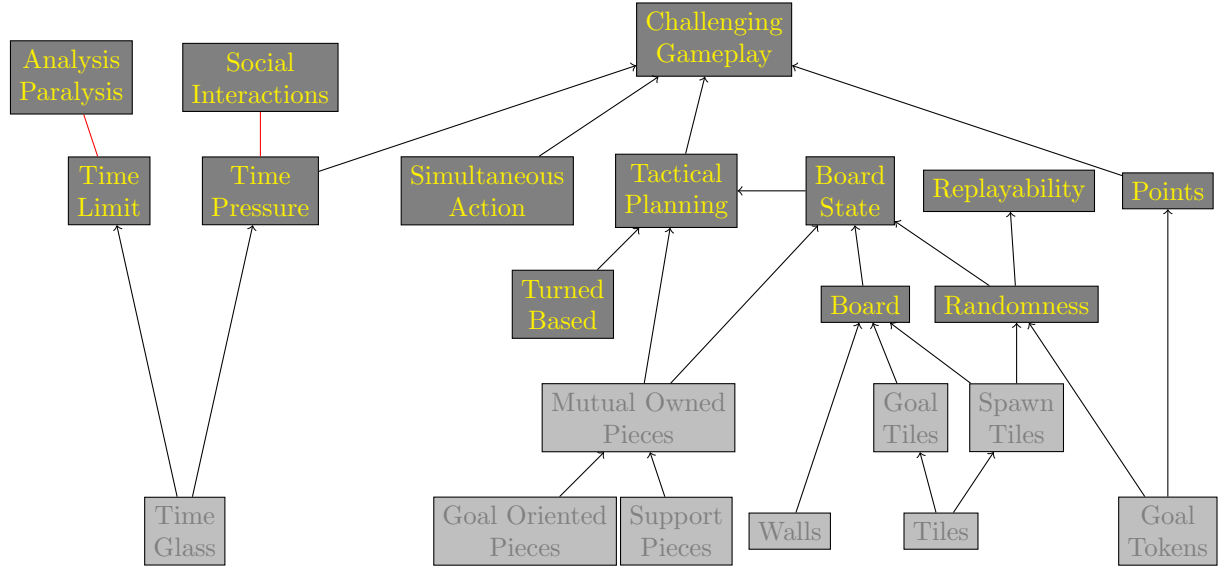


Figure 2: Analysis of Ricocheting Robots using Game Design Pattern. Light gray boxes indicates gameplay mechanics unique to Ricocheting Robots. Dark gray boxes are abstract mechanics found in other games. Edges with arrows indicate that the pattern being pointed to is instantiated by the other pattern connected to the edge. Red edges indicate that a pattern is in conflict with another pattern.

3.3 Similarities and difference between the game using our analysis

As Figures 1 and 2 shows there are a lot of similarities between the games. Even though they are different genres and their basic gameplay do not share any similarities. The main gameplay mechanic is that of the *tactical planning* which is important in both games. In 7 Wonders the player has to plan which card by tactical planning and in Ricocheting robots the tactical planning element is how to move and place the robot pieces to reach the goal tile.

Another similarity is that both games have been able to avoid *Analysis Paralysis* through different mechanics. *Analysis Paralysis* is when a player is presented with a couple of options and takes a long time to reach a decision, which forces other players wait before starting their player session. As our analysis states 7 Wonders have solved this by limiting a player's choices through the *Drafting* mechanic. Ricocheting robots solves this by having a time limit for a player session. Another mechanic that contributes to avoiding delays is that each player's session takes place simultaneously and therefore limits the waiting time that a *Analysis Paralysis* can cause.

Randomness and replayability . In both games randomness is used to give a unique player experience every time. In ricocheting robots due to the random order of goal tokens, the random spawn tiles in the setup phase and the shortest path found by a player, are all variables which makes every game unique. Which increase the replayability of the game. 7 Wonders also rely on making every game instance unique for replayability. Due to the randomness of shuffling cards, the draft mechanics behaves differently every time.

Social interaction is very limited in Ricocheting Robots by our opinion. As the analysis concludes this is due to the time pressure when a player have found a path. Also the competitive nature and the high pace of the game keeps players more engaged in the game then engaged in social interaction. Becker (2011) disagree with our opinion and argues that Ricocheting Robots are an Social interactive game in the sense of there can be infinitely many players playing at the same time. Therefore the game can be played in on social event and players can jump in and out of the game without much impact on the gameplay. We agree with Becker statements, but still thinks that due to the *time pressure* mechanic there is less social interactions during the players game session.

4 Design structures in the games

This section answers the questions stated by the exercise. It focuses on what specific gameplay mechanics are used to achieve a certain goal.

4.1 Keeping players engaged with the game

Due to 7 Wonders drafting mechanics players are playing simultaneously. Which in the group's opinion is one of the key components for keeping players engaged during the game. Furthermore, this usually means that little to no time has to be spent on waiting for other players. Another aspect of 7 Wonders drafting mechanics is that players need to constantly analyse their opponents board state and base their card pick and overall strategy upon that. Since the board state changes for each picked card there is always new information to process, which encourages players to engage more in the game. Huzonfirst (2011) makes an argument about the drafting design of the game. That even if a player makes a lot of decision. Most of these decisions do not matter in the end it is about to find the "perfect card" at the right time more than the previous decisions. Our thoughts about this is even if that is the case this is the nature of the *drafting* mechanics. Also to get in the spot of the getting the perfect card one has to make decisions so that one minimize the possibility that an opponent need the same "perfect card" as oneself. Also the reward of this can get a player more engage. One could argue that this can make the opponents less engaged in the game due to the advantage, but our opinion is that even if a player gets a big advantage the game instances are short enough so that other players would not have time to lose interest.

In Ricocheting Robots everyone is playing simultaneously. In most cases you can not be certain that you have found the optimal solution, therefore a player can always try to find a better solution. This keeps players engaged even

after they have found a solution. The game revolves around intense Competitive gameplay which is caused by trying to actively best your opponents before the time runs out. The way the gameplays out is in itself very engaging. If someone were to dominate their opponents and win every round in a row, there is still a good chance that the other players would not have the time to lose interest due to how short the rounds are. Futurewolfie (2014) argues that this games only engages certain types of players, or rather certain types of brains. That to players who are not good at solving puzzles, or stepping through a solution in their head without moving the pieces, this game will be *Dead on arrival*. We also agrees to this facts, but overall a game cannot satisfy everyone.

4.2 Ending the game in time

7 Wonders have a fixed amount of cards to play during each of the three stages of the game. One card is played each round and each stage consists of six rounds. Therefore, the time it takes to play the game is reliant on how fast players decide upon which cards they want to play.

Ricocheting Robots has a limited number of Goal tokens, which regulate the game time. There is a possibility that the game could end before all tokens are used. A player only needs to collect a set number of tokens, which is based on how many are playing, in order to win the game. There is also an hour-glass which is turned when the first solution is found by a player. This affects gameplay mechanics and adds elements such as stress to the game, but it is also useful when making sure that each round lasts a reasonable amount of time.

4.3 Player interaction and the feeling of playing a game together

In 7 Wonders one can not directly interact with all other players, only ones neighbours(players on the left and right side). One can interact with neighbours by either trade gold for resources or beat them in military power. Since all cards have a resource requirements that must be meet to be able to play it. It is very important to watch the neighbours resource stockpile to see if one could trade with them to pay for a card. The other aspect is military power. At the end of each age of the game, a player's military status is compared to ones neighbours. The one with a higher military status gets a fixed amount of points while the loser of gets a minus point. These points get counted in the *set-down* stage of the game. The number of points is determined by which age the battle is set in. The later the age, the higher the points. Teale (2012) argues that the neighbouring only interaction is a great design due to never attacking a player directly in battle is more friendly for casual gamers Since no one can get too upset when you have no choice about who you attack. Teale also states that this design of limit player has other benefits in form of decreased game instance time. There are a lot of indirect interaction between all players in 7 Wonders, due to the drafting mechanic. Players should always base their picks on what their opponents are picking. For example if someone goes heavy on science cards others need to pick this category or *hate-pick* science cards and use these to build wonders or discarding them for currency.

The Critical Boardgamer (2013) makes a statement about the scalability of players in the game. That even if this game can scale up to seven players, you as a player is mostly affected by your neighbours. Thus it is argued that 2-3 players is the optimal amount to play, because this tightens the gameplay and also contributes to the feeling of being in the same game.

On the other hand BoardGameGeek (2014) suggest that its best with four players. We have tried to play the game with three players and five players. When playing with many player we can agree with The Critical Boardgamer that one feels distant with players that are not neighbours. But in a game of three a player have more information of which cards that are in the draft pool since the some cards will come back twice. Therefore making the card pick easier.

In Ricocheting Robots the players are always trying to beat their own or other players solutions, by figure out another one path to the goal using even fewer moves. Which means that the player interaction is the bread and butter of the game design, since the difficulty of the game is based on cost of the current known best paths, which is always stated by a player.

Overall both games have a lot of indirect interaction between players. Both the drafting mechanics in 7 Wonders and the path finding in Ricocheting Robots are the core gameplay mechanics and they affects the other players indirectly. Based on this our conclusion is that these indirect interaction benefits the games, since it is hard to target a specific player which can make the game unsatisfying.

4.4 Make the player feel as if they are achieving something

7 Wonders gives the player the ability to build a civilisation. The player is indirectly collecting points through construction and advancement in various aspects of their civilisation. When the game ends each player's civilisation will have made significant progress in varying fields depending on the choices of the player.

In Ricocheting Robots a player has achieved something once he has found a path. Even if is not the winning path, a player will still have figured out the puzzle to some extent. The player will be rewarded further if that path is the shortest of those that were found, in which case the player will receive a token.

Overall both games is focused on either building up something or collecting something. Even if a player loses none of the games include a destructive pattern, each round either lets you gain something or remain on the same status as the round before. The gameplay focuses on who can achieve the most without emphasizing that it should be on someone else's behalf. Strictly speaking you are making it harder for your opponents by obtaining tokens or cards, as this limits what is available to them. However, it is done in a way so that no one can end up worse off than when the game started. Your goal is not to eliminate or steal from you opponents, instead it is to collect and attain more than them while competing alongside them.

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