

TDA580 Gameplay Design

Group 26 Assignment 2

1. Descriptions of games and gameplay

mark *mechanics in italic*, **patterns in bold**

No thanks !

No thanks is a card game. The cards are numbered from 3 to 35 and at the beginning of the game, a *drawing stack* is constituted by the deck from which 9 cards will have previously been randomly removed (**Randomness**).

It is a *turn based* game in which each player *collects points*, and whose objective is to have the lowest number of points. In addition to this, each player has chips to get or reject a card.

Each turn a card is drawn from the drawing stack (**Randomness and luck**), then players must make a choice (*decision making*):

- Either they bet one of their tokens into play to avoid getting the card back (*Bidding*).
- Either they get the card and all the chips that have been placed in play on that card (**Gambling**).

Chips are the only way to refuse a card, since players have a limited amount of chips they have to use them wisely ! (**Resource and Risk management**) When a card is collected by a player, its value is added to his total number of points. However, if the player has cards and the values are consecutive, only the lowest value card is considered. It is therefore interesting to collect sets of cards (*Set collection*) with consecutive values, but also be aware of which set the other players are trying to build (**anticipation**).

The game ends when there are no cards left in the drawing stack. The points of each player are thus counted. The number of chips that the players still have in their possession is deducted from each player's total score. The player who have the lowest score wins ! (**competition**)

Catan

Each of player places two small houses on spaces where three terrain hexes meet as starting settlements at start (**Modular board, Fixed Distribution**). Players roll dice twice and get a number N (*Dice Rolling, Randomness, Turn Based, Luck*). Each terrain hex is marked with a die roll number. Each player who owns a settlement adjacent to a terrain hex marked with the number N receives a resource produced by this hex, while the city get 2 resources (*Resource Management, Area Control, Drawing Stacks*).

Hills produce brick, forests produce lumber, mountains produce ore, fields produce grain, and pastures produce wool (**Resources sources**). Player use resources to expand across Catan: build roads and new settlements, or upgrade our existing settlements to cities (*Building*).

Players select the place to put their settlement to acquire more resources (*Strategy*). Player could trade resources with the other players and/or trade with the bank at a rate of 4 to 1. Harbors allow for 3:1 and 2:1 trades (*Trading*).

Each settlement is worth 1 victory point and each city is worth 2 victory points (**Collecting Points**). The first player to reach 10 victory points win the game (**Competition**). The knight card can be drawn from development card stack. You can draw the development card through **crafting**. The first player to play 3 Knight cards may claim the Largest Army. If you build the Longest Road/the Largest Army, you get 2 more points (**Achievements, Multiple Objects**).

2. Mechanics and game patterns

The MDA model: marked with M for mechanics, D for dynamic, A for aesthetics

No thanks!

Mechanics :

- **Cards** : Cards are used as an support for informations used in the game..
- **Drawing stacks**: we have 33 card and when the card stack is empty the game is end.
- **Collecting points** : Through the game, player accumulate points which will determine the winner at the end of the game.
- **Turn based**: Players plays one after another, in a definite order.
- **Bidding(1)** : Players need t pay a chip if they don't want a card.
- **Press your luck(1)** : You're hoping that a card that advantages you will rise.
- **Set Collection(1)** : Players are encouraged to gather set of cards with consecutive numbers.
- **Decision Making** : Each turn the player make decision to get card or pay chip.
- **Strategy** : This game enables the players to elaborate different strategies to win.
- **Switch Mode(6)**: The player needs to constantly switch between two (or more) modes to effectively get points or not (not sure).

Patterns :

- **(M) Luck(2)** : Since the value of next card is randomness, you could get a less value, a sequence value or a super large value base on your luck.
- **(M) Randomness(2)** : The value of next card, the start player, and the 9 card removed at first are random
- **(D) Speculation(2)** : how you make the decision to looking for sequence card, how you get more chips by gambling and your strategy.
- **(M) Visible info/Limited foresight(2)** : Player have access to the current state of the game, but cannot predict exactly with card will be drawn (at most, they can evaluate which cards are likely to be drawn).
- **(D) Gambling(2)** : you wanna get more chips, example: a large value card in your sequence (you have 34, the card next is 35), you gambling that no one want this card

then put chip on it to get it go a round, then you could chips from others when the 35 card is back on your turn.

- **(D) King maker(2)** : almost the same explanation as for alliances
- **(D) Anticipation(2)** : Players' strategy is often based on anticipating which cards they will take, to create sets of cards with consecutive numbers.
- **(M) Resource management(2)** : you're given limited chips at start, you have to manage when it is proper to use chips and get more chips, in order to get less card values
- **(M/D) Risk management(2)** : Players have to deal between their amount of chips and number of points.
- **(D) Alliances(2)** : Sometimes alliances between players rises to prevent someone for winning.
- **(D/A) Competition(2)** : Since the objective of the game is to be the one with the lowest number of points, competition between players arises.
- **(D) Analysis paralysis(2)**: Players take time to think about their strategy and how they will apply it.

Catan:

Mechanics:

- **Dice rolling(1)** : Each turn dice are rolled to determine which tiles will generate resources.
- **Trading(1)** : Players can trade resources with each others and with system in a higher price.
- **Turn based:** Each player plays one after another.
- **Modular board(1)** : At the beginning of each game, the board is "generated" by displaying tiles.
- **Building(1)**: Players aimed at creating routes and settlements to explore the map and generate resources.
- **Collecting points** : Points are collected during the game. the player with the most points wins.
- **Multiple Objectives:** Several objectives can be fulfilled like "having the longest road" or "having the biggest army".
- **Resource Management:** Players have resources at their disposal. They can use them in various ways (trading, crafting).
- **Strategy:** Players elaborate strategies to manage resources and make points.

Patterns:

- **(M) Fixed distribution(2)**: Each player is given fixed number of cards at first
- **(M) Drawing stacks(2)**: Each player has a stack of cards as resources.
- **(D) Analysis paralysis(2)**: Player have to analysis which area is better to put his buildings in order to get more resources.
- **(M/D) Randomness(2)**: The number of dice is random.
- **(M/D) Luck(2)**: Player might get more resources depending on the luck on dice points.
- **(M) Dice(2)**: Players roll dice to get resources.
- **(M) Crafting(2)**: Players could craft their resource card to buildings, also upgrade.
- **(M) Trade:** Player could exchange/trade card with other players or with system in a higher cost.

- **(D) Negotiations/Collaboration actions(2):** Players can negotiate while trading resources.
- **(D) Investment(2):** Players could invest variety of resources to build more, getting goal points.
- **(D) Bidding(2):** Offer trade chance for other players.
- **(D) Area control(2):** Players could get resources from the area number near their settlement, city or road.
- **(M) Turn based(2):** player rolling dice twice by taking turns.
- **(M) Achievements(2):** player build in a certain rule (e.g. build the longest road) to get achievements for some rewards.
- **(M) Resource location(2):** Each resource can be found at a specific location
- **(D) Resource competition(2):** Since resource sources are limited, players are in competition to access these resources.
- **(M) Resource sources(2):** Resources are generated when the number of the corresponding tile is rolled.
- **(D/A) Competition(2):** Players are in competition for resources and, more generally, for points.

3. Design structures

3.1) What **design structures** are used to keep players *engaged with the game*, both regarding interest and regarding actively doing actions ?

- **No thanks!:**

In this game, players feel engaged in the game through different elements.

The first is about **competition** and *collecting point*, players are competing against each other and want to get as many points as possible.

The development of a *strategy* is also very challenging for players. In addition, **anticipation** and **speculation** add a sense of satisfaction when they are well anticipated by the player. **Resource and risk management** are also components that keeps the player continuously engaged in the game, as the player must ensure a balance between the number of points he has and the number of chips he has left.

The last aspect that keeps the player alert is the playful and "addictive" aspect of some aspects of the game. This is reflected in particular by the slight importance of **luck**, but also the **gambling** skills of the player. This aspect is clearly described on the feedback loops (see section 4.3). Also the player is invested in the creation of *set collections*, strengthening its application in the game.

- **Catan:**

In this game, player actively *collecting points* by building settlement and get points through **area control**. Players get interest by the **competition** with other players and feel a sense of fulfilment through **achievement**. Player also could *trade* and do some

resource management, resource competition among all players during the playing, for example, how and where the player arrange and use the tiles and resources.

Players use their *strategy* to accomplish some small goals like shown in the *i* model*: have the biggest army and have the longest way. *Luck* also add some random interest among all players, for instance a player could happenly get the resource he wants so he could build more settlement.

3.2) What design structures are *used to make the games typically end near the stated time* (given players that know the rules) ?

- **No Thanks !**

The duration of a game of No thanks! is generally controlled by the presence of a *drawing stack* and the *turn-based* progression of the game.

The duration of a turn being relatively quantifiable (except in the few cases of **analysis paralysis**), the game ends at the completion of a number of turns corresponding to the number of cards in the *drawing stack*. This progression is easier to see on the Machination graph (see section 4.2), where the stop condition is when the number of cards in the drawing stack is equal to 0.

- **Catan:**

Players only need to collect 10 points (*collecting points*) to become a winner, which restrict the game time to around 20 mins. It's a *turn based* game and each player won't take too long time to play his turn. Some accelerators like *trade* and **achievements** patterns allow players to get more points apart from the original route, shown in *Catan's machination model* (the fx to check if it's the longest road). Player's *strategy* towards *resource management* and **analysis paralysis** help to accelerate the game process.

In addition, some random *luck* dice results and right card resource happenly accomplish one player's requirement, push the player closer to a winner and helps the game end at stated time (but luck also a balance pattern, it would add some activator but it won't change the game status strongly).

3.3) What design structures are *used to make players interact with each other*, or at least have a feeling that they have been playing a game together?

- **No thanks!:**

In No Thanks! players are encouraged to interact with each other. The most obvious component of interaction is the **competition** between the different players, this competition is the foundation of many interactions. This sometimes leads to the creation of **alliances** between players, usually to prevent the lead player from winning (**King Maker**).

Interactions are also made through **gambling**, where different interactions such as **anticipation** and **speculation** are of great importance. These interactions are more in the order of psychological understanding, making them much more subtle than the first interactions mentioned above.

The **competition** between players can be seen in the I* graph, represented as an intermediary between players. In the Machination graph, we can see that players influence each other through betting token, corresponding to the **gambling** aspect stated above.

- **Catan:**

As shown in the left down corner of *Catan's machination model*, players could *trade* with other player to get required resources, for the result, other player may accept or reject the players trading request, which is a funny interaction between players. **Competition** is another aspect to interact with gamers: players hold their **area control** and observe all settlements, looking into the whole situation and trying out to do some **bidding** or **resource competition**; players seems like commanding a real kingdom against each other.

Strategy is another interaction among all players. For instance, when a player want to continue his goal for "the longest way", he need to think and guess where other players gonna put their tiles and plan a best way for his goal, this is an underground **gambling** interaction.

3.4) What design structures exist *to make players feel that they are achieving something* while they are playing?

- **No thanks!:**

In a No Thanks! game, there are many elements that show the player his progress in the game. The first element that stands out is the collection of points, which displays through a score the performance of a player in relation to another. Although the score is an important element, it is also reflected in the **ressources management**. Players feel a sense of accomplishment not only through the comparison of scores between the different players, but also through the chips they collect during the game.

The *set collection* mechanic is important in the sense that it allows the player to be rewarded for the choices, and allows him to feel his progress in the game.

Also, seeing your **strategy** evolve during the game, whether through an **alliance** or by influencing the outcome of the game (**king maker**), has something rewarding for the player who feels that he is doing something through the game actions.

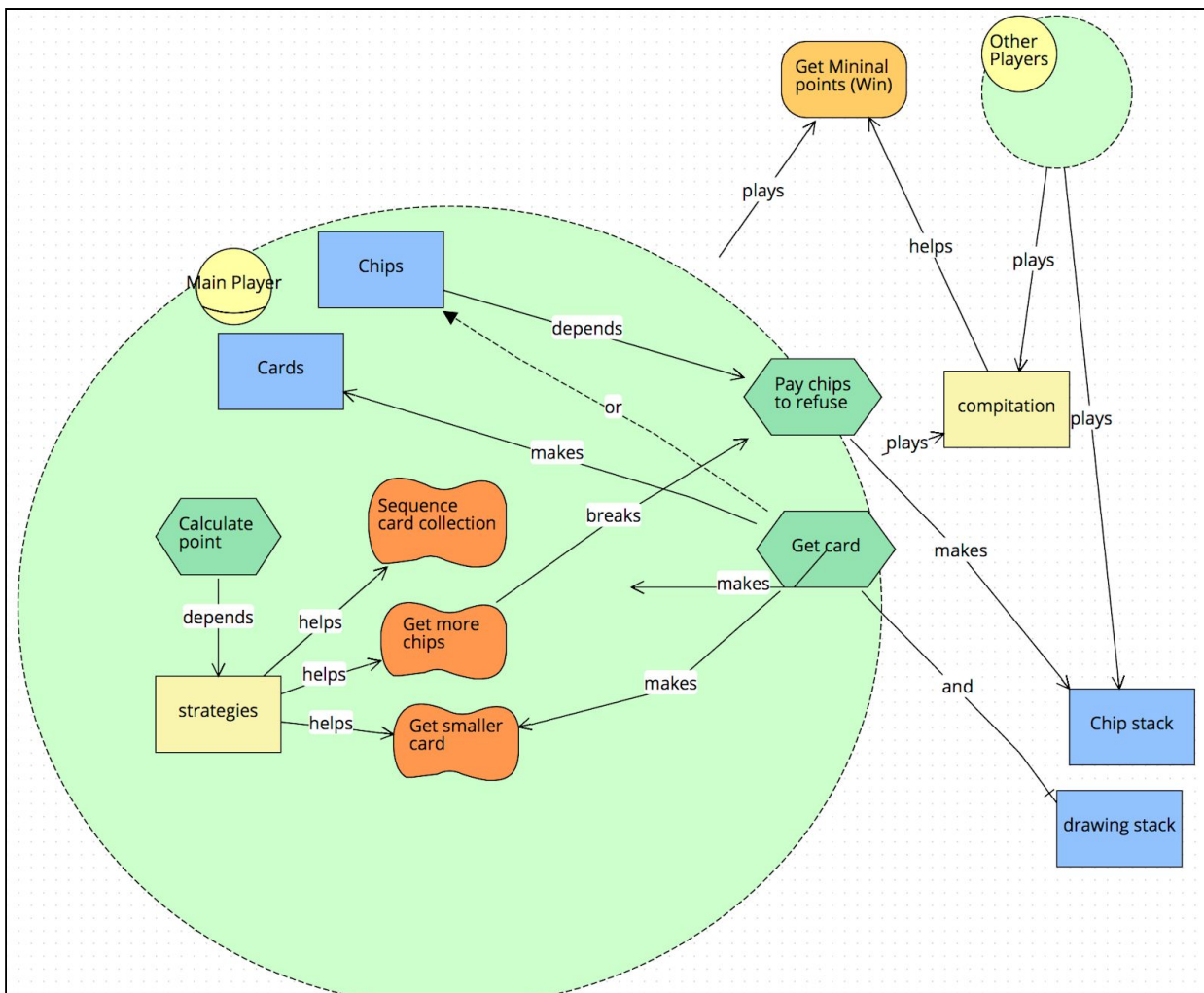
- **Catan:**

The winning state is the player get 10 points, so player feels achieve something when *collecting points* and get closer to the winning state. *Trading* in Catan where player has chance to successfully get the resource he wants also gives the player achieve something (although it may failed), trading is shown in *Catan's i* model*. **Competition** and *strategy* also help player to get more points.

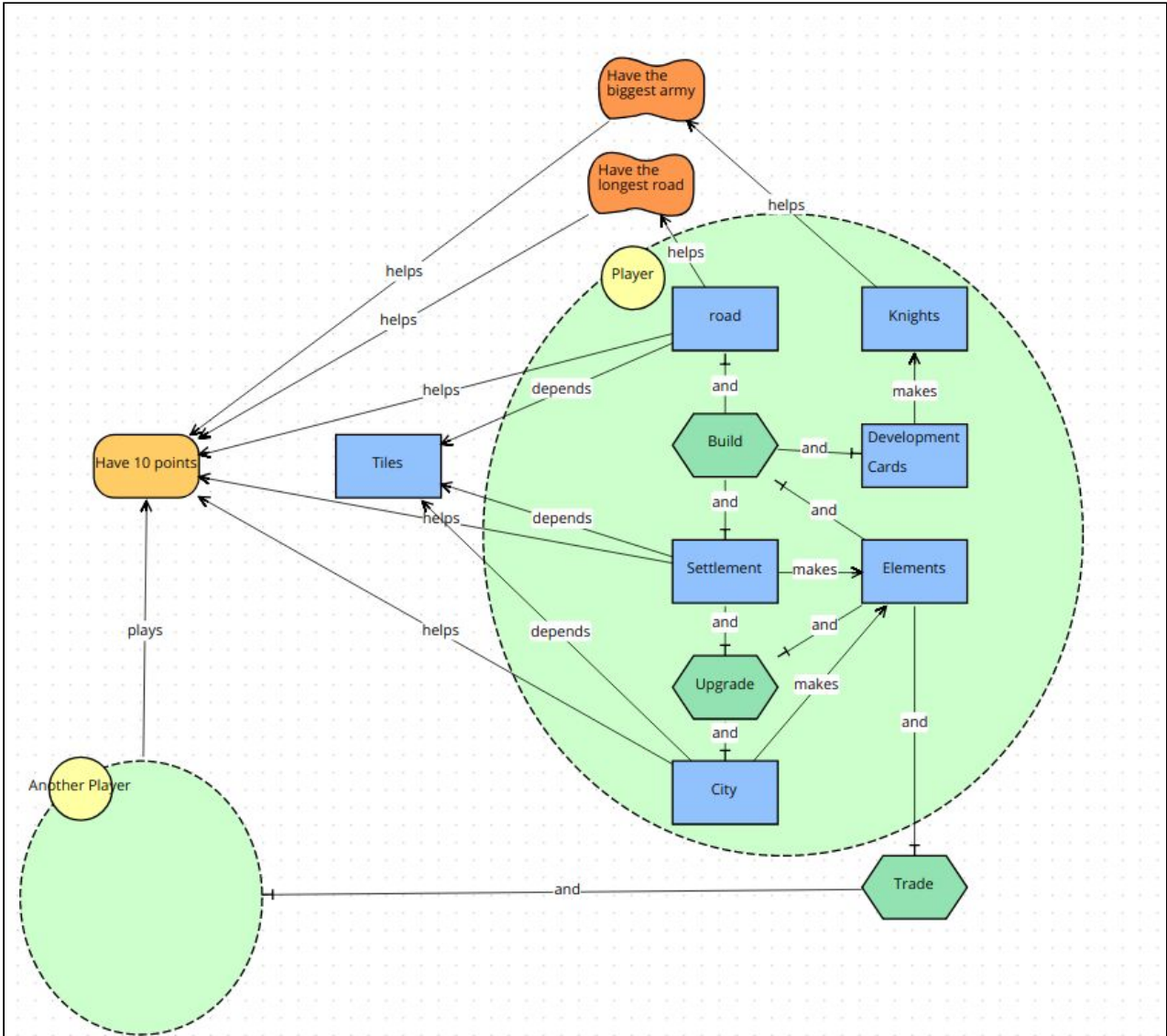
As shown in the right up part of the *Catan's machination model*, player get points through **building**, this gives him some sense of fulfilment. Player could feel achieve owning some settlement and cities by building itself (**resource location**). After he build some settlement, he owns **area control**, this also gives him a sense of achievements. After the half process of the game, some player starts to accomplish **achievements** like: the longest way or the biggest army which returns some extra points towards that player, this also gives the players feeling of achieving something.

4.1 Modelisations in i*:

No Thanks! :

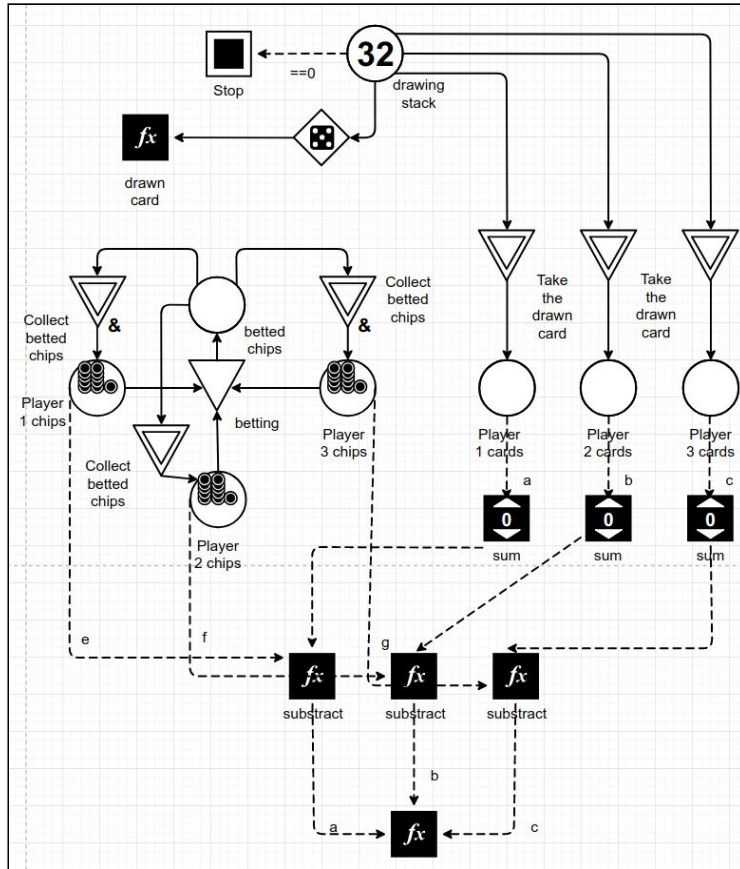


Catan:

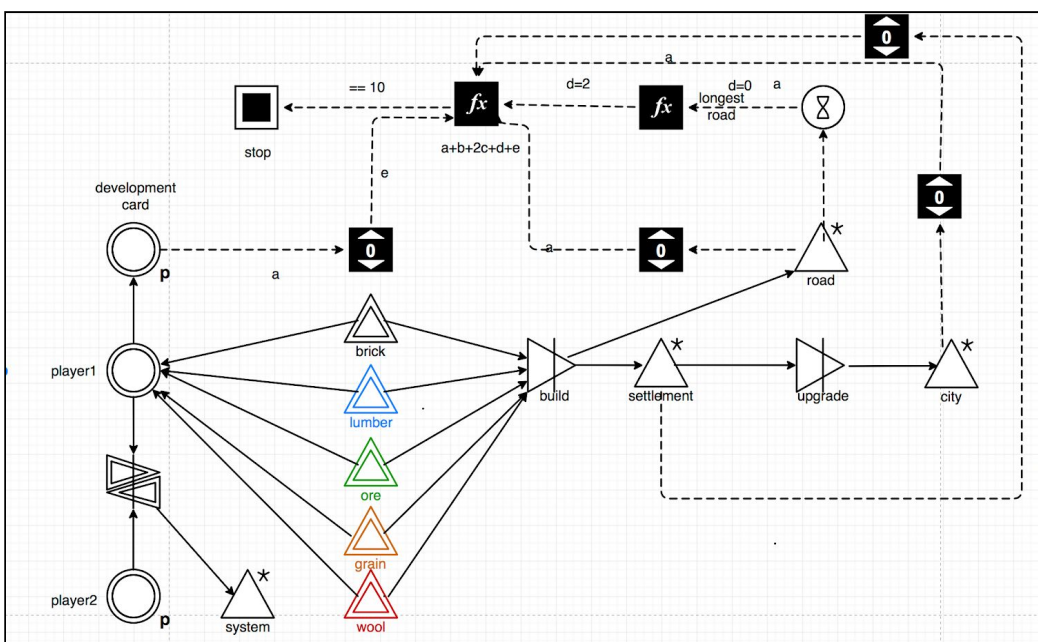


4.2 Modelisations in Machination :

No Thanks! :

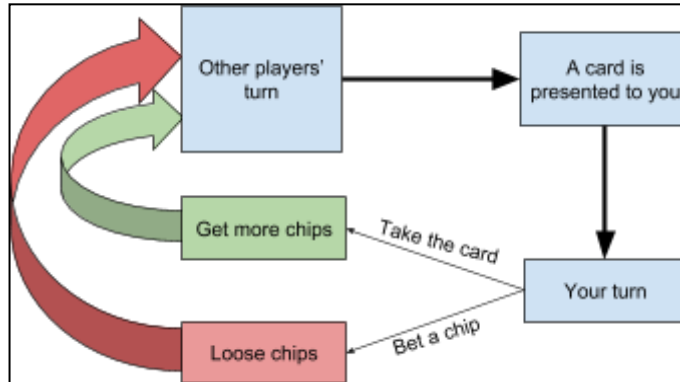


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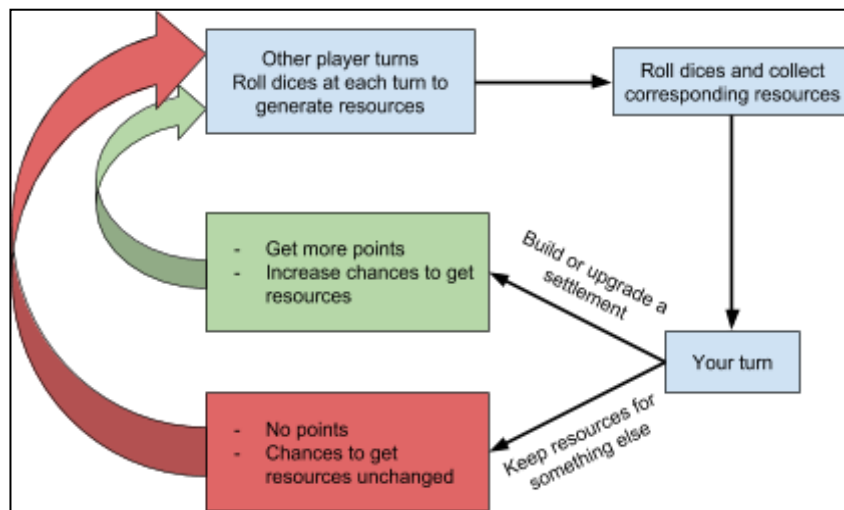


4.3 Feedback loops :

No Thanks! :



Catan :



For Catan, similar feedback loops can be drawn for each type of items the player can craft.

4.4 Tools limitations :

For No Thanks, the i^* diagram focuses mainly on a specific player and does not reflect conflicts between players' strategies. Concerning Machination, two aspects of the game are represented: the betting of chips and their winnings, as well as the pick-up of a card. These two actions are supposed to be linked to each other, but appear independent in our diagram.

For Catan, diagram i^* also focuses on a single player. The various resources have been generalized under the name "elements". Movement actions are not represented, nor are the mechanics linked to the robber. The Machination diagram mainly shows three parts: the building process of the player's resource management, the calculation for game points and the trade between players and system. Similarly to i^* diagram, robber rule and moving mechanics are not represented. Development cards are simplified, and the secondary objective relating to the number of knights is not taken into account.

References:

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3. http://virt10.itu.chalmers.se/index.php/Pattern_Suggestion_List
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