Grau en Disseny i Producció de Videojocs

Creation of an analysis tool for storygames and tabletop RPGs based on RPG theory and collaborative worldbuilding

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To my family, who have always known me better than I do.

and to Meri, may we build many more things together.

Abstract

With the recent diversification of tabletop RPGs and the apparition of games with distinct and original premises, a subset of storygames focused on the construction of alternative worlds has flourished. This project intends to study the basic principles that guide this genre of games, relate them to worldbuilding concepts and theory, and legitimize their validity as games. With these objectives in mind, a recollection of multiple perspectives and examples has been gathered, leading to the analysis of several storygames and the construction of an original storygame, focused on the creation of a world as an artifact of play.

Resumen

Dada la reciente diversificación de los juegos de rol analógicos y la aparición de juegos con premisas distintivas y originales, un subgrupo de juegos narrativos centrados en la creación de mundos alternativos ha prosperado. Este proyecto pretende estudiar los principios básicos que guían este género de juegos, relacionarlos con conceptos y teoría sobre creación de mundos y legitimar su validez como juegos. Con dichos objetivos en mente, una recolección de múltiples perspectivas y ejemplos se ha realizado, que lleva al análisis de varios juegos narrativos y la construcción de un juego narrativo original, centrado en la creación de un mundo como un artefacto de juego.

Resum

Amb la recent diversificació dels jocs de rol anal·lògics i l'aparició de jocs amb premisses distintives i originals, un subgrup de jocs narratius centrats en la creació de mons alternatius ha prosperat. Aquest projecte pretén estudiar els principis bàsics que guien aquest gènere de jocs, relacionar-los amb concepts i teoria sobre creació de mons i legitimitzar la seva validesa com a jocs. Amb aquests objectius en ment, una recol·lecció de múltiples perspectives i exemples s'ha dut a terme, que porta a l'anàlisi de diversos jocs narratius i la construcció d'un joc narratiu original, centrat en la creació d'un mon com a artefacte de joc.

Index

Figure Index

Table Index

Glossary

❖ **CRPG:** Computer Role-Playing Game.

❖ **GM:** Game Master. The player in a role-playing game is mainly responsible for directing the plot, interpreting the world, and reacting to the player's actions. This term is used interchangeably with DM (Dungeon Master), or MC (Master of Ceremonies).

❖ **LARP:** Live-Action Role-Playing.

❖ **MORPG:** Multiplayer Online Role-Playing Game.

❖ **RPG:** Role-Playing Game.

❖ **TTRPG:** Tabletop Role-Playing Game.

1. Introduction

The Indie Tabletop RPG scene has given place to games that are far from falling into the same narratives and challenges the mainstream RPGs like *Dungeons and Dragons* (Mearls, Crawford, 2014) face. These games focus on the possibilities of telling a story together and, as such, have the potential to access stories no other media can.

As part of this genre, several games that focus on the creation of an object, usually a world or setting, have also appeared. These "storygames" make use of concepts from the discipline of worldbuilding to create an artifact of play that will last far beyond the game's duration.

However, as these games focus more and more on these narratives, their simplicity makes them liable to fall out of the definition of game. Several past authors in the past have treated this genre of game as a borderline case. This thesis aims to legitimize this genre as games of their own, while also delving into their particularities and history.

Some other related themes, such as artifacts of play, are also explained in detail to form a complete picture to utilize for analysis of storygames. Accompanied by general theory for TTRPGs and worldbuilding, this thesis aims to create a tool of analysis that unifies the most important concepts that define a RPG as such, and specifically utilize it to find the differences between traditional TTRPGs and indie games.

After extracting the requirements for a storygame to be considered as such, the practical part of this thesis leads to an original proposal for a worldbuilding storygame, that focuses on the creation of a fictional world as an artifact of play.

2. Objectives

This project focuses on a deep analysis of the Indie Tabletop RPG genre, intending to gather previous research and define whether or not this kind of storytelling device can be considered a game and to which extent it is different from traditional role-playing games. Therefore the main working hypothesis is the following:

- ❖ What distinguishes storygames as role-playing games and games in their own right?

This project will attempt to defend their legitimacy as games through an analysis of the genre, the creation of artifacts through play, and the theory of collaborative worldbuilding that provides the foundation these games are built upon.

Therefore, the main objective of this thesis is to:

- ❖ Create an analysis tool that establishes the particularities of the storygame genre.

With this objective in mind, the following secondary objectives are defined:

A. Determine the academic legitimacy of role-playing games as games.

B. Gather and analyze research on TTRPG theories.

C. Analyze the storygame genre and gameplay based on artifacts.

D. Synthesize prior studies on holistic worldbuilding and collaborative worldbuilding.

E. Create an original storygame based on collaborative worldbuilding methodologies.

3. Prior Research

The referents chosen for the project handle some recent views on the objects and themes analyzed throughout the entire thesis. The first section handles current research on role-playing games theory, storygames and other forms of collaborative storytelling. The research is centered on their design, nature, and purpose in the current landscape of game design and play.

The second section covers artifacts of play, and how they are being utilized, mainly by storygames, as a way to create an enduring object that encapsulates the playing experience.

After that, there's material on the field of collaborative worldbuilding, which handles methodologic considerations and current concepts of worth. Discussions on worldbuilding definitions are handled in the theoretical framework.

3.1. Collaborative RPGs

One of the strongest pieces on the evolution of TTRPGs towards a more collaborative style of play appears in the first volume of the magazine Push (2006). In it, Emily Care Boss presents an article that discusses the evolution of the typical disparity in functions between players and game masters. The overlap in these functions is better expressed through the five elements of roleplaying, previously discussed by Ron Edwards in his article "GNS and Other Matters" (2001). Each of the five elements and their contained functions for player and GM can be observed in table number 1.

Element	Player	GM
Color	Descriptions of Player Characters	Description of the world, events, characters, objects, etc. Sets the tone of the game
Setting	History and Relationships of Player Characters	Election and description of the world
Character	Description of appearance, words, and actions of Player Characters	Description of appearance, words, and actions of Non-Player Characters
Situation	Actions of Player Characters	Creation of situation and events
System	Only the parts applicable to the Player Character	Application and arbitration of the rules and mechanics

Table 1: Traditional functions assigned to players and GM's (Boss, 2006). Source: Author's creation from source.

This model, however, is just one of many, as Boss expresses. Her article is devoted to analyzing the role of each of these five elements and games that subvert the traditional assignment of functions. Some games elevate all players to the level of power that GMs have, establishing them effectively as "co-GMs" or erasing the need for a GM.

In the article, Boss argues that Color as an element of roleplaying is present in many parts of RPGs in combination with other elements, but it is hard to find an element that exhibits only Color. Therefore, the articles focus on the other four categories.

Setting is argued to be the easiest element to develop collaboratively, as creating the fictional world where the game takes place allows players to cultivate a sense of involvement prior even to the beginning of play. This approach has the possibility of generating an incohesive and disparate world, so Boss focuses on examples that deal with this issue.

In *Primetime Adventures* (Wilson, 2004), players share total control over the creation of the initial setting with the GM (or "Producer"). This works particularly well for this game, as it represents a television series, a concept argued to be highly accessible to players, which makes expressing clear ideas easier and facilitates reaching a consensus on what is included in the setting or not. Additionally, players get to establish locations related to their characters, and, when scenes take place in said locations, the player responsible gets control of the description and the sequence, a method very reminiscent of the television format the game is attempting to emulate.

In other games like *My Life With Master* (Czege, 2003) the players create the main villain and, by extension, their environment, which plays a major role in the setting of the game as a whole. *Universalis* (Mazza, Holmes, 2002), a storygame that features a potent collaborative approach, has players create Tenets, which are assumptions about the game, as well as establish locations and objects as usable components.

Alternatively, some games have the GM role change periodically. Games like *Ars Magica* (Tweet, Rein-Hagen, 1987) offer players the chance to divide the world and distribute creative authority over its multiple regions between the players.

With Characters, players already have a great amount of control over their PCs, so the natural solution proposed by Boss is to allow control of multiple characters. Since this can raise issues of equal participation and confrontation, the examples presented an attempt to deal with this problem. In this instance, solutions for this issue, as Boss comments, tend to be individual to each group, as games that include guidelines to interpret multiple characters are rare, with *Ars Magica* as a notable outlier. In *Ars Magica* each player controls two or three characters on different societal levels. This has a twofold function: it allows players to have different characters to play depending on the situation and distributes the influence each has equally.

In *Universalis,* characters are created as components and managed by a resource called Coin. Spending coins on developing characters through traits makes them harder to eliminate, but control of a character is not limited to a single player. With this in mind, a player can create and control multiple characters, which can be also managed by other players.

A different approach features *Primetime Adventure*'s screen presence mechanic, which has players assign importance to their characters in the context of the adventure they are playing, with each character taking the spotlight in different moments. This communal agreement has the players direct only their character, but understand their function and reach a consensus on their participation.

In Scene, the GM usually has total control. The sequence of events, how scenes begin and end, pacing, etc. are all elements left to the game master. In *Soap* (Bazelmans, 2003) the initiating player has the right to establish how a scene begins, which characters are involved, and the environment where it takes place. The highly dramatic focus of the game and the capability to ban characters from a scene creates

tension and adversity, in which players can take advantage of their resources and bid to overrule certain aspects of the established scene.

Bidding resources is a mechanic also utilized in *Universalis*, where players use it to create and narrate components in the scene. In general, this collaborative perspective runs into the glaring problem of creating adversity, a role traditionally covered by the GM, so rules in these games put a strong emphasis on creating adversity by establishing competition in statements or other elements.

Finally, when dealing with System, the article focuses on clarifying that, while many observe rules to be an obstacle in the way of creativity and collaboration, the system is the main factor in establishing whether a game encourages collaboration or not. The previously discussed *Universalis* has a flexible system of component creation which extends to conditions and complications players have to deal with when playing. This works particularly well since all actions are managed by the universal coin resource.

Universalis also separates its rules for conflict resolution into Complications (a player affects a component they do not control), Challenges (which solve disputes between multiple players), and Fines (where a player attempts to censor another and all players vote). The three options are managed by negotiation and coins.

Other games like *The Pool* (West, 2017), have players take narrative control of what their successes look like, a function normally given to the GM. *Shadows* (Arntson,2002) has players propose two opposite outcomes for their action, creating their adversity after rolling dice.

All of these are just examples of the rising tendency defended by Boss (2006) on the introduction and use of collaborative elements in TTRPGs.

3.2. Storygames

This genre of games is currently largely composed of Indie tabletop RPGs. Their main focus is on the narrative experience of the players, rather than the overcoming of tactical challenges (Hymes, 2021). This implies that these games avoid the victory and defeat conditions linked to these challenges, meaning that failure can be just as satisfying and important as success. The objective is best defined by the phrase "play to find out", which encapsulates the exploratory and open-ended nature of the games.

Hymes points out that, although they are designated as role-playing games, Indie RPGs don't require players to embody a character, which has led to some using the alternative term "storygames". Storygames may contain no characters, or have multiple players control a single character.

Mechanics in a storygame should drive the narrative experience, by putting the focus on fiction. In _Apocalypse World_ (Baker, 2010), the MC is encouraged to prepare sessions in a very superficial way, to have them create the story collaboratively with the players on the table. In the example, a character is trying to observe a complicated situation. In a more traditional RPG, the GM might have an answer ready with various degrees of specificity depending on the player's die outcome. In _Apocalypse World_, however, the player gets to ask questions depending on their outcome and has the MC create answers depending on the die's outcome.

Storygames are useful for studies on narrative design due to a handful of factors. The first one is the idea that they need to communicate their design choices to facilitate players running the game. This leads the books to be very honest about their intentions and design. Authors are usually commonly involved in design discussions, which encourages interaction with their work. The third argument concerns their ability to be iterated quickly, given their length and simplicity.

When analyzing the history of storygames and their role in narratology, Caïra (2014) explains that the genre originated with the game *Once Upon A Time* (Lambert et al., 1994), which saw the players construct a story by playing cards that depicted places, characters, situations, etc. It can be observed that, while this game does successfully create a story by itself, it does not concern itself with the world the story takes place in nor the artifacts that result from play. It also differs from other more modern games in the sense that one player wins the game by getting rid of all of their story cards and playing their "Happily Ever After" card. Caïra later points out Robbin's *Microscope* and the fact that, as a storygame, it does not state who wins or loses the game. Caïra also concludes that the study of storygames has been sparse due to a lack of visibility, which has led to their confusion with more popular TTRPGs or their avoidance altogether. A second motive stems from the fact that storygames are not narratives by themselves, but Caïra is quick to defend their validity as devices to create narratives.

In her presentation, Hymes (2021) speaks about the role of the GM, as a current topic of discussion in storygames. Traditionally, a GM would have ultimate authority over the game. They were responsible for creating play, worldbuilding, and the vast majority of functions connected to the game experience. GMs were also charged with the role of antagonism and generation of conflict. This divide has led to the creation of material that is specific to the game master.

On the opposite side, Indie RPGs have contested this classical approach of the role by distributing the functions of the game master among others. *Fiasco* (Morningstar, 2009) spreads the role of the GM to everyone on the table, with players taking turns deciding if situations go well or poorly. This either indicates the absence of a GM (which creates the concept GM-less), or that everybody is a GM (which creates the concept GM-ful), with the implication that both of these terms mean similar things. While Fiasco mechanically splits authority, games like *A Thousand and One Nights* (Baker, 2012) have players improvise stories in the style of the eponymous tales. The construction of these fictions has the player often invite others into their recollection

to aid them in handling certain parts of the story, having the narrative authority distributed as the fiction requires.

Another way in which Indie RPGs have sought to separate the GM's duties is to have chunks of them given to the players. *Downfall* (Hobbs, 2015) talks about the fall of a culture created during the game. The game does this by giving the player various roles that represent different elements of the culture and facilitating the creation of tension between them. The Hero tries to save the world, the Fallen antagonizes the hero, and the Pillar tries to maintain the status quo. These roles rotate, which allows each player to embody all of the roles through the course of the game.

Archipelago (Holster, 2015) distributes roles between players, but their nature is distinctly different. For instance, if the players follow a boat as it sails through the ocean, one of them may be in charge of the weather, while others handle the ship, encounters, and any other elements. When there's uncertainty surrounding the element, the player responsible for it has the authority to decide.

The focus of Hymes' discussion lies in how to lend authority to the players in the video games based on indie RPGs. She does this by discussing her view on the concept of the fruitful void and analyzing more storygames. *My Life With Master* (Czege, 2003) has the player as minions of a master or mistress. While the themes of the game touch on defiance and rebelliousness, these are not supported by the mechanics of the game, which focus on servitude and obedience. *Breaking the Ice* (Boss, 2005) is a storygame for two people who go on three dates, in the hopes of finding love. Even though the game mechanizes this experience, the author herself presents this idea as nonsensical.

Other studies of storygames focus on the use of storygames for different purposes. Kleinen and Kurz (2021) modified the storygame *For The Queen* (Roberts, 2019) to be used in a workshop on sustainability and science-fiction speculation. The

objective was for the students to develop a science-fiction story in groups by answering a series of predetermined questions and focusing on the role of sustainability. Through playtest sessions and a survey, the authors composed a list of recommendations for others interested in implementing similar methods in their academic curriculums.

Their most vital conclusion is that the students struggled to adapt the concept of sustainability to their studies. This leads Kleinen and Kurz to propose that this kind of approach might be best suited for project-based learning, with the option to include additional fields of expertise, which could lead students from different disciplines to collaborate in the formation of a more complete object. Kleinen and Kurz consider that the use of a storygame allows students to tackle problems creatively and playfully, which in the case of sustainability, helps them develop solutions in a new paradigm, without the hindrance of preexisting notions and policies.

This use has also been attempted in different initiatives, such as the *Rolling Stories* project (Turner, 2018), which tried to utilize TTRPG objects and systems to create shared experiences and meaning through the diegetic experiences of participants. This project aimed to combine STEM practitioners with students of the Queensland University in Brisbane, Australia, and other universities. Together, the participants would work in multiple activities which would generate shared meaning and make STEM resources and knowledge far more accessible to the general public.

In general, the use of RPGs, and more specifically storygames, in connection with education and learning has been widely studied by multiple sources. The volume *Playing With Teaching* (Garcia et al, 2020) includes several chapters in its first part (Johnson, DeBoeser, 2020; Witte, Bindewald, 2020) that explore this topic. Notably, the latter includes an interview with Thorny Games, focused on the use of their storygame *Sign* (Hymes, Seyalioğlu, 2019)*.

The thesis will focus on both approaches, but with the intent of producing a prototype that is not related to any particular educational purpose, the main use of prior research is to look into the characteristics of storygames previously analyzed and particularities that could be of use when creating the prototype.

3.3. Artifacts of Play

Hymes (2020) discussed the ways players keep things from play experiences through various channels. The most common option is the use of documentation of play, which typically encompasses audiovisual resources such as photographs and recordings of play sessions. By documenting play, "we're acknowledging that play is meaningful and that playful experiences are something that deserves to be kept and revisited" (3:44). Documentation of play also allows for the creation of objects which help reminisce past play experiences, as a person could do for any other memory.

It is through Hymes's research on artifacts of play, which presents them as being distinct from documents of play, that their definition and purpose are explained. In her work, she focuses on the analysis of several example games that employ them, and the subsequent utility they present.

While most documentation of play is excluded from the definition of an artifact of play, a game can produce an artifact that accomplishes the same purpose. These objects are more "playful" and true to the experience of the game than an object like a photo. *A Fake Artist Goes To New York* (Sasaki, 2012) is a hidden role game where players draw a single picture on a pad of paper, with one of the players being a "fake artist" who has to avoid being uncovered. The artifact is the shared drawing pad, which contains all previous drawings, with their respective prompts, and documents the progression of the game with each stroke.

Figure 1. Drawing sheets from a game of *A Fake Artist Goes To New York* (Sasaki, 2012). Source: Author's creation from Hymes (2020, 7:10).

Artifacts of play create a connection between reality and game based on immersion. Since the artifact is an object created from the context of the game's fiction but is also usually represented by a tangible object which outlasts the game's duration, it facilitates the connection between reality and fiction. The solo role-playing game *Thousand Year Old Vampire* (Hutchings, 2018) has the player interpret the role of an ancient vampire and reflect on their thoughts and life experiences through the creation of a personal journal based on the rulebook, which spans over several centuries. This journal exists in the physical space, which creates a closer relationship with the game itself, allowing the player to go back into "vampire mode" every time they interact with it (10:32). It is the making of the artifact that provides a more impactful experience.

The third distinction provided by artifacts is the ability to personalize the playing experience for each group. The choices made by the players are absorbed by the object, which implies that the final product will be a reflection of said choices. In this case, *Risk Legacy*'s (Daviau & Dupuis, 2011) campaign contains a win condition that allows players to name a portion of the map and write it on the game board. Along with other choices made through the game which affect it permanently due to the

legacy nature of the game, the board becomes an artifact that condensates the experience of the overall campaign.

The rules for a game that creates artifacts of play direct who has control. How the artifact of play is built can set the stage for how players have to interact with one another. The collaborative map from *The Quiet Year* (Alder, 2013) narrates the story of a community in the year before the end of times, from a fundamentally collaborative standpoint. Each turn, an active player unveils a card that contains a question that expands the artifact. The player then performs an action that reflects on the map. The map, as a recollection of past choices, forces the player to acknowledge the preexisting information and build on it.

Figure 2. Map and Resource sheet from a game of *The Quiet Year* (Alder, 2013).
Source: Author's creation from Hymes (2020, 13:08).

Design based on artifacts of play requires the creator to let go of control and distribute it to the players. The game has to be constructed in a way where it allows players to have creative control (Hymes, 2020).

In their research, Stricklin and Nitsche (2020) proposed a worldbuilding game based on the challenges of materiality: material experience, material culture, and material

agency. The resulting game, *Primal Clay,* has players construct a world from a set of prompts through the use of a cement material called Hydrostone.

Building on the ideas of Acharya and Wardrip-Fruin (2019) and their requisites for worldbuilding games, the authors of *Primal Clay* argue that the interest of the game lies in the way the material touches on the requisite of moderation by establishing agency based on its properties. This ties the three concepts of materiality into the role of moderation and allows the clay to be considered an active participant and player in the game. This further expands options in terms of the distribution of control when using artifacts of play, having the artifact itself be a player and, as such, make decisions that affect the experience. In future research, Stricklin and Nitsche ask for further study on the role of other materials in collaborative game practices.

From an economic standpoint, artifacts of play can be employed as marketing tools. Hymes argues that an object constructed in a playful environment is often intriguing and attention-grabbing (2020, 14:42). *Tee K.O* (2016), from the Jackbox Games collection, is a digital party game where players combine puns and silly drawings into t-shirt designs, which compete with each other in popularity contests. At the end of the game, it offers the option to keep any of the designs by buying a physical shirt. By wearing this shirt, it is implied that other people will develop an interest in the artifact, and awareness of the game will expand naturally.

Artifacts of play can also create a sense of intimacy, due to the experience of bonding inherent to co-creation. In Hymes' own table-top roleplaying game *Dialect* (Hymes & Seyalioğlu, 2017), players tell the story of an isolated community by building their language. The subsequent artifact is the created language itself. Although its nature is intangible, it has the quality of permanence, as players can continue to use the invented words after the game has finished. The game intends to connect the players both to the story and each other, by collecting the emotional impact of co-creation in words. The secretive and exclusive nature of the language can elevate the sense of intimacy between players.
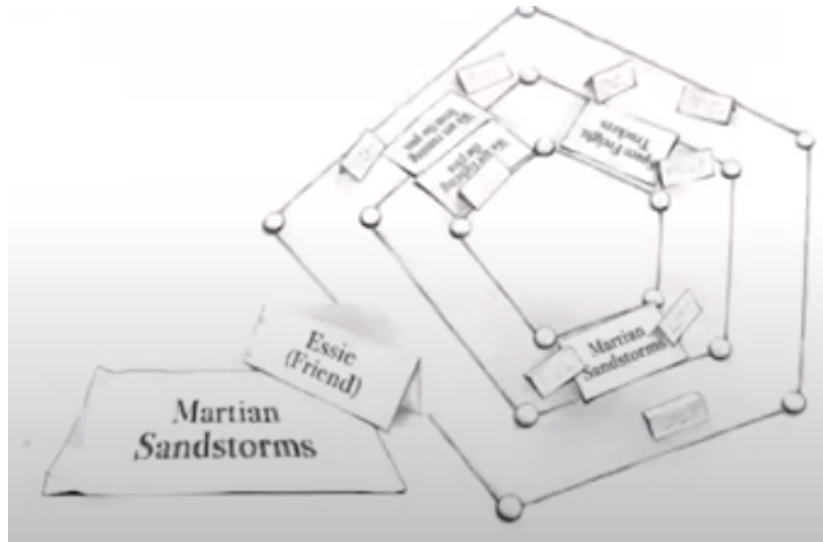
Figure 3. Artifact of play from a game of *Dialect* (Hymes & Seyalioğlu, 2017). Source: Author's creation from Hymes (2020, 16:13).

When designing games that make use of artifacts of play, Hymes (2020, 18:47) proposes a handful of advice to facilitate their inclusion.

The most important quality of an artifact of play should be its immersion potential. Hymes discusses Huizinga's (1955) magic circle and argues that artifacts of play are made within the magic circle and emphasize the meaning created. The designer needs to focus on where they want to include the connection between the game world and the real world.

The second point asks the designer to identify where the most interesting parts of the game are, to root the artifact of play in it. The artifact needs to amplify the core aspects of the game and its fun.

Due to their permanent quality, artifacts are to be kept by players after play has ended. Therefore, a designer needs to consider what players would like to keep. An artifact should be interesting to look at, evocative, playful, etc. But also has an

element of practicality. Creators should also think about what they want players to keep from the game, as it needs to be a proper representation of the nature of the game as a whole.

This research into the nature of artifacts of play is geared towards identifying the characteristics of this component of storygames, and focus on defining better what the product of a play session of the final game should look like.

3.4. Collaborative Worldbuilding

According to Hergenrader (2018), collaborative worldbuilding implies that more than one person works on a project with a set audience and in a recognizable genre of speculative fiction. Each participant in the process is referred to as a writer, collaborator, or contributor. This definition is not contested, as discussion on collaborative worldbuilding tends to focus on the purpose of the process and its methodology.

The objective of the collaborative worldbuilding process is assumed to be to create a coherent and consistent world, with each piece fitting in the context of the world's rules and being compatible with other pieces. A collaborative approach to worldbuilding begins by establishing an audience for the project.

Hergenrader's method for collaborative worldbuilding happens in two distinct stages, each subdivided into several steps. The first step consists of building a foundation by choosing several aspects that define the world, including Hergenrader's taxonomy (see *Hergenrader's Structures*). After a consensus has been reached, a catalog of various entries can be created for the writers to acquire a solid understanding of their world.

Tomin's study (2020) intended to specifically attack Hergenrader's notion of consensus through the use of democratic practices focused on negotiation and challenging each other's views. The individual experiences of each student allowed for particular views on reality and the construction of new worlds. Furthermore, any detail was subject to change, with the vision of the future shifting with the narrative. This meant that different students, with individual interests, had to discuss the impact they had on their peer's work and had to look for a way for their perspectives to fit into the whole.

In the method used by Skullgate Media (Gagliardi et al, 2021) it is also apparent that the focus is not on finding a consensus about some core aspects of the world and building from them, but rather on including developed input from every author and increasing the consistency of the ensemble. As with Tomin's study, authors often found themselves evolving their work through the addition of new elements in the world they co-created.

When setting up a project based on collaborative worldbuilding, the first step is to select the contributors that will participate in the exercise. Hergenrader (2018, p.121) states that, while a project can handle a theoretically infinite amount of contributors, having a smaller group of four to six people allows the writers to provide multiple perspectives while staying focused on a tight set of ideas. However, Hergenrader does provide additional options in terms of team structure, like opening the final parts of the process to others or subdividing a much larger group into smaller teams with given assignments.

In Skullgate Media's case (Gagliardi et al, 2021), the methodology begins with the election of a genre and the formation of a group of about two dozen writers. Over a week, the writers create a new original world for the stories in the anthology to take

place in. These stories might take the form of short stories, recipes, songs, etc. The anthology is complemented by other non-written media, such as maps made by graphic artists or soundtracks made by a music producer.

The number of contributors can be increased with experience, although this presents new challenges to face, mainly difficulty in reaching a consensus. By its collaborative nature, the worldbuilding process touches on a wide range of topics, including sensitive ones prone to cause disagreements. Hergenrader (2018, p.7) emphasizes the ideas of listening and learning, as well as the ability to come to terms with the fact that contributors won't always agree with all decisions made.

Gagliardi (2021, 11:12) describes their process as being dissimilar to other collaborative endeavors, in that while usually in other projects there's a fundamental need to come up with a unified idea together through brainstorming, Skullgate media establishes a clear turn structure for everybody to create something different, which leads to providing access to the authors to ideas and resources that they might have never explored by themselves, and creates a world that could have never been made by anyone single person. Van Dyke (2021, 16:44) condenses this argument by separating the concept of shared vision present in most group projects with the idea of "everyone brings their vision and you smash it together until something cool happens".

Given that this lack of a consensus is the main piece of the process, the authors still need methods to agree with each other and create a sense of coherence and aesthetic pleasure. Reimer (2021, 19:42), a music producer, speaks about a transmedia project developed by his company called Cthulhu Dreamt. He indicates that, while he might provide suggestions regarding the work of other branches of the project, he allows his contributors to make their creative decisions. Therefore, the success of the project lies in choosing the person whose vision will align better with

the overall direction. Van Dyke (2021, 23:20) compares the process to that of improv theater, where someone proposes a lead and other people build on that concept through a consecution of "yes, and" statements. This doesn't work when people fight over the nature of the lead and its direction. This means that some basic rules need to be set for contributors to not disperse from the central concept, and the contributors need to ensure that all of them are on the same page. These constraints are what make creative decisions richer.

In terms of the essential elements that a collaborative worldbuilding process requires, Hergenrader (2018) talks about three fundamental pieces of software: online document sharing, wiki, and online mapping software, with the wikis being the most relevant. Sutter (2021) supports this idea by speaking about his own experience at Paizo, where they had a fan-run wiki on their games *Pathfinder* (Buhlman, 2009) and *Starfinder* (Sutter, 2017) that included all of the canon content. This easily allowed Paizo's workers to go over all of the prior lore to make sure that continuity and consistency were being properly kept. The fan's works became so vital that some of them were eventually hired into the company.

In this case, it is apparent that prior research into this topic has focused on methodologies and the best practices when conducting collaborative worldbuilding projects. Although useful for prolonged works, these are made with the finality of using the fictional world for a narrative, and do not discuss the process in the context of a game. Therefore, the concepts will be utilized when applicable, but are more representative of current lines of thought regarding the topic of collaborative worldbuilding.

4. Theoretical Framework

This section of the project tackles several topics to provide a comprehensive solution to the proposed objectives. The first section begins with an analysis of the definitions of games and role-playing games, as well as academic views on the legitimacy of the latter as the former. The aim is to define the main requirements that a game should possess to be considered as such.

In the second section, this thesis explains multiple frameworks and concepts pertaining to TTRPG theory, to establish a basic level of knowledge for all of these games before diving into the studied genre of Indie Tabletop RPGs in the third section, with a brief historical analysis of the genre, accompanied by an overview of prior study of their specific characteristics and purpose.

After that, there's a minor fourth section on artifacts and gameplay based on artifacts, since most storygames produce an artifact as a result of play. In this instance, studies concern the implications of artifact creation and good practices when performing it.

Finally, a collection of basic concepts and taxonomies on worldbuilding are explained. These allow for a deeper analysis of the reach and focus of the studied games.

4.1. Definitions of Game

When considering definitions of games, it is important to state that games are notoriously difficult to define.

Juul (2003) offers a synthesis of seven previous game definitions, which lead to his classic game model. He exposes the problems found in the definitions and proposes a new solution, based on six features. Games (1) are based on rules, (2) have

quantifiable, variable outcomes, (3) said outcomes are assigned positive and negative values, (4) players need to invest the effort to influence the outcome, (5) players are attached to the outcome of a game, and (6) the rules of the game can be played with or without real consequences.

1,2 and 4 describe the game as a formal system. 3 establishes the goals of the game. 4 and 5 describe the relationship between the game and the players, and 6 describes the connection between the game and the world. Juul defines that a game should have most, if not all, of these characteristics, and that objects that don't might enter in borderline cases or fall out of the definition entirely. In this sense, Juul declares pen & paper role-playing games to be a borderline case on the basis that the presence of a human GM allows for rules to be changed and altered at will.

Salen and Zimmerman (2004) attempt the same task in a similar manner, by first defining "play" and its relation to "game". They determine that game is a subset of play, distinguished by their formalized set of rules. On the other hand, they state that play is part of the experience of what constitutes a game and, as such, becomes one of its components. The authors also touch on previous definitions by describing them and pointing out their strengths, with the objective of forming a common list of shared characteristics. This allows them to present their definition: "A game is a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome." The book goes on to define several limit cases, such as that of role-playing games. In this instance, both tabletop and computer RPGs are taken into consideration.

In the instance of TTRPGs, their nature as a game is disputed by a lack of a quantifiable outcome, given that they don't present a clear endpoint to the game, and if they do, it is not quantifiable. Salen and Zimmerman do conclude that not categorizing RPGs as games seem out of the question, and as such, offer the option

to consider the personal goals of the players, englobed in the overarching structure of the game, to be the desired quantifiable outcomes.

Zagal and Deterding base their paper *Definitions of Role-Playing* (2018) on contesting these views and looking for a definition that covers the diverse nature of RPGs and legitimizes them as games. Their method consists of challenging the very concept of definition, to find a proper way to define concepts in games. Definitions always abstract a concept, which leads to providing relevance to certain concepts while belittling others. The authors argue that the point of view of the person that provides a definition greatly influences their descriptions. In this sense, they defend that authors like Juul and Salen-Zimmerman handle the definition of RPGs as "systems", which implies a view deeply reflective of the fields of design, systems theory, and formal literary studies (p.9).

This difficulty to create an interdisciplinary definition of RPGs led Zagal and Deterding to propose a solution based on what they term pluralist dialogue, meaning that the definition doesn't lie on what RPGs are, but in "What useful questions can be phrased, what helpful things are observable if we see role-playing games as <disciplinary perspective X>?" (p.11). This definition puts the focus on the *as*, with each perspective defining the stance taken when discussing RPGs.

This implies that the definition is incomplete, but the authors do provide some notes, based on the different aspects of a definition identified previously. Ontologically, RPGs are created by humans and, as such, are social entities and not natural ones.

Zagal and Deterding's work also establishes the differences between what they denominate the RPG forms into four, distinguishable categories: TTRPG, LARP, CRPG, and MMORPG.

This classification, however, fails to include certain categories previously observed by other authors, namely Hitchens and Drachen (2009), who in their paper analyze previous definitions of roleplay as an activity, as well as attempts at defining role-playing games as a whole. The resulting analysis derives into an expanded taxonomy of role-playing forms, that includes the ones discussed by Zagal and Deterding, but adds new ones, to a total of seven, understanding that some forms might appear ingrained within others. The discussed forms are the following:

❖ **Pen-and-paper/Table-top:** Originated in the 1970s, TTRPGs usually have a small group of players sit together in a room, with all players but one interpreting a character through which they interact with the game world, and the remaining participant taking the role of game master. This form's main characteristics typically include verbal descriptions, and the use of written materials such as rules and character sheets, with the latter being the one that provides the name pen-and-paper to the form, as players write their characters' attributes on the sheets.

❖ **Systemless**: Initially born in the Australian role-playing scene, this form is a sub-variant closely related to pen-and-paper play, with the presence of multiple game masters being more common. Characters have only qualitative features, as opposed to the mix of qualitative and quantitative exhibited by table-top forms. The focus is shifted from description into action, as players interpret their characters' speech and actions directly, and the game master arbitrates the result of actions. The authors remark that prior discourse has struggled to categorize systemless as a table-top or live-action RPG, but that its main distinguishing feature is its ability to retain the characteristics of an RPG while abandoning quantitative elements.

❖ **Live-Action Role-Playing / LARP:** LARP features a much larger number of players than the two previous forms, with the focus remaining on players' enactment of character actions, but with the optional presence of rules that condition player interaction. As the quantity of players is considerable, LARP also makes use of a comparably large amount of game masters, with some players even forfeiting total interpretative freedom to perform pre-planned actions to assist the flow of the game. This form tends to make use of modified physical spaces to create approximate representations of the fictional world, which allows for players' interactions with said world to be much more varied and detailed.

❖ **Single Player Digital/ CRPG:** Partly originated from direct digital adaptations of pen-and-paper rulesets and setting, single-player digital rely greatly on quantitative representations of characters, with development manifesting mainly through the improvement of their quantitative attributes in a similar fashion to TTRPGs. The most apparent difference with analog forms is the presence of a single player, with the role and functions of the game master conducted by the software. This implies a more strict enforcement of rules since a human game master can improvise on their decisions and the application of the rules. However, the open nature of role-playing games typically leads to CRPGs presenting more open systems and freedom of choice than other digital game genres.

❖ **Massively Multiplayer Online / MMORPG:** Presenting a much larger number of simultaneous participants, MMORPGs allow for the presence of much more complex patterns of play, derived from the social interactions between players. The explorable world is usually also more expansive, although the interactions the player has with it tend to be similar for the most part to those presented in CRPGs. This is complemented by the communication with other players, which allows for more unique experiences, as players have the option to even develop multiple, distinct characters.

❖ **Freeform:** Often seen as a variant of the LARP form, this form puts a stronger emphasis on character interaction in controlled environments, with the player count situated between the one employed by TTRPGs and the larger amounts presented by LARP. Rather than focusing on the rules for action resolution, freeform makes heavy use of inter-player communication and negotiation.

❖ **Pervasive:** Pervasive forms typically refer to computer games that expand beyond the digital constraints, which can define pervasive forms as an extension of LARP, with the main difference being that pervasive does not have strong boundaries on how the real world represents the game world, as anything in the real world can have an impact on play.

Given that these forms appear to present distinct games, Hitchens and Drachen (p.12) also provide certain characteristics common to all of the forms:

❖ The existence of characters through which players interact with the world and develop. This development leads the world, in turn, to react and change accordingly.

❖ The existence of game masters that present and control the game world beyond the player characters. These GMs make decisions and determine outcomes through the use of rules.

❖ The existence of a fictional game world, utilized in a consistent and distinctive manner based on the boundless nature of analog forms and the expansive worlds present in digital forms. This freedom of exploration is often accompanied by equally notable freedom of choice for how the players want to interact with the world.

❖ The existence of micro-interactions with the game world, differentiated by the macro-interactions explained in the previous feature, on the basis that the scope of the interactions can be any that the players wish to utilize. These

interactions tend to be generalist, being able to take many forms, but not delving into great detail on any of them. This also normally means that players don't need to provide constant input for the game to function, contrary to other digital game genres.

❖ The existence of notable narrative influences and the presence of story-like elements. Making sense of play typically requires players to be familiar with the narrative of the game world. These elements are introduced as a consequence of the individuality of player characters and the emergence of narratives through play.

This culminates in the definition of role-playing games, based on the following requirements:

1. **Game World:** An RPG is set in an imaginary world, with a large potential for exploration and freedom for players to choose how they interact with it.

2. **Participants:** An RPG has players who interpret characters, and game masters who control the game world beyond those characters.

3. **Characters:** There are player-controlled characters that present a combination of quantitative and qualitative elements that can be developed, with this development being partially under players' control and the game being able to react to the character's changes.

4. **Game Master:** At least one, but not all, participants take on the role of the game master, with the responsibility to adjudicate the rules of the game.

5. **Interaction:** Players have a wide array of options to interact through their characters with the game world, which are typically expressed abstractly.

6. **Narrative:** RPGs present sequences of events, which construct a narrative within the game world.

While serviceable, this definition fails to take into account the blurring of boundaries in one or more of these features, such as the disappearance of the game master on the denominated "GM-less" games. As observed by Hitchens and Drachen, the

distinction between analog and digital forms is tackled superficially, with the understanding that their differences are clear concerning the features.

Alongside the possible absence of a GM, Arjoranta (2011) criticizes this definition stating that it fails to take into account games where the structure of power grants players better narrative control, which would interfere with the requirement of player participants being unable to control the world beyond their characters.

Arjoranta instead proposes a definition of role-playing games based on Wittgenstein's approach (1999, as cited by Arjoranta 2011). Wittgenstein attempted to define games through "language games". This concept defines objects by the attributes they share and to other objects. This is exemplified by stating that multiple forms of role-playing games can make use of language attributed to similar concepts which would not apply well to other RPG forms. For instance, LARP can make use of theater analogies, since it makes use of an interpretative style very reminiscent of that of theater, while CRPGs might be better understood through computer game vocabulary. Arjoranta's discussion does not aim to provide an infallible definition of what a "role-playing game" is, but rather to present multiple alternatives. In that regard, it also includes a revision of Hitchens and Drachens (2009) elements:

1. **Game World:** An RPG is set in a world, which is at least partially defined by the act of role-playing. This world exists in a magic circle of play and is at least partially separate from the players' ordinary life.

2. **Participants:** There is more than one participant, with the inclusion of computers.

3. **Shared Narrative Power:** Multiple players can alter the narrative, with the implication that a single player holding all narrative power is understood as storytelling.

4. **Interaction:** The players can interact with the world in multiple ways, defined by the scope of their actions and their modes of interaction.

Shared narrative power replaces the figure of the Game Master, as it provides more flexibility in defining the structure of power. Characters are taken out of the definition, as they are inherent to all narrative forms and, therefore, not an essential part of what distinguishes role-playing games from other narrative objects. Lastly, Narrative has been removed, as its existence is implied by the Shared narrative power.

While managing to cover some of the problems of Hitchens and Drachen, Arjoranta's definition fails to include all role-playing games as such. TTRPGs which are meant to be played as a one-player experience, such as *The One Thousand Year Old Vampire* (Hutchings, 2018), are excluded by the second and third element, although it is unclear whether or not Arjoranta includes the manual itself as an arbitrator, in a similar fashion to the understanding of a computer as a player in digital forms.

An altogether different taxonomy was constructed by Greenberg and Folger (1988, as cited by Rugelj et al, 2018), which defines role-playing games in five different dimensions:

1. **Level of Involvement:** Defined by an ordinal variable, entails how the relevant parts of the game resemble real action. A low level of involvement implies that the players are asked to "pretend" to be in a certain situation, while higher involvement comes from a more simulationist environment.

2. **Role played:** Greenberg, alongside Eskew (1993, as cited by Rugelj et al, 2018) further divides this into two subcategories. Person refers to the description of the player character, while familiarity reflects how similar this character is to the real player. Most RPGs have players create characters with low levels of familiarity.

3. **Degree of response specificity:** How can the players respond to the events of the game and how much freedom they are allowed to use, as opposed to a restricted and concise manner.

4. **Competitiveness:** How does the game encourage both competition and collaboration through its rules.

5. **Goals:** Specifically related to the serious games field, these can fall into one of three categories: improve interpersonal skills, improve specific skills, or gain knowledge of a topic.

4.2. TTRPG Theory

This section of the thesis is devoted to the most prominent methodologies and frameworks resulting from both academic and amateur communities, in relation to analog role-playing games, their categorization, and common phenomena in their composition and in play.

4.2.1. Frameworks of Study

4.2.1.1. Forge Theory

The Forge was an RPG forum dedicated to the study of role-playing games, as well as independent design and discussion on related topics. A collection of articles from this webpage provide many of the theoretical terms that form the current discussion on RPGs. Some of the most notable are revised and summarized by Boss (2008), in an article regarding "Forge Theory".

Forge Theory is based on several principles that create a nested connection between several concepts, referred to as *The Big Model* (see figure below)*.*
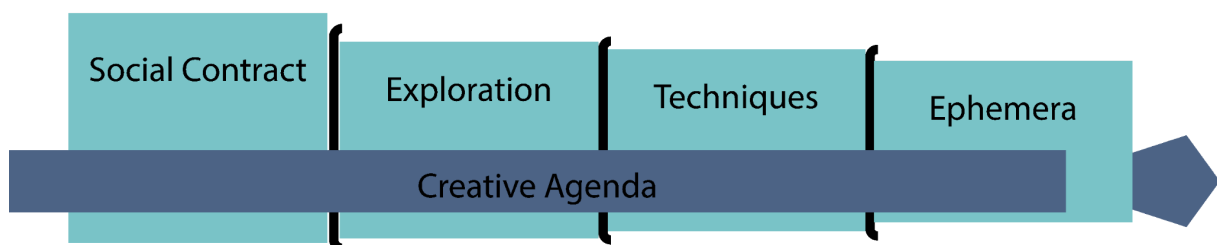
Figure 4. Big Model representation. Source: Author's creation from Boss, 2008.

Each nested concept is an expression of the one that contains it and represents a key assumption of Forge Theory as a whole.

Social contracts are built on the first assumption, initially presented by Lehman (2005, as cited by Boss 2008), which implies that RPGs are social activities by nature and that they are led by a *Game Contract* or *Social Contract* of play. Given that any single interaction in the RPG activity requires role-playing, and role-playing is a "human activity", these games are social activities by nature.

Through the social contract, players can reach an agreement on the kind of activity they would like to conduct. This creation of a shared fiction was touched on by Edwards (2001) in the article "GNS and Other Matters of Role-playing Theory" and given the name Exploration. Exploration entails all activities performed when playing an RPG, as far as they contribute to the creation of the shared fictional space.

In chapter 1: Exploration, Edwards defines the following elements through which a person can role-play:

- ❖ **Character**: A fictional person or entity.

- ❖ **System**: How the in-game actions happen.

- ❖ **Setting**: The environment in which the character exists.

- ❖ **Situation**: A situation the character encounters.

- ❖ **Color**: Additional details that provide atmosphere to the scene.

Character and Setting are further developed in Chapter 4 on roleplaying design. Character is composed of three distinct elements:

- ❖ **Effectiveness:** Numerical values that determine the success or extent of the character's actions.

- ❖ **Resources:** Exhaustible pools utilized by Effectiveness and Metagames mechanics.

- ❖ **Metagame:** Statements tied to characters and mechanics that allow the player to override existing Effectiveness rules.

Currency defines the relationship between these three elements. The name is tied to the fact that their "quantities" may transition from one to the others, and that the use of any of them during play might have an impact on the use of the others.

Correlated to the reach of a system, it can be categorized by an extensive amount of categories, one being Event Resolution. Event Resolution defines how the game mechanizes how a character action occurs. These are separated into three categories:

- ❖ **Drama:** Resolution based on statements and qualitative values.

- ❖ **Karma:** Resolution based on non-random quantitative values.

- ❖ **Fortune:** Resolution based on random, typically quantitative values.

The use of these resolution systems is not exclusive, meaning that any given RPG can use two or more of them.

The definition of System would later be expanded by Edwards (2004, as cited by Boss, 2008) through the use of the "Lumpley Principle", which states that "System (including but not limited to 'the rules') is defined as how the group agrees to the imagined events during play. This adds to the implicit and unwritten agreements made by the players, as well as the more traditional rules.

Taking System and Character together, their elements of resolution can be separated into Switches (discrete values that are set in place) and Dials (continuous values that can range from low to high on a scale).

Genre is excluded from the aforementioned five elements by Edwards (Chapter 1), as he defines it to be an amalgamation of assumptions about the proposed elements.

Derived from Exploration, Boss (2008) reaches the Creative Agendas, which instead of defining the composition of a game, define player intent and their interests when creating the Social Contract of play.

Connected to the five elements of roleplaying presented before, Edwards (2001) constructs an initial premise. This premise needs to be further refined through the application of more characteristics. The GNS model allows one to decide which approach to play better defines a game. There are three exposed approaches:

- ❖ **Gamism:** These games focus on the competition between the participants, with win and loss conditions, based on play strategies.

❖ **Narrativism:** These games focus on the creation of a story through roleplay, with the players acting as co-authors.

❖ **Simulationism:** These games focus on elements of roleplaying and heightening the exploration of premises.

For any given instance of play, these modes are exclusive in application. With this new information in mind, premises can be adapted to encourage the use of one of the three perspectives. Gamist premises focus on metagame goals, Narrativist premises focus on the exploration of themes, and Simulationist premises vary greatly depending on the explored elements, which necessarily overpower all others.

Forge Theory then builds on Techniques (Boss, 2008, p.238), or the methods through which play is enacted. Techniques are commonly referred to as the rules and include most elements previously observed by the System in the Lumpley Principle (see above). When categorized, Techniques fall in various points of multiple spectrums. Generalized Techniques are common to every RPG (for instance, speaking in character to express a character's action). Opposed, Specific Techniques are particular to many given games.

Techniques can also be mechanical or guidelines. Mechanical Techniques enforce some steps that trigger when a certain condition is met. Guideline Techniques are looser and work on a case-by-case basis.

Despite being able to cover a wide range of functions in the Rules, The main purpose of a Technique is to allow a player to establish Credibility. Credibility (Edwards 2004, as cited by Boss, 2008) is defined as the degree to which a statement is integrated into the imaginary events of play. It is more complicated for players to reach a

consensus on what happens if a rule does not contribute to making any given statement credible or not.

A shared understanding of the fictional world through the use of Techniques helps create fiction with greater cohesiveness. By creating a Credible environment and facilitating creative collaboration, rules allow for players' Permission and Expectations of a game (Baker 2005, as cited by Boss, 2008). Permissions are those things that the rules allow to do, agree with, or facilitate; while Expectations refer to the elements that are implied to focus a player's creative efforts.

Lastly, in Forge Theory, Techniques supersede Ephemera (Boss, 2008, p.243). Ephemera defines the action of role-playing itself. By applying a collection of Techniques and navigating the social contract, the Ephemera form the Exploration.

As the GNS covers Creative Agendas, it can also be considered in each decision the player makes. In these instances, the Ephemera employs several Stances. Stances are the methods through which a player decides the actions their imaginary character performs. In Chapter 3, Edwards (2001) identifies four stances:

- ❖ **Actor:** The player limits their character's actions to their knowledge and perception.

- ❖ **Author:** The player drives their character's actions by their motivation, and retroactively changes the character's motivations to fit. If they don't do so, it is known as a **Pawn** Stance.

- ❖ **Director:** The player determines aspects of the environment that affects their character outside of the character's knowledge or abilities.

Even if GNS and Stance don't always correlate perfectly, Gamists typically keep their options open by utilizing Author or Pawn, Narrativists make use of Author and Director to inform the narrative, and Simulationists utilize Actor stance by default, with the option to go into the other ones.

All of these concepts form one of the more complete bases of RPG study and analysis as a whole.

4.2.1.2. The Three-Way Model

In a similar fashion to the aforementioned GNS system, the Three-Way model attempts to categorize the aspects of role-playing logically. It mainly defines how a game is played and what is given the most value, amongst other things. This separation is represented by three distinct styles that provide the name for the model. These are as follows:

- ❖ **Dramatist:** Values how actions create good storytelling, with a particular focus on the resulting story.

- ❖ **Gamist:** Values constructing or solving a problem or a challenge.

- ❖ **Immersionist:** Values experiencing similar things to the interpreted role and constructing believable play.

As explained by Bøckman (2003), these goals are not necessarily exclusive, but they do help players and GMs evaluate their preferred aspects of RPGs. It creates a reference to explore players' motivations and their resulting playstyles.

4.2.1.3. The Wunderkammer-Gesamtkunstwerk Model

The Wunderkammer-Gesamtkunstwerk model (from here, the Wu-Ge model) was created by Lars Konzack (2015) as a response to the GNS and Three-Way Model. Arguing that these two focus exclusively on the player's approach to a role-playing game, Konzack proposes a model of his creation destined to analyze and design RPGs.

The words which form the name of the model refer to two different aspects attributed to TTPRGS. Wunderkammer (or Chamber of Wonders) describes the ability of role-playing games to add features into their setting and genre and contextualize them within their mood and feel. Konzack explains that other media, such as film or literature, also possess this quality, but in TTRPGs these objects form part of the general setting and are not necessarily tied to any plotline.

The second half, represented by the word Gesamtkunstwerk (or all-embracing art form), stipulates that, although a role-playing system might be composed of multiple, distinct parts; these parts work as a whole to create a complete experience. This requirement for a combination of multiple parts positions the Wu-Ge model as opposed to Edward's GNS model.

The Wu-Ge model is composed of the four following elements:

❖ **Performance** is the manifestation of drama shown during play, mainly through the interpretation of a character. Due to the interactive nature of TTRPGs, performance in this medium does not assume a separate audience and, therefore, requires a greater degree of introspection. Konzack adds that performance could be argued to include elements of narrative and play, but it ultimately refers to the presentation and exhibition of the players.

❖ **Narrative** includes the narrative structure as studied by narratology. Narratives in RPGs are particular because of their open-ended and interactive qualities. Input from all of the players creates a dynamic story, led mainly by the GM as narrator.

❖ **Ludus** is the total of game features of TTRPGs as a whole and their application in any given game of the genre. Konzack explains that games are studied from several different ludological angles (such as game mechanics or game classification), but the focus of the Ludus is how rules define the ways a game session is expected to function and, as such, are an integral part of the RPG.

❖ **Sub-Creation** describes the fictional, secondary world of the TTRPG, differing from the simulationist definition of the term imposed by the GNS model. The world encapsulates not only a simulation but a representation of the game as a whole.

These elements are connected by the Wu-Ge model in two distinct spectrums, which join elements in pairs according to certain similarities (see figure below). The two spectrums are Action-Contemplation and Concrete-Abstract.
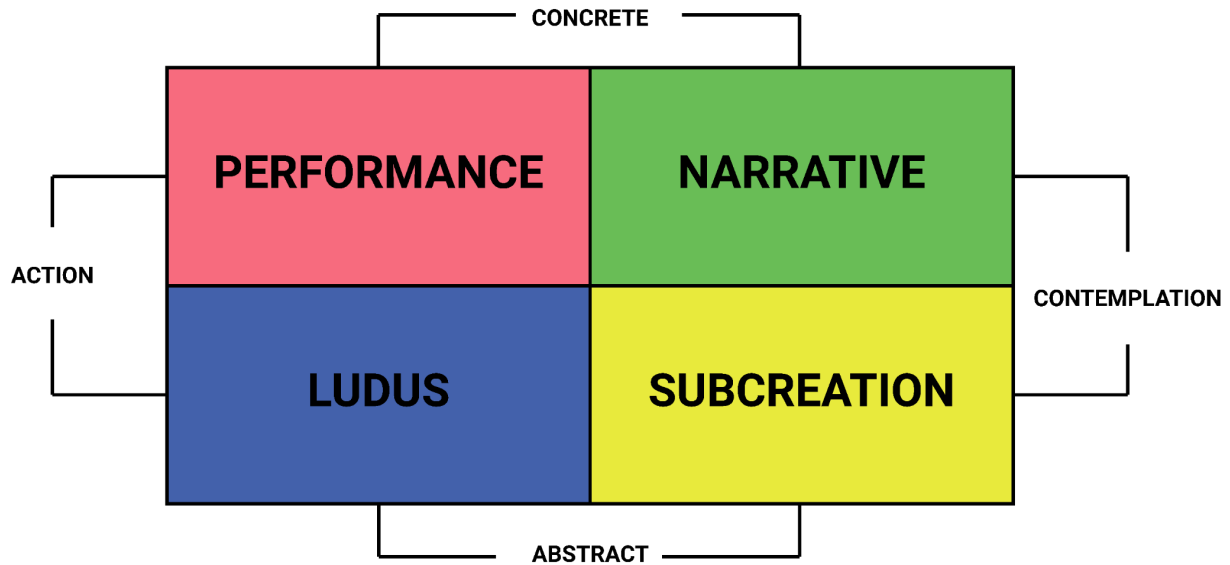
Figure 5. Wu-Ge model representation. Source: Author's Creation from Konzack, 2015.

❖ **Action** features the elements of Performance and Ludus. Performance is manifested through the dramatic interactions of the players, while Ludus comes into play when applying rules to determine the result of the dramatic actions. The rules put unpredictability in the player's actions and therefore, create unexpected consequences that the player will need to confront. The intention of the model regarding action is to look for and create a synthesis of character creation and character performance.

❖ **Contemplation** features the elements of Narrative and Sub-Creation. In opposition to action sequences, contemplation defines the moments that provide perspective to the player through understanding a series of events or relating them to the game world as a whole. Konzack, based on J.R.R Tolkien's theory, suggests that the objective is not to create suspension of disbelief but to create an innerly consistent world. Both elements work together to achieve this by having the narrative bring the game world out of the purely abstract.

❖ **Concrete** features the elements of Performance and Narrative. This refers to the performance of the player in the context of the story. The Concrete side of narrative encompasses the story components that players experience, and their experiences are derived from their interactions with said story components. While for short-duration games, the concrete level can cover all the needs of the playgroup, it requires the abstract to evolve from being an act of role-playing to being a role-playing game.

❖ **Abstract** features the elements of Ludus and Sub-Creation. The Ludus, represented by the game rules, provides methods and information to understand and interact with the fictional world, which creates a tight connection between the two elements. Proper rules respect the inner consistency of the world and express its genre and setting through simulation. The abstract elements provide a framework upon which the Concrete elements are introduced into a scenario.

The Wu-Ge model can be utilized with an analytical approach or a design approach. In terms of analysis, the Wu-Ge model provides a "framework for analytical strategies", meaning that it dissects RPGs to facilitate determining from which viewpoint a game should be analyzed. However, it is important to have an understanding of how the four elements create a whole.

In this case, there is a clear distinction between the analysis of game sessions, where the most relevant analysis concerns the Action and Concrete elements (Performance and how it relates to Ludus and Narrative), and written materials, which focus on Contemplation and Abstract elements (Sub-Creation and its connections to Narrative and Ludus).

The model can be applied to analyze any given element of the role-playing game, based on its impact on the four elements connected to the Wunderkammer of the game. it is important to note that many objects might possess real and fictional representations and that both need to be taken into account.

On the other hand, the Wu-Ge model can be used to design games. Konzack defends the existence of multiple approaches but argues that for an RPG to express an idea, the creator needs to communicate their vision through Sub-Creation, which requires that the rules support the presented fiction. Instances of the author's vision will create the Narratives present in the games.

The fictional world is represented as a space of ideas, "a space in which mental events can be said to occur" (Vylenz, 2008, as cited by Konzack, 2015). By populating this space with intelligent beings that hold different views, the consequences of their cooperation and confrontation can be studied within the inner reality of the Sub-Creation. Once the world takes shape, rules that support its consistency are added. These rules are in constant interaction with the world, and both undergo an iterative process through which the Sub-Creation is properly expressed through the Ludus while promoting its narratives. Any added rules, through their internal meaning, provide meaning to the structure of the game as a whole. This endogenous meaning (Costikyan, 2002 as cited by Konzack, 2015) is central to the construction of the author's vision.

Any fictional objects included in the Sub-Creation need to fit with its genre and setting. Said objects should also generate possible narratives and possess game rules effective in play sessions. The system, however, needs to be open-ended so as to encourage the transformation of fictional objects through the Wunderkammer concept into coherent pieces of the whole.

The elements of Performance are added when testing the game, and the resultant feedback will allow the author to iterate on all of the elements to achieve the Gesamtkunstwerk where they work as a whole.

The Wu-Ge model as a whole intertwines with the study of storygames by its ability to synthesize the multiple components of the RPG, which Reed (2017) refers to as "resolution".

4.2.2. Frames of Storytelling

In an attempt to create tools that supported design for games focused on storytelling, Begstrom (2011) performed a series of interviews with players and performed observations during play sessions in TTRPGs to determine what levels of communication players used and the differences between them.

From his findings, Bergström observed that communication during play happened at seven different levels:

- **Diegetic dialogue:** The player interprets the character directly and speaks with their exact words.

- **Diegetic pose:** The player describes what the character does, usually in a third-person perspective.

- **Diegetic description:** The player provides a description of an element in the fictional world.

- **Non-diegetic system-related:** The player speaks about an element of the system, usually in relation to their actions or their character's actions.

- **Non-diegetic story-related:** The player comments on the story of the game. This is usually done after play, as an analysis.

- **Non-diegetic activity-related:** The player speaks about the act of play itself.

- **Non-diegetic non-activity-related:** The player speaks about an element external to play.

These seven frames also function as a synthesis of the frameworks created by prior authors. As Bergström comments on these features, he explains that in his investigation he found additional characteristics which could not be classified as frames, but as additional features that expanded their functions. These were separated into three main groups:

- ❖ **Limited and open disclosure:** When players wish to perform an action that they want to keep secret from other players and not only their characters, GMs need a separate channel of communication. Any method that achieves this purpose is an act of limited disclosure. Limited disclosure often imposes restrictions on the message, with Bergström arguing that this leads to a loss of information. Secret information is a highly variable factor across games, and an important factor to take into account when designing them.

- ❖ **Synchronous and asynchronous modes:** It's not uncommon for players to communicate about a game and prepare material between play sessions. Although simple, this distinction helps understand the context in which the transmission of information occurs.

- ❖ **Restricted diegetic control:** In the typical asymmetric distribution of control that TTRPGs use, players often have to check with the figure of authority if an element is suitable for the diegesis. To this end, information has to be complete to avoid misunderstandings, and players need to be able to agree on what is true or not.

4.2.3. Additional Concepts

4.2.3.1. The Czege Principle

Storygame design often makes use of a prevalent principle, stated by Czege and dubbed "the Czege principle":

"When one person is the author of both the character's adversity and its resolution, play is not fun."

This statement forces games to ensure that authority is properly distributed so that no player is stuck in a loop answering their questions.

4.2.3.2. The Fruitful Void

The Fruitful Void, as defined by Hymes (2021, 20:48), defines the parts of the game that are a part of the narrative experience but are not contemplated by the mechanics. Although these central themes are not directly mechanized, the game systems are constructed in a way that guides players' thoughts and actions towards them (Guzdial et al., 2020). Originating from community discussion boards in the 1990s and further developed in the 2000s (Baker, 2005), this concept has been ingrained in the language of storygames as a whole.

4.3. Collaborative Storytelling Games

The term Storygame goes as far back as 1985 (Buckles, as cited by Reed, 2017), but it is better defined by Reed himself as a playable system that contains units of narrative where "the understanding of both, and the relationship between them, is required for a satisfying traversal"(2017, p.18).

Collaborative storygames build on this concept by adding two additional requirements (p.290): the content of the story has to be built partially or totally during play by the participants, and its creation is based on systems designed to produce a compelling story. The basic need for multiple players is added but considered to be implicit in the use of the term collaborative.

Related to the second requisite and contrary to the ideas of other authors (Caïra, 2014), collaborative storygames do not include games such as *Once Upon A Time* (Lambert et al., 1994), since its mechanics lead players to direct conflict and therefore oppose any type of meaningful collaboration. This in turn creates a fruitful void that encourages competition over cohesion and the creation of a compelling story.

Reed compares this concept to that of shared authorship, previously defined by Samuel (2016) as a collaboration between player and system to produce a narrative artifact that neither could have made separately. Where these concepts differ is in the fact that shared authorship comes from analysis and tool use, while a storygame, by its very nature, implies a direct interaction with the narrative created during play.

Storygames defined as an equivalent term to Indie RPGs appeared around the 1990s. Hymes (2021) offers a timeline of their inception. She presents Indie RPGs as being significantly younger than other, more well-known examples in the genre, such as *DnD* (1977) or *Call of Cthulhu* (1981).

Throughout the 1990s, 2000s, and 2010s, the Indie RPG scene took relevance with games such as *Fiasco* (Morningstar, 2009), *Microscope* (Robbins, 2011), or *The Quiet Year* (Alder, 2013), to name a few.

This genre of games is largely composed of Indie tabletop RPGs. Their main focus is on the narrative experience of the players, rather than the overcoming of tactical challenges (Hymes, 2021). The following section of the thesis is dedicated to theory connected to collaborative storygames and other forms of co-creative game design.

4.3.1. Spectra of Reed

To better understand collaborative storygames, Reed (2017) offers a framework that situates them in two distinct spectrums: a simulative spectrum and a performative spectrum. Situating players in these spectrums establishes four major categories of action.

The simulative spectrum concerns a game's design and specifically analyzes whether it puts emphasis on logic and simulation or focuses on narrative. Storygames can be found throughout the spectrum, although they tend to be slightly concentrated on the story extreme. Reed argues that tabletop roleplaying games typically fall in the middle of the spectrum, which partly justifies their prolonged success.

In contrast, the performative spectrum understands stories to range between completely improvised and totally established in advance. What defines the position of a game in this spectrum is its ability to grant agency to its players. Collaborative storygames again are usually found in the middle area, with some forcing players to make certain assumptions about the story and others allowing a great degree of freedom.

The control and arbitration of both spectra fall on the figure of the game master, who directs rules and narrative. In the presence of an imbalance of knowledge or power, the figure of an adjudicator is required to have a centralized source of authority. While this has been the case classically, sharing power and knowledge in equal shares amongst the players can lead to them realizing distinct functions, and many collaborative storygames make use of this principle to potentiate collaboration. The balance of both spectrums is present to different extents in all collaborative storygames.

With this in mind, Reed also defines four major functions that players can perform when playing collaborative storygames:

- **Generation:** Consisting of contributing ideas of any type. These games usually feature expansive worlds and stories which require constant creative input.

- **Storywrighting:** The act of connecting ideas from all participants to tell a story. This concept is specifically linked to the Wunderkammer of the Wu-Ge model (Konzack, 2015), as it focuses on selecting the right ideas and providing them with the corresponding contextual meaning.

These two first ideas in combination are what conforms to the first prerequisite for the collaborative storygame: creating the story during play. The remaining functions are as follows:

- **Negotiation:** Process of discussion through which players solve conflicts and contradictions in generation and storywrighting. Authority might be embodied by several different agents, but the goal is still focused on establishing what is consistent with the fiction.

- **Administration:** Overseeing the other three activities, Administration consists of the rules that structure all actions, as well as the mechanisms players can utilize to enforce and respond to the story and its components.

Performance is discussed as a separate action, but Reed identifies it as a type of Generation, where players contribute to the conduct of a particular character in the world.

4.3.2. Rules and Creativity

By analyzing player habits in three different TTRPGs, Bergström (2012) aimed to create a connection between the various functions the rules of a game fulfill, and

their relation to types of creativity. From this analysis, Bergström observed the following functions for the rules:

- **Rules as "narration first" or "rules first":** Establishes whether when resolving an action, the player narrates their mechanical intent or their narrative performance first.

- **Rules as arbitrator:** As an impartial element, rules can help settle disagreements between players and ensure equality.

- **Rules as creative coolant:** Rules can help put creative constraints on otherwise excessively open systems to keep the narrative from being too fantastic and sparse.

- **Rules as consistency provider:** Rules provide information that keeps the diegesis consistent with the rules of the world.

- **Rules as inspiration:** With a wide array of character creation options or skills, rules tend to afford the player to think about characters and stories that might have not been considered otherwise.

- **Rules as support:** Rules clarify what's possible and what's not, which helps more inexperienced players catch up with the rest.

- **Rules as communication:** Expressing certain attributes by numbers allows players to use a certain language that can be understood by everyone playing at the table.

- **Rules as randomness:** The generation of unexpected outcomes provides new angles for exploration and opportunities for storytelling.

- **Rules as a diegetic control mechanism:** Referring to who has control over what is true or not in the diegesis, this role is typically overseen by the GM, although each particular playgroup can decide how this power is distributed.

In association, the following types of creativity are established:

- **Narrative Creativity:** The ability to observe the story as a whole and expand on it by creating new arcs and revisiting previous content, amongst other things. In this sense, rules as creative coolant and consistency provider play a major role in ensuring that the story does not become convoluted and that it retains internal consistency.

- **Acting Creativity:** Traditionally understood as the purpose of roleplaying, acting creativity refers to how a player portrays one or more characters. Rules as communication assists the player to act according to the system, while rules as randomness provides new angles to work from.

- **Gaming Creativity:** How a player utilizes the pre-established rules to achieve the desired outcome. It is highly dependent on well-written rules and has to do with optimizing character choices, but also being aware of the best option on each occasion. Rules as arbitrator creates an equal chance for everybody to utilize the rules and be affected by them, as does rules as randomness.

- **Problem-Solving Creativity:** With a wide variety of problems, TTRPGs face characters with resolution often. A point is made about the balance this holds with acting creativity since the believability of a character's portrayal greatly influences their ability to solve diegetic problems. Contrary to mechanical gaming creativity, problem-solving creativity usually deals with open-ended issues. Rules first or narration first determine the relevance of this creativity, since rules first environments tend to utilize winning strategies instead of problem-solving skills. Rules as consistency provider are also essential since problems need to be consistent for a good solution to be found.

- **Game-World Creativity:** Agnostic of the system, this category refers to the skill required to introduce elements in the diegetic world and the setting as a whole. In this case, rules-first allows for a greater degree of freedom, since the

descriptions do not affect the rules much. Rules as inspiration give information about the game world to the players.

- **System Creativity:** Despite a faint connection to the rules, system creativity concerns the ability to modify a game to accommodate a group's needs and preferences. In this case, this type of creativity is not strongly linked with any one function of the rules, since it requires being creative with the rules themselves.

Rules as support and rules as a diegetic control mechanism are not distinctly related to a particular creativity, since they have a more broad effect. However, Bergström discovered that players' creativity appeared to be affected the most by rules as a diegetic control mechanism, being a direct representation of the structures of power inherent to RPGs.

4.3.3. Co-creative Games Model

Tying together the studies of collaborative worldbuilding and co-creation in games, Acharya and Wardruip-Fruin (2019) analyzed some role-playing games to extract common characteristics to build a model of world co-creation within games. They defined three features that a game should include:

- ❖ **Player-Determined:** Players decide what exists and what doesn't in the shared game world.

- ❖ **Adaptable:** The game world can be extended and adapted to fit the player's interests.

- ❖ **Moderated:** A system controls how and what content is added to the world.

The authors then analyze additional games, including the storygame *Microscope* (Robbins, 2011). Microscope's players can choose themes and eras to add and subtract from their world at any moment, the world can always be extended temporally (as long as consistency is kept), and roleplay and the palette of contents created by the player allow to determine what is included in the created world.

4.4. Artifacts of Play

Artifacts of play, as discussed by Hymes (2020), are "Items we create by virtue of playing the game" (1:04). This might refer to a drawing, a final board state, a physical construction, etc. The artifacts have a permanence quality that extends further than the end of the game itself. These are the two basic requirements for the object to be considered an artifact of play.

This broad definition contains many categories of objects. Hymes (4:30) defines a handful of them by providing a few concrete examples:

❖ Recordings and Photos: Live Streams, actual Play, etc.

❖ Play preparation: GM notes, maps, rule summaries, etc.

❖ Level Tracking or Note Taking: Character sheets, score pads, etc.

Within this wide scope of options, Hymes brings attention to a particular set of artifacts of play that fulfill the third requirement. Aside from being constructed during play and outliving the play session, these objects' creation is directed by the rules of the game. The matrix game "includes an artifact by design and to play the game is to make the artifact" (5:36). The artifact is consistently created in the game session and is reflective of the choices made by the players within a particular context of time, space, and involved people.

This concretion makes this category distinct from other types of artifacts of play since these are driven by the players, and not inherent to the game itself.

4.5. Worldbuilding

To describe worldbuilding as a discipline and the concepts it might contain, it is necessary to define what a world is. In worldbuilding, the definition of "world" is not discussed by itself, but rather segmented in the distinction between the primary world and secondary worlds.

Primary worlds describe our reality just as we know and understand it (Hergenrader, 2018). The focus of the definition lies on the depiction of certain aspects of human existence that are consistent and independent of time or cultures, such as the force of gravity and the human impossibility to go back to the temporal fourth dimension. A world that represents the primary world and shows no speculative changes can be called a historical world and any fiction that happens in a historical world can be understood as historical fiction.

Opposite the primary world is the secondary world or fictional world, where the rules of the primary "have been altered in some fundamental way" (Hergenrader, 2018, p.10). The secondary worlds are defined by their detachment from the primary world, as well as their level of detail (Wolf, 2012). The construction of surroundings and locations, that could be experienced by a fictional character, form an ontological whole that is different from the primary world (p.377). Building on Wolf's concept of surrounding, Hynes (2018) argues that an essential characteristic all secondary worlds have is a border that clearly distinguishes them from the primary world.

When any world, realistic or fictional, is suitable to contain a story, it becomes a storyworld (Schrier et al, 2018). The way it is constructed is deeply connected to its genre and tropes that inform the narratives it might present. All present knowledge that would influence the current state of the world and the character's actions conforms to the "backworld", which would differ from the similar concept of "backstory". The construction of a backworld is non-linear, such that it may require the author to create it in later stages of a project or to change it, a process defined by Wolf (2012) as retroactive continuity or "retcon".

4.5.1. Main Concepts

4.5.1.1 Worldbuilding

Once a world is defined, the process of worldbuilding can be performed. Worldbuilding defines the process of creating a fictional world. Hergenrader (2018, p. 17) argues that said process goes beyond the creation of a setting where stories take place and that it delves into the political, social, geographical, and many more aspects of its reality. It is a compilation of miscellaneous information about the fictional world, and the relationship between all of its components.

From the angle of writing, Tomin (2020) considers worldbuilding as a technique used by writers to construct the futures where their stories take place, in the context of science fiction. This world, instead of being constructed by components belonging to multiple branches of science, arts, society, etc. Is composed of many story elements, which define its main characteristics.

In terms of process, Wolf (2018) states that the creation of imaginary worlds begins in most cases with the referent of the Primary World, from which the assumptions and structures linked to it can be replaced by the fictional elements. This theory is built on the work of Walton (1990) and Ryan (1980), and the principle of minimal departure proposed by the latter, which defines that fictional worlds are constructed as close as possible to reality, and only the minimal, unavoidable adjustments are made.

Wolf's work (2012,2018) also covers the objective and minimal requirements a world should fulfill to function as a significant imaginary world. These are invention, completeness, and consistency. Invention defines what distinguishes a fictional world from the Primary World and other fictional worlds. Completeness defines the degree of feasible information provided to its audience. Finally, consistency refers to the extent to which world elements fit with each other without contradiction.

4.5.1.2. Completeness

In the article World Completeness, Robertson (2018a) builds on Wolf's (2012) definition of completeness (or its illusion). This definition is based on the ability of a world to provide explanations and details covering all possible aspects of a character's experiences, related to feasibility and practicality. The analysis offered by Robertson goes over the contrast between Wolf's definition and the history of the term, based on the field of formal logic and the success of a single principle.

Classically, for an object to be complete, all of its possible properties should be accounted for. This reasoning is contested by some fictional world scholars, which defend the fact that fictional objects can not be fully complete, and that incompleteness is not only of quantitative nature - due to the inability to know all physical properties of fictional objects - but also qualitative - the physics principles that define the objects are also not completely available.

This is often the case with forms of audiovisual media such as television and games, where although the viewer has a more complete experience of the text in that they receive more sensory information, an illusion of completeness is held to cover for the extensive amount of data the text is unable to provide.

Wolf's definition agrees that worlds described by texts are necessarily incomplete and that a total account of the properties of its fictional objects is impossible. Where the author separates himself from the fictional world definitions is in proposing that the completeness of fictional objects can not be solely based on the textual properties, and audience's assumptions, but that it is also built on intertextual and paratextual sources.

Robertson (2018a, p.87) also touches on the concept of immersive fantasy as opposed to the "portal-quest fantasy". Immersive fantasy is a genre and literary presentation which does not explain to the reader the nature of the world's objects.

Completeness, at its core, defines the ability to answer questions about the properties of the world, supported by the willingness of the reader to produce answers through their labor and understanding that total completeness is unattainable.

4.5.1.3. Consistency

Defined by Wolf (2012, p.43) as the degree to which a world's details are feasible and avoid contradiction. This includes both having world objects not be mutually contradictory, as well as having each object follow a set of internal rules, based on the set of macro rules that govern the world.

Lessa and Araújo (2018) expand in their analysis of world consistency on the requirements for a world to be consistent as a whole. Objects need to not contradict each other and follow certain rules, but objects also need to respect their internal consistency. Worlds, where contradictions appear, are denominated "impossible worlds" in fiction theory (Pavel, 1986; Doležel, 1988; Ryan, 1991; Eco, 1989, as cited by Lessa and Araújo, 2018).

Just as consistency is often an objective of authors, certain worlds break it constantly for different purposes. Oftentimes, it is made with comedic intention. And often, it can

lead to creating certain expectations, to the point that recovering consistency in the world can upset the perception of the world. This, according to the authors, generates a separate level of consistency which is based on expectations of genre or a franchise.

The analysis of consistency then works in three separate dimensions. The first concerns singular elements and their development through the analyzed work. The second observes if elements in the world can co-exist without creating any blatant contradictions. The third touches on how the world conforms to its expectations of genre, franchise, parent works, etc.

As a storyworld grows in size, the harder it is to keep internal consistency and analyze it. This does not however imply that the quality of the fiction is lesser by itself, given that understanding where and when inconsistencies happen is as vital as knowing of their existence.

4.5.1.4. Scope

Hergenrader (2018) defines scope as the extension of the fictional world through two different aspects: breadth and depth. Breadth refers to the physical boundaries that define the world, which can range from a town to a galaxy. Depth relates to the level of detail in the description of the spaces.

Given that not all locations are equally important, depth usually fluctuates across the breadth of the setting. Those points which exhibit the most depth are referred to as focal points and may work as smaller worlds within the main one. The breadth of focal points is also influenced by the breadth of the world (with bigger worlds having much larger focal points).

When turning to other authors, Wolf (2018) defines scope as the extent of space covered by the world itself, which correlates to Hergenrader's definition of breath. Depth is replaced by size, which concerns the amount of world data that surrounds a

world (p.68). Furthermore, Wolf adds two more concepts that could be considered under Hergenrader's definition of scope: shape and boundaries. These two factors define the audience's perception of the world through the known and accessible spaces of the world and the landmarks that define its limits or unknown regions.

4.5.1.5. Perspective and Audience

In the context of collaborative worldbuilding, the issue of perspective pertains to the distinction between the narrator and the protagonist (Hergenrader, 2018). Aside from the typical considerations of point of view and level of knowledge, the most extended perspective suggested is a neutral point of view (NPOV), which is based on an objective, third-person viewpoint which attempts to avoid any kind of bias. When used in worldbuilding, a narrator is usually also omniscient or near-omniscient, which allows the narrator to know all aspects deemed relevant.

The consideration of perspective is also linked to an audience, as it defines the access to information a person outside of the worldbuilding project. The audience is usually divided into three distinct categories: closed projects, open projects, and limited (Hergenrader, 2018).

Closed projects establish the contributors as the only intended audience, which means that anyone outside the group will learn about the world only through the stories set in it. Fans would be able to infer information from the world and categorize it into a wiki available to the general public, but the actual worldbuilding wiki is only accessible by the original writers. This approach is common when developing fictional worlds for commercial media, such as books, films, games, etc.

Open projects provide reference documents to the public, with stories possibly directly linked to the wiki. These reference documents may be available from the

inception of the project or be opened up from a closed project. The open access to the wiki allows the audience to explore the content in a non-linear way.

Some projects require the contributors to have different amounts of access to information. For instance, a group that collaboratively creates a world to use as a campaign setting for a role-playing game will need the game master to retain certain information from the players, to preserve suspense.

Alternatively, a collaborative project can be created for the sole purpose of building a world, which has a variety of uses, from allowing writers to practice their worldbuilding to just a fun activity to perform in groups. Conventions, workshops, and classes on worldbuilding also benefit from this approach, having limited time and encouraging the act of creating fictional worlds for themselves

4.5.1.6. Sequence

Defining a collection of past, present, and future events that facilitate establishing the current point in time of the world's history (Hergenrader, 2018, p.36).

Sequence is first established by defining a starting and ending point for the timeline, called termination points. The length of the timeline is the timeline comprised between both termination points. The timeline is further expanded by adding significant events throughout its length. Arguably, the most relevant of these events is the point of the present, which is usually closer to the end termination point. By constructing this timeline (Robertson, 2018b), an author can add to a world's completeness and consistency, although it restrains future additions further as the timeline is deeply based on a relation of causality between past events and the present that they will inevitably lead to.

4.5.1.7. Genre

The majority of secondary worlds spawn from speculative fiction, which covers certain media genres such as fantasy, science fiction, and horror, as well as their

respective subgenres. Ryan (2018) defines genre as the set of common ontological rules shared by several texts, which applied to a story world, specifying what is plausible and possible. Building on her work, Ryan also proposes some semantic domains, which define ontological rules based on degrees of detachment from the Primary World. The categories proposed are the following:

❖ **Inventory of Individuals:** Whether the setting is limited to historical individuals (Same), introduces fictional characters alongside historical ones (Augmented), or utilizes exclusively imaginary characters (Different).

❖ **Properties of Common Individuals:** Whether no changes are introduced (Same, Verified), characters are attributed plausible, unconfirmed characteristics (Possible), or characters exhibit different properties from reality (Different). This category depends on the Inventory of Individuals being either on the Same or Augmented spectrum.

❖ **Kinds of Natural Species & Natural Laws:** These two categories define the separation between realism and fantasy. Natural Species can make use only of real-world species (Same), introduce fantastical species which interact with real-world ones (Augmented), or make use of only fantastical species. Natural laws are either equal to those of the real world, susceptible to being surpassed by magic (Augmented), or completely different.

❖ **Technology:** Can be the same technological level as a given historical period, show more advanced, speculative technology, or be absent from a world's focus.

❖ **Cosmology:** The world can be confined to the space of a single world, or, more commonly in science fiction, be composed of several galaxies, or feature multiple, parallel universes.

❖ **Time:** The temporality of the setting can mimic that of a historical period, engage in future speculation, or be non-characterized and left intentionally vague.

❖ **Space/Geography:** The spatial constraint refers to whether the setting is that of the real world, makes use of the real world but introduces fictional landmarks, or is vastly different from the Primary World's geography.

❖ **Number of Spatial Dimensions:** Characterized by the use of either less than three dimensions, three dimensions, or more than three.

❖ **Logic:** Defines the consistency of the world's logic and establishes if it is always respected, is occasionally violated, or systematically violated.

Through the definition of these characteristics, genres are formed and, more importantly, expectatives about said genres form.

4.5.2. Taxonomies

Given that multiple definitions of the worldbuilding process are presented, it is not unusual for authors to follow different methods when worldbuilding and, as a result, classify worlds in different ways.

4.5.2.1. Components of Worldbuilding in RPGs

In the chapter named *Worldbuilding in RPGs*, we see multiple authors (Schrier et al, 2018) discuss what components can participate in the construction of a new world, and their connection to the RPG genre in all of its variants.

The main group is formed by the core canon, built on the agreement between creator and audience of what elements belong to the world. Whether RPGs expand previously established fictional worlds on a transmedia basis or create their own spaces, canon in these texts facilitates a focused and unified comprehension of the elements of the world.

Anything that would not enter in the canon of a world, or is not considered to be canon by the previously stated agreement, for instance, a part of the audience might consider it to be, but not its entirety. This material is occasionally referred to as "fringe", as it might appear in unofficial channels such as magazines or game forums.

The third identified category is metatexts. Derived from literary theory, metatexts include extra-diegetic materials that refer to or describe the fictional world, such as wikis. As cited by Schrier, McGee talks about five essential characteristics of metatexts:

- It is self-referential, as it refers to itself as a text and also as a text about a text.

- It is extra-diegetic and specifically comes from our world, be it from the community or particularly dedicated to it.

- It blurs the distinction between the fictional and real-world in that it refers to fictional elements by describing them with real-world terms and the ways both worlds interact with each other.

- The intent of the narrator is worth studying since it reflects the author's interpretation of the fictional world.

- It constantly explains its medium.

A usual piece in transmedia documentation is the "Story Bible", which establishes the elements of the fictional world. RPGs, however, tend to handle this text by utilizing various forms of media, such as images or taxonomies, to create their "Bible". While most of this information might appear in the core book of an RPG system, supplements and posterior releases tend to include information that expands upon that basic canon. A remarkable difference stems between computer RPGs and tabletop in that the former requires the user to interact with this canon via a player avatar while the latter requires the user to read the pertinent texts.

A final element is the player community, as their interpretation and input shape the world as much as any of the prior elements. Through their understanding and creation, players create meaning and transform the canon and worlds they participate in. In occasions such as LARPs, a world does not exist without the involvement of the players (Linderoth, 2012 as cited by Schrier, 2018).

4.5.2.2. Hergenrader's Structures

In his book *Collaborative Worldbuilding for Writers and Gamers* (2018), Hergenrader presents a process to collaboratively create a world. The beginning of this process is defined by the formation of a framework, which relies on two distinct sets of characteristics that together form a comprehensive and complete overview of the world.

The first set of characteristics is composed of Hergenrader's previously discussed definitions of scope, sequence, and perspective, alongside the formation of maps and metanarrative leads.

The second set, however, defines the world in several categories, called structures, that provide a basis for his method and define the way the world operates as a whole. Each of the four structures is divided into several substructures, which allow making finer details and differentiate worlds where otherwise a structure would be designed similarly. The contributors creating the fictional world are able to define the relevance of each structure by utilizing a deck provided by the author (see figure below).

Figure 6*.* Collaborative Worldbuilding Deck. Source: retrieved from Hergenrader, 2022.

The first structure, governance, defines the political rules and boundaries that exert control over members of society. It is subdivided into three substructures: government presence, rule of law, and social services.

- ❖ Government presence describes both the system that governs society and the overall power that it holds in everyday life. This ranges from a complete lack of government of any kind to authoritarian states that control most aspects of the lives of those they rule over.

- ❖ Rule of law refers to the administration of justice and the enforcement of the law by the government. Therefore, rule of law concerns everything connected to the manifestation of the legislative, executive, and judicial power. A poor rule of law would refer to a world where individuals are responsible for their rights and property, whereas a strong rule of law indicates that there's a strong police force and justice is inflexible.

- ❖ Social services include the provision of basic services, healthcare, and education for the general population, although Hergenrader (2018, p.55) specifies that the quality of social services is not related to an equal or unequal distribution of said commodities. A society might have well-spread services of poor quality, or have different social classes with varying amounts of comfort.

The structure of economics touches on the production, distribution, and consumption of wealth, beyond currency and into all aspects of this discipline. Understanding that economies might be based on different types of capital helps build economies with different outlooks on value. The three economic substructures are economic strength, wealth distribution, and agriculture and trade.

❖ Economic strength covers the capabilities of production and possession for a society of valuable commodities and resources. Strong economies produce excesses of resources, whilst weak economies tend to lack the means of production of wealth. This factor is pointed out to have a considerable influence on government policies and to be the reason for various conflicts throughout human history.

❖ Wealth distribution defines the various classes and proportions a population is divided into depending on their wealth. Feudal societies had a clear divide between a small ruling class and a large base of labor, and modern primary societies tend to have larger middle-class populations.

❖ Agriculture and trade involve the self-sufficiency of a society in exploiting natural resources and negotiating with other powers. Groups with a large production of food and natural resources will have the ability to better care for their population, but will often be targeted by others with fewer resources.

Social relations, as a structure, indicate the levels of rights that exist for different social groups, understanding that rights are never universal nor eternal, and are subject to change. This structure is particular in that all of its substructures work in a similar spectrum that ranges from a complete absence of rights and persecution to encouragement and normalization of various social groups.

❖ Racial and ethnic relations focus on inequity between different races or ethnic groups. Race is defined by Hergenrader (2018, p.56) to be connected to physical traits and ancestry, whereas ethnicity relates to cultures and customs. Taking a stance on the racial and ethnic relations of a fictional world implies

that distinct races or ethnicities have been created and are sufficiently different from each other.

❖ Class relations focus on the hierarchies of society. Even though the most common distinction in this sense is to divide these groups by their level of economic wealth, lower, middle, and upper classes can be defined by any aspect, such as connections, stability, or education. Another element of class relation is social mobility, which defines the ability to change classes, normally to a higher one. The tension between classes is more likely to appear if the stratification is more rigid and people are locked into their social classes.

❖ Gender relations are how a culture defines the distribution of rights between men and women with one. Gender differs from biological sex, determined by anatomy. it is defined to be "a social construction that includes traits or behaviors that a society has coded as being masculine or feminine" (Hergenrader, 2018, p.57). As such, gender relation concerns the consideration of gender in the prohibition of certain jobs, gender roles, gender expectations, and recognition of gender, as well as equal access to services. This category is further expanded by the inclusion of different genders, which can be directly extracted from the primary world, or created by an author. Therefore, gender relations can be understood as the relationship between any gender present in a culture or society.

❖ Sexual orientation is closely related to gender relations but concerns the considerations of individuals that classify themselves to have a different sexual orientation than heterosexuals. These include recognition, permission, and social consideration. Although the primary world is based on the

contraposition of heterosexuality and all other preferences, a fictional world might explore sexual orientation relations between several other sexualities.

Lastly, cultural influences are the shared values and beliefs of the broader society. These are more notable in settings that develop strong ties between culture and social institutions. Just as rights, cultures are most likely to vary over time, between geographical regions or typical population sizes. Cultural influence is separated into military, religious, technological, and cultural, stating the importance that culture gives to each of these fields.

❖ Military influence defines the presence of armed forces throughout society, be it through a consideration of their number of troops or institutions, duties and responsibilities of military personnel (especially when compared to law enforcement in the same areas), or investment and development of culture through war and the military as a whole.

❖ Religious influence includes the ways religion and spirituality influence culture and the power they hold over certain institutions. Doctrines can affect different members of society in various degrees and manners, while also defining the general outlook an average citizen would have of someone depending on their religious point of view. Such as with many other substructures, this category requires the existence of distinct religions to define their influence and the tensions that may arise between them.

❖ Technological influence concerns the level of importance put on development and investigation to further the level of knowledge of a society. It is common for this category to vary through time, due to its high dependency on wealth and the large impact it has on the economy, war, and many other fields. The

role of technology also is in tension with other cultural influences, depending on the investment of societies in development at the expense of different aspects.

❖ Arts and cultural influence define the investment of society in the arts and all other sorts of recreational activities, which are often influenced by the political and social context of society, and provide great information about the purpose and function of art.

Hergenrader's taxonomy focuses on the main four structures and their corresponding fourteen substructures. However, he also suggests that "Adding a few unique substructures can provide interesting new wrinkles to your world, and some genre-specific considerations can be important enough to warrant inclusion as substructures of their own (2018, p.59). Any added substructure must be considered by itself, but also concerning each of the fourteen substructures to be properly included. Hergenrader includes a total of four suggestions for substructures: age, ableness, drug culture, and relations with the natural world.

❖ Age relations is a substructure that fits well with other substructures in the social relations structures and defines the relationship between different age groups in a society. As with any other relation structure, this includes distinctions in social perception, work restriction, and access to services and wealth. It could also play a significant role in cultural influences, with different age groups being involved in different parts of the military, religion, or arts.

❖ Similarly, Ableness relations connect to social relations and social services. This substructure is defined by how society views those with disabilities, particularly when connected to the roles that disabled people can perform

within society, the government's capabilities to care for them, and the cultural values of the society as a whole.

❖ Drugs and drug culture count as another substructure that can expand the cultural influence structure. Depending on their effects, drugs can play significant roles in societies, be it for ceremonial use or as a central topic in politics. Drugs can greatly affect the work of legal enforcement, and influence economies and culture.

❖ The relationship and attitude towards the natural world add an aspect to the world that can be included in the larger structure of the economy (management of natural resources) and cultural influences (ecological influence). Some societies give sacred meaning to animals or environments, while others might see them as just another resource.

5. Methodology

This section details the steps followed to analyze several worldbuilding games and the subsequent creation process of an original worldbuilding game based on previous worldbuilding theory. This section is followed by a chronogram covering the estimated temporal length of each stage of the project.

5.1. Methodological Design

The methodological process is divided into two distinct steps. The first section concerns the analysis of several study cases, in this instance pre-existing TTRPGs, according to the previously exposed theory on their genre, artifacts, and collaborative worldbuilding.

The second step is the creation of a worldbuilding game prototype, built on the analyzed games and theory. This prototype intends to justify the main working hypotheses through a series of playtesting sessions.

5.1.1. Study Case Analysis

This phase begins with the composition of an analysis sheet, constructed on the basic concepts and taxonomies of role-playing games and collaborative worldbuilding upon the completion of the theoretical framework. The exposition of these theories is included throughout the prior research and theoretical framework, and thus not included within the methodological design nor the thesis' results.

With this tool completed, a list of games to be studied is presented. The games are *The Quiet Year* (Alder, 2013), *Microscope* (Robbins, 2011), *Dungeons & Dragons 5e.* (Mearls, Crawford, 2014), and *Fragged Empire* (Dyer, 2015). The first two games have been chosen mainly for their condition of TTRPGs focused on worldbuilding, whereas the latter two focus on the more traditional style of play. Both of them are to provide a clear counterpoint to *The Quiet Year* and *Microscope* when analyzed, resulting in a much clear divide between each genre's characteristics.

Dungeons & Dragons (from here, DnD) has been particularly selected for its popularity, deduced by its willingness to proclaim itself "the greatest role-playing game" (Mearls, Crawford, 2014, Cover). This leads to examples being much more accessible for analysis to the general public. _Fragged Empire,_ while hypothetically less well-known, contrasts the other title by utilizing a ruleset and setting based on science fiction, as opposed to the more traditional high fantasy of DnD.

The referents are to be analyzed according to the decided characteristics present in the worksheet. All of the chosen games can be seen in the following table:

Game	Author(s)
Microscope (2011)	Ben Robbins
The Quiet Year (2013)	Avery Alder
Dungeons & Dragons 5e. Player's Handbook (2014c) Monster Manual (2014b) Dungeon Master's Guide (2014a)	Mike Mearls, Jeremy Crawford
Fragged Empire (2015)	Wade Dyer

Table 2. Chosen games for analysis. Source: Author's creation

The result of this phase will be the consolidation of the worksheet as an analysis tool, and several characteristics extracted from the similarities and differences that the study cases exhibit.

5.1.2. Analysis Sheet Design

The worksheet itself is a list of 20 items, which have been extracted from the concepts presented throughout the prior research and theoretical framework sections, deemed to be significant to provide a proper analysis of worldbuilding games. The items on the worksheet have also been classified following the four distinct categories established by the Wu-Ge model: Interpretation, Narrative, Ludus, and Sub-Creation. This further clarifies the approach of analysis to each item and allows to expand on prior theories.

Each item of the list is followed by a short definition, which establishes what characteristics that particular part of the tool analyzes. The list of items is as follows, subdivided by their Wu-Ge category:

1. **Goal:** The premise of games functions at a higher level than the rest of the components in the list. While TTRPGs have been traditionally considered to have more unclear goals than other games, it is useful to establish the appeal and objectives of a game to better understand what its rules and play experience are attempting to achieve.

5.1.2.1. Interpretation Characteristics

2. **Roles:** Are there player characters, or does the game allow players to influence and interact with the game world through other mediums? Knowing what avatars players utilize points to the methods of interaction and interpretation while intersecting with multiple theories (Bergström, 2012; Greenberg, Folder, 1988 as cited by Rugelj, 2018).

3. **Levels of Communication:** By observing how players are able to talk to each other, games are able to constrain certain activities and work at multiple levels. By examining the use of each frame of storytelling (Bergström, 2011), it's easier to determine the role of each player as a weaver of narrative and their relation to the diegesis.

5.1.2.2. Narrative Characteristics

4. Conflict: An essential ingredient to any successful narrative, observing what conflict a game presents and how it favors said conflict through its mechanics complements observations about a game's goals, and how the narrative evolves to reach them.

5. Player Connections: Most TTRPGs have players be connected in some ways, usually through their characters. Therefore, it is of interest to observe how games that do not have player characters handle this, compared to how others facilitate this endeavor.

6. Sequence: As previously discussed (Hergenrader, 2018), sequence concerns itself mostly with the temporal progression of the narrative during play. Although it tends to move linearly, differing from real life in its compression of time, some games take more novel approaches to this idea by altering the natural order. A correct comprehension of how to perform this alteration successfully can allow for better, more innovative design.

7. Fruitful void: Previously defined as the parts of a game present in the narrative experience but not contemplated by the mechanics (Hymes, 2021), understanding this space will complete the comprehension of how a game's rules direct play towards certain themes and situations, by understanding how the fruitful void also produces the desired experience.

5.1.2.3. Ludus Characteristics

8. Authority: As seen before, by way of concepts of authority and credibility (Edwards 2004, as cited by Boss, 2008), a determining factor in what is considered to be factual or not in the world of fiction greatly relies on how a game distributes control of its diegesis. Lightly touching on diegetic control creativity (Bergström, 2012), considered to be the most important of the creative types in how a game operates, observing the distribution of authority should clarify the difference between collaborative storygames and more traditional TTRPGs.

9. Resolution Mechanic: Focused on the process through which games handle player actions establishes differences in narrative progression and the willingness of design to allow more freedom in player actions. This concept mainly relates to that of Degree of Response Specificity (Eskew, 1993, as cited by Rugelj et al, 2018) and Event Resolution as seen in Forge Theory (Edwards, 2001 as cited by Boss, 2008).

10. End Conditions: Traditionally, a critique of role-playing games as legitimate games has focused on their lack of clear final objective. While this is true of most traditional TTRPGs, this is not contrary to the idea that games can have final victories and defeats for players. Furthermore, collaborative storygames often take the span of a play session to be finished, with the addition of an objective, designed end condition.

11. Information Management: To a certain extent similar to Authority, the degree of information management defines how much every player knows about the diegesis, as well as which levels of information exist and how they communicate to each other. Therefore information is closely related to control and power over the fictional world of the game. If storygames attempt to shift this balance of control, then their distribution of information should change accordingly.

12. Progression: Most TTRPGs follow a linear narrative structure that, however, offers ways for players to advance the state of their characters and the world. These systems, typically known as progression systems, determine how the options of the players increase in quantity and quality. However, progression is also a way to understand how the game state changes as it progresses. This is true of all games but is particularly useful when analyzing games with no player characters to advance.

13. Role of Rules: Based on Bergstrom's theory (2012), identifying what functions rules accomplish and to what degree in each of the analyzed games will help tie them to the favored types of creativity, leading to a better understanding of how to design a collaborative storygame by focusing on the more prominent creativities in the genre examples.

14. Creation of Artifacts: Utilizing Hymes' classification (2020,2021), this feature attempts to identify which artifacts spawn from play in each of the study cases and observe if there are significant differences in their creation and purpose.

5.1.2.4. Sub-Creation Characteristics

15. Scope: Built on multiple theories (Hergenrader, 2018; Wolf, 2018), the Scope of a game world is understood both by its Breadth, or how wide a fictional world's borders are, and Depth, or the general level of detail for the world. Knowing how expansive a world can be and how detailed its parts are painted provides a clearer picture of how designers wish for their fictional worlds to be observed and understood.

16. Genre: By Ryan's definition (2018), the genre will establish tropes and expectations for game worlds, that we can contrast and check to understand if these games conform to their predicted characteristics, or choose to oppose them. In this particular item, for collaborative storygames, the definition or lack thereof of a genre will be prone to condition players in their creative process, by facing them with the aforementioned expectations.

The four last categories to be observed are divided into the four structures defined by Hergenrader (2018), each with a delve into their contained subcategories and the way they are represented in each of the four games. As this taxonomy covers many of the focal points of a fictional world, this section of the analysis will serve to determine what each game puts a bigger emphasis on while defining its setting focal points.

17. Governance: Political rules and boundaries that exert control over members of society. Formed by the substructures of government presence, rule of law, and social services.

18. Economics: Production, distributions, and consumption of wealth, beyond currency and into all aspects of this discipline. Formed by the substructures of economic strength, wealth distribution, and agriculture and trade.

19. Social Relations: Levels of rights that exist for different social groups, understanding that rights are never universal nor eternal, and are subject to change. Formed by the substructures of racial and ethnic, class, gender, and sexual orientation.

20. Cultural Influences: Shared values and beliefs of the broader society. Formed by the substructures of military, religious, technological, and arts and culture.

The use of additional substructures, such as age relations and ecological influence, as defined previously, will appear in the analysis whenever a game makes notable use of them.

5.1.3 First Prototype Creation

With the basic characteristics defined in the previous analysis, a proposal of a worldbuilding game can be drafted. The methodology utilized to create the game is one based on the SADDIE method, utilized by Rugelj and other authors when explaining their comprehensive model to design roleplaying games (2018). SADDIE, adapted from the ADDIE method, is an acronym for each of the steps to be followed.

Specification concerns the author of the game identifying weak points in the teaching of a certain topic or class. It is worth noting that Rugelj's work is dedicated to serious games in the context of education, so the addition performed to the ADDIE method is focused on that field. By utilizing specification, the author is able to define the basic concepts that will later develop into all the parts of the game. In the context of this thesis, the objective is to define the basic concept of the game and a desired outcome or experience.

Analysis is tied to collecting and examining all pertinent data for game design and implementation. In this particular case, the analysis will have been performed with the game study cases, so the process of creation will turn to the next step.

Design connects a virtual environment with the player to present content. As the work to be done is based on analogical games, the creation process will focus itself on the idea of gameplay or "what the player does" (p.18). In terms of design, the authors provide a process for roleplaying games that will be utilized for the prototype, with any modifications required by the conclusions of the analysis. These are the eight steps of the process:

1. Choosing a topic, game universe, and defining the game plot

2. Defining the game system, game rules and choosing the game mechanics

3. Developing character profiles and defining non-playable characters

4. Defining the levels of difficulty

5. Defining the time frame for a single game

6. Defining the number of players

7. Thinking about accessories and multimedia aids for the game

8. After creating the game we should think about the game manual

The choices associated with each step will be explored in detail when designing the game.

Development covers the phase where the author produces the game. For the game, this means writing the game manual and preparing any graphics that it might require to help with clarity.

Implementation is the part where the game is applied. Within the context of the original work, this means taking it to classes and playing. In this case, several playtest sessions will be conducted. Lastly, **Evaluation** allows authors to see flaws in the design and consider solutions for a future iteration.

The resulting document needs to include all necessary features considered in the study cases, as well as all basic requirements that define a game. The experience can also be complemented by some of the considered collaborative worldbuilding practices, defined in previous sections.

This prototype should result in a ruleset that allows players to create an artifact based on collaborative worldbuilding techniques while ensuring that it can be considered to be a game.

5.1.4. Playtesting and External Evaluation

Once the first draft of the original game is completed, it is necessary to evaluate to check if it fulfills the intended purpose. To achieve this, some playtesting sessions need to be conducted, utilizing the created system.

The playtesting sessions will be conducted with multiple groups at various levels of game design knowledge, to allow for several perspectives to be taken into account. These sessions will also be conducted by different people, to minimize certain biases and verify if the game functions without the author's supervision.

5.1.5. Final Prototype

Through the playtesting sessions, an iterative process of refinement of the original game will be conducted. The data collected from the sessions should determine if the prototype can be considered a game, if the prototype produces a proper artifact through collaborative worldbuilding, and bring up any flaws in its design and game experience.

The analysis of the data will be used to draw conclusions and make any pertinent changes to the prototype. The game can be further iterated through additional playtesting sessions if the time frame allows for the construction of additional

prototypes, but the process should conclude on a final, revised version of the original game.

5.2. Chronogram

A chronogram (see Table 3), based on the deadlines provided by the Bachelor's Degree, has been created to show the temporal structure to be followed throughout the project's creation.

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Planning	■								
October 22nd, 2021: Thesis Proposal									
Introduction		■							
Prior Research			■	■	■				
Theoretical Framework			■	■	■				
Methodological Design					■				
February 11th, 2022: First Draft									
Revision and Correction					■	■			
Prior Research Ampliation					■	■			
Theoretical Framework					■	■			

Ampliation					green	green				
Study Case Analysis						yellow				
First Prototype Creation						yellow	yellow			
April 22nd, 2022: Intermediate Report										
Revision and Corrections								green	green	
Playtesting and External Evaluation								yellow	yellow	
Final Prototype									yellow	
Analysis and Results									red	red
Conclusions										red
June 15th, 2022: Final Report										

Table 3. Chronogram. Source: Author's creation

6. Results

6.1. Game Study Cases

The analysis of the four reference games described previously (see Table 2) covers the 20 features discussed in the Analysis Sheet Design section. Here each of the observed results will be shown, focusing on the more noticeable game cases for each feature. The main focus of this section is to extract conclusions on how storygames are different from more traditional TTRPGs, as well as to check the effectiveness of the proposed features as a framework for RPG analysis.

6.1.1. Goal

The lens through which Goals are defined is the one proposed by Cardona-Rivera, Zagal, and Debus in their GFI model (2020). Initially designed as a support to the MDA (Mechanics, Dynamics, Aesthetics model), this scheme includes a clear definition of goals as ludological codified conditions (p.3). These goals are divided into Ultimate goals, which define the end of a game, and Imperative goals, which establish the steps necessary to achieve the ultimate goal.

Goal	Description
To Win	Effect an evaluation when a predefined state is reached.
To Finish	Effect no evaluation when a predefined state is reached.
To Prolong	Conclude against the designer or player's intent.

Table 4: Ultimate Goals from the GFI model. Source: Author's creation from Cardona-Rivera, Zagal, and Debus (2020).

Understanding that ultimate goals do not necessarily define what players look for in the game, as Edward's (2001) concept of premise would, but how the game ends, the observed ultimate goals might be worth revisiting in the later item End Conditions.

6.1.1.1. In DND

In the *Player's Handbook* (p.5) the rulebook states two ideas: DND has no real end and there's no winning or losing. A game of Dungeons and Dragons connects an ongoing narrative denominated campaign, which can last for any span of time, following a group of adventurers as they progress and change. The playgroup forms a team that tells a story, undivided by the distinction between player and DM.

As an Ultimate goal, the game would need to Prolong the duration of the campaign, at least until the players consider the experience to be concluded. Even if their player characters would die before this condition is met, the game argues that this is not a loss. Even if players fail to complete an objective this doesn't determine if they had success or not. The true objective is to "have a good time and create a memorable story.

6.1.1.2. In Fragged Empire

Fragged Empire begins by establishing a premise of a far future with long-lost humanity, genetic engineering, and cultural tension at its core. No further mention of goals or a specific end appears. As with DND, Fragged shows the Ultimate Goal for players to Prolong the life of their player characters, but also as with DND, for a campaign to end players must agree to conclude the narrative. This leads to a Win or simply a Finish Ultimate goal, left to the playgroup to analyze and elect according to their considerations.

In its complexity, players can perform most if not all of the imperative goals to progress the game and its intrinsic narrative.

6.1.1.3. In Microscope

Microscope's main draw is to create an epic history through play (p.7). It specifically states that "Microscope has no defined ending. There are no victory conditions, no goal except to create something that interests you. Play for as long as you want, then stop."

Since there are no goals nor victory conditions, the Ultimate goal of Microscope would be to Finish, with the addition of players having total control over when to stop playing and deem play successfully.

In its imperative goals, Microscope features Create actions for players to expand the story. They can create parts of the story at different levels by Choosing. As more and more elements are added, the timeline needs to be Configured. The objects themselves, in the narrative, can perform any of the goals, which further the narrative as a whole.

6.1.1.4. In The Quiet Year

On its second page, the Quiet Year is quick to define itself as a map-drawing game. Its premise is focused on a community in the process of rebuilding after a collapse. It has the players take the reigns and represent the environment where this community resides and how it evolves through time.

The game seemingly does not ask the players to accomplish anything but to create a map. Since the map can not be objectively evaluated and the game doesn't include a rubric for this purpose, the ultimate goal can be understood to simply Finish the game.

The Quiet Year's imperative goals are mainly formed by Create actions, as each player adds their artistic input to construct a conjoined map. The game offers various actions for the turn, as well as questions that are meant to spark creativity. These are offered in Choose actions. Certain elements, like the Project dice, are modified by Configure actions.

6.1.1.5. Observations

In this case, perhaps the most noticeable conclusion to extract from the imperative goals when discussing storygames is that their completion does not affect the end state of the game, they merely prohibit progress to its inevitable conclusion. As both storygames analyzed focus on constructing an artifact, classical Ultimate goals fail to take into account this objective. Therefore, these games are best defined by the Create imperative goal, and its subsequent result.

6.1.2. Roles

From the definition of Greenberg and Eskew (1993, as cited by Rugelj et al, 2018), player Roles are separated into Person, as a definition of the player character itself, and Familiarity, as a representation of how similar the character is to the actual player.

When discussing roles and functions, this definition appears to assume the presence of a game master by default, but the reality is that some games employ game masters with defining characteristics, or get rid of the position altogether. Therefore, the study of how the GM is represented in each of the study games is also included in this feature.

6.1.2.1. In DND

Appearing in the *Player's Handbook* (Mearls, Crawford, 2014c), each player creates an adventurer, which handles many situations such as "The adventurers can solve puzzles, talk with other characters, battle fantastic monsters, and discover fabulous

magic items and other treasure." (p.5) The person, therefore, is that of the adventurer in fantasy land.

Players can choose from an array of fantastical races such as dwarves or elves, and they can choose to be trained in many classes, most of which are proficient with magic. This implies that the characters will have a very low level of familiarity, save for the characterization that links the player to a player character.

6.1.2.2. In Fragged Empire

As in DND, players have options to construct their characters that are foreign in their nature: alien species from a far future, performing any odd job while they travel between systems in their spaceship. The degree of familiarity can be better than that of DND in that the setting of Fragged Empire takes place specifically in speculation of our own universe, but at the same time, the technological aspects of science fiction make the game less familiar than the more past-focused, medieval aspect of Dungeons and Dragons.

In both cases, one other player covers the role of GM and handles the fictional worlds, as well as the non-player characters, enemies, and other situations the players might come to face.

6.1.2.3. In Microscope

When playing, players do not take any particular identity as "No player owns anything in the story" (p.53). However, when acting out Scenes, players get to decide what the main character they want to interpret, with the option to include secondary characters during representation. The person and familiarity of these characters can change in scale massively between game and game, and even within the same story,

depending on how grounded players wish their story to be. They could play a game where they act as an alien species from an alternate universe just as well as they could be themselves living through a particular, plausible scenario.

The way the game is constructed to abstain from including a GM implies that all players find themselves at the same level of power to indicate which roles they wish to play within the bounds of the game.

6.1.2.4. In The Quiet Year

The Quiet Year takes a similar stance in one of its two predominant roles. It consists of overseeing the community as a whole and caring for it. In contrast, the second role asks the players to introduce problems. Players jump between these two functions, always with a degree of detachment. Players do not represent characters or scenes. When discussion takes place, players speak for groups of people with similar beliefs.

The objective is to understand how communities in conflict collaborate and rebuild, so the roles players fulfill is to understand how different opinions negotiate to reach agreements, while they introduce new issues to tackle. Tension and resolution come from players handling both functions with fluidity.

it is worth noting that this notion seems to contradict the Czege Principle, a common guideline for storygame which states that players should not be authors of both adversity and its resolution. The way the game works around it is always by having single players create conflicts, but have them solved by the playgroup as a whole.

6.1.2.5. Observations

Both storygames analyzed are notable for their lack of GM, contrasted with the great redistribution of the roles in traditional TTRPGs. However, this was an apparent feature of the genre, although it is not exclusive to storygames.

It is in the analysis of player roles that interesting points can be made. While Microscope takes a more classical approach to have players embody characters (usually with low levels of familiarity), The Quiet Year is special because it goes against this idea and forces players to act as extradiegetic arbiters and creators of the world as a whole. Players do not handle a single character, but a simplification of a greater group, for the purposes of simplicity and conveying the game's message.

A possible explanation for this divergence is the fact that Microscope focuses on telling a story much more than it does to create a world and relies much more on characters as actors for a narrative.

A prototype of a storygame should abstain from using a GM figure but has great flexibility in defining roles depending on whether they wish to utilize characters in the world as an intrinsic part of it or pieces of the main plot.

6.1.3. Levels of Communication

Through the lens of frames of storytelling (Bergstrom, 2012 a) it is possible to observe at which levels information is transmitted. The analysis for this item focuses on what levels of communication players are allowed to use. Unless otherwise stated, non-diegetic activity-related and non-diegetic non-activity-related frames function in a similar way in all TTRPGs and are not present in the following findings.

6.1.3.1. In DND and Fragged Empire

Players are always able to talk to each other in diegetic dialogue as long as their characters would be able to communicate in the diegesis. Likewise, they are always free to engage in diegetic poses and descriptions whenever necessary. When performing actions, the player describes their actions through a diegetic pose and then proceeds to provide the non-diegetic system-related justification for the character's actions.

Non-diegetic story-related dialogue is free to use as commentaries during play or as a posterior analysis, but they don't contribute to the game.

As the game centers on its characters, it is to be expected that the most present frames are the diegetic ones, with the occasional inclusion of system-related explanations.

6.1.3.2. In Microscope

When playing Microscope, however, both diegetic dialogue and diegetic poses are only present when players interpret characters during scenes, which represents a much smaller section of play than in the previous examples. These are instead replaced by diegetic descriptions of periods, events, and scenes that players add and clarify to others.For this purpose, each action is also accompanied by a non-diegetic system description of what the player is trying to accomplish.

The latter frame takes place when discussing the turn order and clarifying any misunderstood rules. However, Microscope is characterized by a strict restriction on non-diegetic story-related dialogue, as players are not able to provide nor receive ideas as to how the narrative should progress. This facilitates that players do not collaborate constantly and creates better differences between their ideas.

6.1.3.3. In The Quiet Year

The Quiet Year is even more limited in its use of diegetic dialogue, as players never interpret any particular members of the community, only their opinions. In this sense, diegetic poses and diegetic descriptions allow the construction of the environment through the actions of groups and the players themselves.

Free discussion of the game's events is also restricted (p.8), as the rules refer players to mechanics such as Contempt that allow them to express their non-diegetic story-related opinions.

6.1.3.4. Observations

The absence of explicit characters that players control divides traditional TTRPGs and storygames in their use of frames of information.

Diegetic dialogue and poses are the two main frames utilized by DND and Fragged, but less so by the other two study games, where they take place only on the sparse occasions where characters are required, or almost not at all.

In contrast, storygames make much more use of non-diegetic dialogue, both system and story related. The latter is a particularly interesting matter, as both examined games include rules that restrict the free flow of information at this level, which results in uncertainty that creates tension and more interesting designs.

6.1.4. Conflict

Integral to consistent stories, how conflict is explored determines the focus and the narrative intentions of a system, which can then be contrasted with its mechanical side to determine if both halves are working together to properly communicate the desired type of conflict.

6.1.4.1. In DND and Fragged Empire

Although some types of social discussions and intrigue are able for use in Dungeons and Dragons and Fragged, most of their conflict is explored through combat. Characters embody adventurers that explore the world and fight enemies in hopes of achieving a final objective. The nature of this objective can greatly vary, but as can be seen in most of the rules, both games mechanically tend to progress through combat, and so the overall conflict in the narrative also evolves by defeating foes.

In addition, however, characters are often constructed in a way where they possess internal conflict or they are in danger due to an external conflict. Each of these can be solved through combat as the system facilitates, but their varied nature can allow the playgroup to solve them through other means.

6.1.4.2. In The Quiet Year

Conflict in The Quiet Year refers to the second of the two roles players engage in, the one where they introduce problems to the community to create new tensions. To this end, there are several mechanics that affect how conflict appears and develops.

The main mechanic the Quiet Year has that signifies conflict is denominated Contempt (p.7). When the group makes a decision a player does not agree with or feels like they were not properly consulted, they can take a token representing their Contempt. The Contempt token represents the tension and remains in front of the player until the end of the game as a remainder. However, players have the option to discard their Contempt tokens in one of two ways: they can either use it to justify a selfish behavior to the detriment of the community or to represent that they are pleased with something another player did. Acting selfishly might have other players take Contempt tokens while diffusing tension is a way to symbolize trust. . This is a way the game avoids its strict rules towards holding free discussions.

On page 8, the game argues that the community itself could divide into different groups due to their differences and that players then define the boundaries of each side and now represent all resulting factions. Contempt can arise from one or both factions, and discussions now might pertain to the community as a whole or one of its subgroups.

6.1.4.3. Observations

Perhaps the most interesting point to draw from the analysis in this point is that The Quiet Year makes use of a resource to keep track of how the conflict is being pushed, whereas the traditional games just keep track of the story as is being told. This could be connected both to the absence of player characters and the fact that the progression of time, although linear in both cases, can be manipulated and skipped in an easier manner in the latter game.

The mechanical control of conflict is greatly influenced by the point of view of the character that experiences said conflict, so a game that wishes to replicate this effect requires abstracting a point of view so players can understand who's involved in the conflict and how it affects them.

6.1.5. Player Connections

When defining how players connect to each other in TTRPGs, it is not uncommon to understand that usually these games feature characters as part of a group and put collaboration as a default. With this concept in mind, it is useful to consider how players interact with each other and how every game refers to this concept.

6.1.5.1. In DND

Showing no mention of how to connect players in the *Player's Handbook* nor the *Dungeon Master's Guide*, DND still treats players and player characters as part of a cohesive group. The effects on many abilities and spells make reference to the concept of allies and enemies, with the supposition that all player characters collaborate.

6.1.5.2. In Fragged Empire

Similarly, the first edition of Fragged Empire does not include a section on connecting players but, in contrast to DND, this game has the players build a spaceship together. This spaceship has its own character sheet and is paid for by all of the players, inevitably forcing them to tie their characters together as the crew of the vessel.
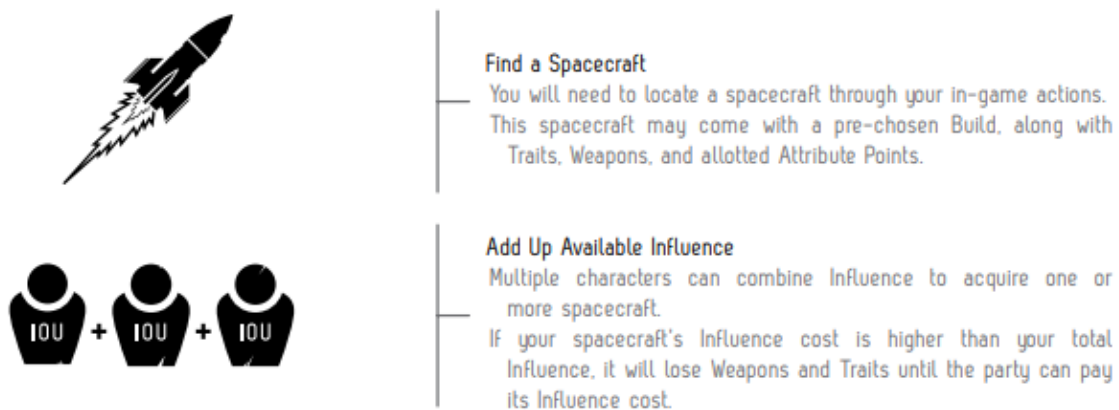
Figure 7. Part of the process for Spacecraft creation in *Fragged Empire*. Source: Author's creation from Dyer, 2015 (p.143).

6.1.5.3. In Microscope

Here, the dynamic between players changes completely. As authority is equally distributed, no single person is responsible for creating all the adversity, that being a role a GM would traditionally fill. Instead, players introduce new details by themselves and watch the story unfold by answering each other's contributions. While this does not necessarily mean that players are enemies, collaboration is under scrutiny in Microscope, as "Nothing will kill your game faster than playing by committee" (p.27).

6.1.5.4. In The Quiet Year

In this instance, the Quiet Year follows the trend set by the previous example by having players create tension and then collaborating to solve these issues. Despite pitching all players as representatives of a community, the game asks them to connect to each other both as allies and as creators of obstacles.

6.1.5.5. Observations

By analyzing all four games, the difference in the connections between players is deeply rooted in the traditional role of GM, and its archetypical function as a controller of all rivals. By erasing this figure and distributing authority equally, players

necessarily need to confront each other, while they don't part ways with the idea of working together to create something.

If looking to create a story, a storygame should strive for its players to be able to correlate with each other as allies and as enemies depending on the state of play.

6.1.6. Sequence and Temporal Progression

Previously understood to be a definition of all events that facilitate establishing a current point in time of the world's history (Hergenrader, 2018), Sequence plays an important role when considering both the narrative and the world where play takes place. When analyzing TTRPGs under this definition, and the usual temporal progression the narrative takes, it can be seen that the time of the fiction can be manipulated with ease by players and GMs alike. It is not uncommon for great spans of time to pass within minutes of play, as characters rest for weeks to heal from their wounds. On the opposite side of the spectrum, some situations can represent seconds in the time of the fiction but be much more dilated in play. Each round of combat in DND represents six seconds of fictional time, while it may take players several minutes to resolve.

By default, most role-playing games tend to utilize a linear temporal progression, only utilizing occasional narrative shifts as innovative mechanics and assistance to the players. *Blades in the Dark* (Harper, 2017) allows players to have flashbacks to establish past actions that influence the current situation to facilitate success. As the game is heavily focused on avoiding lengthy preparations, this resource simplifies that particular process. *Polaris* (Lehman, 2005) as a game begins *in extrema res*, with the players having the certainty that doom is ensured for their characters. This completely modifies the play experience and allows the narrative to focus on how a fatal conclusion is reached.

6.1.6.1. In Microscope

In this case, similarly to Polaris, play begins by establishing a beginning and an end to the story, with clear termination points (Hergenrader, 2018). This definition perfectly suits Microscope's working, as the game requires players to add periods and events along the length of the timeline, expanding on the story and constructing a coherent temporal whole. Players have absolute freedom to revisit any part of the temporal timeline, which makes Microscope's play a constant reinterpretation of the sequence to create a new present point, which will then become part of the sequence for future additions.

Creating a piece of the story requires players to follow a top-down direction, with various narrative sizes. Periods contain events, which in turn can contain scenes. This encapsulation of all additions helps players have a clear understanding of how the story moves forward and what parts are linked to each other.

It is worth noting that, while the construction of the timeline does not follow a linear structure, the end product of Microscope is a collection of periods, events, and scenes that form a cohesive story between two termination points that can be easily traversed from beginning to end.

Initially reluctant to implement this system, Robbins (2011, p.76) explains that during playtesting players found this mode of storytelling familiar with how people describe reality and their ability to naturally jump from moment to moment without hesitation, which led to the conclusion that "Time is not so confusing after all".

6.1.6.2. Observations

As observed, Microscope's innovation in the function of temporal progression is one of its main draws, and an exception to a rule which states that, wherever a story might begin, clear and linear advancement to the plot is a standard for role-playing games, and more extreme experimentation results in a more nuanced and unique design, albeit more complex and prone to risks in design.

6.1.7. Fruitful Void

Though the exact definition appears to not have been discussed at length since the inception of the term, the fruitful void comprises all the parts of the narrative experience that are not directly related to a game's mechanics. By observing the narrative pillars of a game, and how the mechanics work around them, it's possible to observe what parts of the narrative experience players take advantage of that are not natural to the rules.

6.1.7.1. In DND

At the start of the *Player's Handbook* (p.8), DND defines its three pillars of adventure to be social interaction, combat, and exploration. Each of these has sections of the book devoted to exploring them. Combat, in particular, occupies the entirety of chapter 9 and is highly dependent on mechanics and is therefore alienated from being in the Fruitful Void.

Chapters 7 and 8 (p.173-188) deal with how to utilize player scores and skills, including those directly related to exploration and social interaction. They also touch on travel mechanics, such as climatic conditions and possible encounters.

In this sense, perhaps the biggest unconstrained part of DND is how the players interpret their characters while roleplaying. The way their characters act and communicate is completely up to them and how much information they wish to share with others about themselves and the impression they have of other characters and the world. While the rules offer several skills connected to conversations, all of the nuances and complexity of human communication are on full display when playing the game.

6.1.7.2. In Fragged Empire

Fragged Empire's world presents certain topics which function as a backdrop for any narrative that appears during play. These are its post-post-apocalyptic setting, cultural tensions, genetic engineering, and exploration.

Cultural tensions are described at length in the setting guide, but they are simplified by a complication that causes prejudice against players depending on the race they're interacting with, excluding this pillar from forming part of the game's fruitful void. Similarly, genetic engineering is covered by the available skills (e.g. Bio-Tech) and the possibility for players to acquire implants that enhance their own abilities. Exploration is also treated like DND's, with possible encounters and rules that cover travel at a general level.

Therefore, aside from the aforementioned pillar of roleplaying and character interaction, the narrative that is absent from the rules is that of the game's setting. It is left entirely in the playgroup's hands to decide in what state of reconstruction society is, and in the GM's hands to communicate that vision to the player in their descriptions, to create their own image of a post-post-apocalyptic society.

6.1.7.3. In Microscope

As Microscope's objective is to construct a story, it becomes understandably difficult to determine what parts of the resulting narrative are not contemplated by the rules.

What the rules do contemplate about the narrative is that there's an inherent temporal progression and that the units of information described contain a tone of positive or negative.

What the rules do not control is the inclusion of new elements. Players are free to present new characters, situations, organizations, etc. as long as they are following the rules. It is in this constant influx of new information that the game establishes its fruitful void. This is only restricted by the minor requirement of needing to be connected to a focus, which serves the purpose of cohesiveness.

6.1.7.4. In The Quiet Year

Similarly, the game, while being a lot more closed-ended than Microscope in its narrative, The Quiet Year allows total unrestricted progression of plots and the narrative as a whole by not including rules pertaining to what players can feasibly add or not to the game. This results in the different plot points, issues, and other determining factors that separate each community represented in a session of The Quiet Year.

6.1.7.5. Observations

The differences between both genres of games seem to lie in the way these TTRPGs treat the focus of play. Traditional TTRPGs function around players utilizing player characters, so naturally, the emergence of the narrative appears when interpreting those characters. Storygames do not utilize characters in the same manner, so they put their fruitful void in the creation of the world, particularly those parts that can not be considered by the system itself.

6.1.8. Authority

The structures of power present in TTRPGs appear to be of great importance when discussing creative possibilities (Bergström, 2012), as deciding what pertains to the fictional world or not drives the story and a large part of the playing experience as a whole. Since storygames form part of the indie movement that strives to change the

trend of the GM figure, it is worth examining how each game handles its distribution of power and diegetic control.

6.1.8.1. In DND

At the start of the Player's Handbook (p.5), the game explains the roles that players and GM execute. Players create and interpret a player character that works together with other player characters. In opposition, the DM is presented as the game's "storyteller and referee". They create adventures, establish the fictional world around the characters, and control the characters that players might encounter.

A DM's description of the world leads to the players declaring the actions their characters would like to perform. In turn, the dungeon master determines the result of the player's actions and the corresponding narrative. This puts the DM in total control of the diegesis, save for the actions of player characters.

This distribution, as expected, aligns completely with the one presented in traditional TTRPGs (Boss,2006), with the DM having almost complete authority over the game world.

6.1.8.2. In Fragged Empire

When analyzing the GM guide in the rulebook (p.291-314), it can be seen that many of the same occupations previously discussed in Dungeons and Dragons are assigned equally in Fragged. Although the system possesses certain features that allow players to have more options when creating characters and choosing to perform actions, their power over the diegesis is similar to the one shown in the previous example, relating to the classification by Boss previously discussed.

6.1.8.3. In Microscope

One of Microscope's tenets is "the moment you are the GM, making the other players believe in your world. Speak with authority like you're describing a real thing you can see" (p.27). Whenever it is a player's turn, they have total control over what they wish to create and add to the diegesis, and other players do not get to interfere in their decision. The only limitations are that what the player adds relates to the Focus, that it is not in the 'No' palette, and that it doesn't contradict any previous information.

The only exception to this rule is that, when players are interpreting Scenes, they only have control over what their main character perceives and any actions that affect them. During Scenes, players can also 'Push' an alternative to a description if they feel like their option is better for the story. Players vote whether to change the events or dismiss the push by voting and play continues.

By looking at the distribution of authority, Microscope functions by a traditional distribution of authority when it comes to what players and GMs can typically do, but changes the assignment of these roles through play. Each player will get to be the Lens that decides a new Focus and each player has the same power over the diegesis during their own turn. This results in all players taking turns being the sole GM. During Scenes, all players can utilize secondary characters collaboratively as GMs, but each has control over a primary character, allowing them to perform actions related to the Player role.

6.1.8.4. In The Quiet Year

Although players are bound by the rules, they have control to decide what they wish to create freely. No single player has more control over the community than others, and all get their turn to act with total authority. This means that the GM role can be understood to be given to all players, or that it rotates as turns proceed.

6.1.8.5. Observations

A main factor of authority in the two storygames analyzed is that they take the traditional roles performed by the GM and distribute them equally amongst all players. This results in the traditional player roles being of lesser importance, as the diegetic control determines what actions a player can perform in their turn, with the knowledge that these actions are definitive and can not be overruled.

6.1.9. Resolution Mechanic

Also defined in this thesis as Degree of Response Specificity (Greenberg and Folger, 1988, as cited by Rugelj et al, 2018), this feature references how players can react to situations, and how much freedom they are allowed in their actions. This can cover both the mechanical means through which players usually act, as well as any other actions they can take to react to situations.

In most, if not all usual TTRPGs, players can simply state what their character does in response to an action. Then, it is left to the GM to determine if the character's actions could fail, based on the context of the situation and the character's own abilities. If they consider the situation to be difficult or require a test, the player generates a random result to determine whether or not they succeed. This can be done through a variety of methods, with the most common being the use of dice and cards.

DND has players roll twenty-sided dice (also known as "d20s") and add a bonus for their character's prowess in the particular area that the roll requires. In a similar fashion, Fragged Empire has the player roll three six-sided dice ("3d6") and add a bonus, with any sixes rolled being able to activate special, mechanical effects.

However, a noticeable difference between the two is that while the GM would ask the player to perform a roll in both cases, in DND the GM always assigns the skill to roll, while Fragged encourages players to look for new angles to handle problems and choose the skills they excel at. In the latter case, it is worth stating that players can not solve any problem with a single skill, since GMs can assign penalizations to their rolls for utilizing poor methods or justifications.

6.1.9.1. In Microscope

During their turn, players have to create one or more objects and add them to the timeline. Their absolute authority means that the degree of freedom is greatly expanded. When creating they are only restricted by three specific rules: their creation must be related to the current Focus or topic of discussion, they can not include any element from the "No" palette created prior to play, and they can not explicitly contradict anything previously declared.

These limitations forbid the players from deleting the contributions of others and keep all of the elements at the same level of importance. Creating multiple entries through a Focus also helps create better cohesion and inspires players to build on a theme and others' ideas, while maintaining the collaboration constraints established by Microscope.

6.1.9.2. In The Quiet Year

When the active player in the Quiet Year finishes performing the required preparation for each week, they can perform one of three actions. Discover Something New allows them to add something new to the map. Start a Project creates a situation that will be resolved in a number of turns. Hold a Discussion has the players talk about a particular topic and agree or disagree with it. For the first two options, the only limitation for the player is that their created situations must be communicated through a small drawing that takes no more than thirty seconds to detail.

As shown in Conflict (item 4), another way players can react to each other is by acquiring Contempt and redistributing it, to show the narrative tension increasing within the community.

6.1.9.3. Observations

Perhaps the most important conclusion to extract from this feature is that a clear difference between storygames and other TTRPGs stems from the fact that the main resolution mechanics are not constrained by randomness or belong to a Fortune Event Resolution (Edwards,2001), or at least not to such a high degree as the numerical randomness of dice rolling. Instead, they rely more on qualitative statements or a Drama Event Resolution.

The Quiet Year has the players pull cards out of a randomly shuffled deck, but these cards are meant to constrain the player into creating a more concise situation. In Microscope, deciding on a Focus serves a similar purpose. Therefore, these storygames show that constraints are helpful in maintaining coherence and helping with imagination, but that creativity should not be prefixed by random means.

Figure 8. Part of a table depicting the suit (Hearts) and questions for the cards Ace and Two, related to Spring. Source: Author's creation from Alder, 2013 (p.11).

6.1.10. End Conditions

As seen in the Goals feature, TTRPGs do not usually possess clear end conditions, being finished whenever the players consider it appropriate.

In games like DND and Fragged Empire, a campaign could end with the players obtaining their ultimate goal to win, simply with the story being left inconclusive, or failing. This usually happens when one or more player characters die, creating a dilemma for the players controlling them. They can introduce new characters to replace the old ones, or decide to abandon the story altogether.

6.1.10.1. In Microscope

The game ends whenever the players consider, as with the prior examples. What differs then is that the story of a Microscope game can not be considered to be finished by the game, nor is there a "win" or "lose" state. Players are always able to revisit a story and expand it, changing their outlook on certain parts, but they are bound to a singular principle: that the story itself has a conclusion and that everything they add will inevitably lead to that conclusion.

6.1.10.2. In The Quiet Year

Contrary to most games, the Quiet Year has the game end when a particular card, the King of Spades, is pulled from the deck. This deck is arranged in preparation by shuffling each suit separately and then ordering them, with the intent to represent the seasons of a year passing with each particular suit. In this analogy, Winter is represented by Spades and the King of Spades has the Frost Shepherds arrive in the community, ending the game.

When discussing the Frost Shepherds, the rules (p.8) make a specific point about never strictly defining what they represent during play. As the card is read aloud, the game ends and then players are allowed to discuss the nature of the Frost

Shepherds. All other limits on communication and discussion also cease, and the game can be analyzed with freedom.

6.1.10.3. Observations

What can be taken away is that, while most TTRPGs still tend to have unclear ends and The Quiet Year is but an exception, both of these games are meant to provide a complete play experience in the span of a single session of play, usually taking multiple hours. In contrast, usual TTRPGs, while being able to offer a similar experience in what is commonly referred to as "one-shots", are better suited for longer campaigns, taking multiple sessions to be finished.

The prototype should then follow this convention and allow for a mostly completed result in the span of a session.

6.1.11. Information Management

Connected to the frames of storytelling items, as communication is key in determining how information is propagated, information management seeks to analyze who holds the information, what is its nature, and why the game decides to distribute it the way it does.

6.1.11.1. In DND and Fragged Empire

As players make decisions, they have to consider what information the player possesses and what information the character has. A player performing an action with their character based on information they have, but the character ignores, is one of the most common forms of "metagaming". When the DM adds new information to the diegesis, they usually tell all the players, but often a limited amount of characters.

Players also have the right to keep to themselves any information pertaining to the backstory of their own characters. This information is known only by them and the DM, and both are free to develop it into the narrative at the pace they determine.

The DM, as the figure of the authority, has the most amount of information. They control what surrounds the player characters, the intentions and backstories of all non-player characters, and the events happening in any part of the fictional world. They are able to reveal any part of this information as players perform actions and progress in the narrative, but they have complete control over it.

Furthermore, this separation in the amount of information each role holds can be seen too in the mechanical side of the game, not just the narrative. A common item that traditional TTRPGs offer is the GM screen, which serves multiple purposes. Aside from typically providing a reminder of the rules on its inner side, this item conceals any notes that the GM might have prepared about the narrative or subcreation, as well as their dice rolls. This allows GMs to lie about their rolls and change things without breaking consistency in the narrative, where players normally have to perform their die rolls as public information. Although lying about rolls could be interpreted to be an invalid strategy that opposes the rules, GMs often do this to benefit players.

6.1.11.2. In Microscope

Microscope has very strict rules about information. Players are greatly encouraged to "keep their ideas close to the vest" (p.59) and not disclose any of their ideas to others. This serves a twofold purpose: it plays into the concept of every player having total control over their turn by not taking any suggestions, and also ensures that players can not easily agree with one another.

Anything that a player adds during their turn or as a legacy then becomes public information to all players, having been transmitted directly from a player's imagination to the final artifact uninfluenced.

During scenes, there's a particular rule about information and whether what characters state is the truth or hearsay (p.40). If a character can not justify how they are able to perceive something, then that thing can not be established as truth, just that character's opinion.

6.1.11.3. In The Quiet Year

As in the last example, the information often flows directly from the player's minds to the final product, in this case, the map of the community. Players only have access to any public information on the map, as well as cards that have already been drawn from the deck, and any ideas they might have for future developments of the game.

6.1.11.4. Observations

Similarly to other sections of the analysis, authority is a great determining factor in how power, information, and many other characteristics are distributed amongst the players. The majority of the information will be in hands of the player or players with the most authority. For traditional TTRPGs, this means the GM. For storygames, this means all of the players. As inner thoughts are inherent to all games, the quantifiable information is meant to be public for all players, so as to collaborate and obtain better consistency from the end product.

6.1.12. Progression

When tackling progression, two different angles are used, with both referring to the fact that a game's state is in constant evolution, and therefore, so should everything. With no progression, the system stagnates and play becomes repetitive.

The first angle observes how players can acquire new mechanic elements that improve their options. This follows a balancing design made by the creators of the game to provide challenges that scale in difficulty as players scale in power. In contrast, players progress in a game when the game has advanced and their options are now conditioned by its current state. This latter lens is more useful in shorter games that lack a strong use of the former type of progression.

6.1.12.1. In DND

Mechanically, players choose a Class. This class provides them with several abilities and includes features that are unlocked during play by increasing in Level. Progression of levels is controlled by the GM, who decides when players level up and obtain new features and spells.

In addition, the game itself progresses in difficulty, as the GM is encouraged to utilize monsters with a higher amount of Challenge Rating (or CR). CR is an illustrative number that helps GMs design balanced combat. As the *Monster Manual* states (Mearls, Crawford, 2014b), "An appropriately equipped and well-rested party of four adventurers should be able to defeat a monster that has a challenge rating equal to its level without suffering any deaths".

6.1.12.2. In Fragged Empire

Similar to DND, Fragged Empire has players level up, but it is at a fixed rate: every three play sessions, players progress a level. As Fragged has no classes, players instead choose a Trait from a list, which can be expanded upon by negotiating and creating new options in collaboration with the GM.

Another main feature of the progression of Fragged Empire is the management of resources. As players gain levels, their maximum values for their Resources and Influence increase, allowing them to obtain more powerful weaponry, and utilities, and improve their shared spaceship.

For the second type of progression, both DND and Fragged have players progress through skill challenges and combats, with the latter being a situation that heavily relies on the current state of each combatant, and what happens between each turn. By taking their actions, players inevitably drive combat to its conclusion, by taking into consideration their own resources, their enemies', and all relevant information of the area.

6.1.12.3. In Microscope

Microscope doesn't give more power to the players to progress mechanically. The only mechanic that could correlate to the ones previously explained would be Legacies (p.52). Legacies allow players to retain a certain element and utilize it in future rounds. Furthermore, players can use any Legacy currently being kept by any player, not just their own. However, players can only have one Legacy and replace it with a new one when it is their turn to choose a Legacy or another player renounces their Legacy.
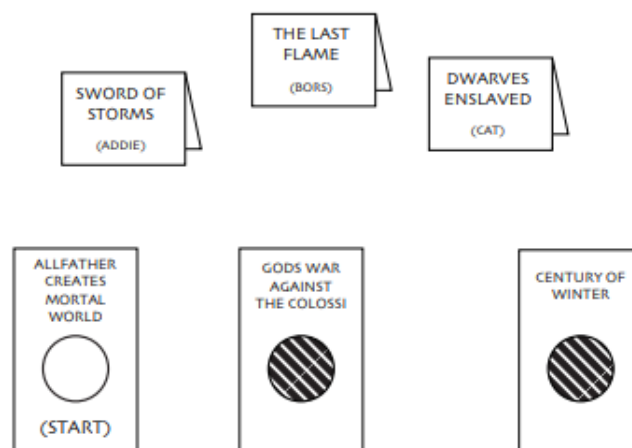
Figure 9. Depiction of a board state in a game of Microscope. Source: Author's creation from Robbins, 2011 (p.54). This image shows the Legacies of three of the players (top) and part of the Periods in play (bottom).

With this mechanic, players can retain certain aspects they believe to be useful, or that haven't been used enough. Understanding that players are forced to work under a Focus that they won't have chosen for the turn helps include options that allow for greater freedom.

In that sense, Microscope's state of the game is constantly being revisited, as players add new parts in different parts of the timeline. In a player's turn, they get to make a choice under the current Focus, but also taking into account all of the new pieces that came into place since their last turn, so as to not contradict any established information.

6.1.12.4. In The Quiet Year

As play is regulated by the deck of cards that arbitrates the passage of time, The Quiet Year makes use of a similar progression as Microscope. In a player's turn, the map has been affected by every other player, projects are closer to completion, and all sorts of new situations have arisen. Their decisions are informed by how the game state has progressed.

But focusing on the passage of Seasons, the game includes a section on Pacing, which states how the game advances and seasons change. Spring (suit of hearts) asks questions to establish the landscape and the basic functions of the community. Summer (diamonds), the community begins to define itself, and certain problems will start to appear. Autumn (clubs) puts forth the hardest challenges for players to tackle.

Finally, Winter (spades) has the community continue its work, with the understanding that the game is about to conclude.

6.1.12.5. Observations

In this instance, the second type of progression appears to be present to different extents in all games, as was expected. How it operates in each example is defined by the particular mechanics of the game, meaning that when designing a new game the first type of progression will be the strongest source of inspiration of the two.

When observing this mechanical advancement, the shorter length of storygames doesn't allow for a complex level-up system, which is much more favored in the longer, more mechanical play of DND and Fragged. However, with the use of Legacies and Contempt, it is clear that an interesting way to handle progression is by utilizing certain resources that players can manage and perform special actions with.

6.1.13. Roles of Rules

By their nature and the observed performative goals, TTRPGs have a high tendency to require actions to create. As Reed (2017) supports, Generation is one of four essential activities these games engage players in. Utilizing the framework proposed by Bergström (2012), rules can be observed and their contribution to this procedure is better comprehended.

6.1.13.1. In DND

Perhaps the most noticeable role the rules fulfill at a superficial level is the one described in resolution mechanics (Item 9). Rules as randomness cover all parts of the action resolution system, as players roll dice to assert if they are successful in their actions.

On page 6 of the *Player's Handbook*, the process described to resolve a player's intent has the player describe how they react to the environment laid out by the DM, and then the DM asks the player to perform a roll following the rules if necessary. Therefore, the system operates on a narrative-first approach. Players also have great control over rules as inspiration, as the wide range of character creation options allows players to explore multiple playstyles and wildly different concepts. For the Dungeon Master, the first chapter in the Guide (p.9-68) focuses on explaining the basic concepts for any DM to create their own world.

The *Dungeon Master's Guide* also establishes the DM as the authority and controller of the rules, so the roles of arbitration, consistency, support, and diegetic control fall in large measure to them. Communication between players is also arbitrated by the DM, who ensures that it happens at the proper levels and that it doesn't incite further conflicts.

Absent are rules as creative coolant, as players are mostly constricted by fixed rules that allow them to maintain consistency.

From these observations, Dungeons and Dragons appears to focus itself on Problem Solving creativity as a narration-first system, Acting creativity as players are highly influenced by the randomness of their rolls, and Gaming Creativity can make use of the tight-knit rules, with knowledgeable players looking for tactical and novel approaches to succeed within the established constraints. In a minor role, Game World creativity directly correlates to the part of rules as inspiration assigned to the DM.

6.1.13.2. In Fragged Empire

Similarly to DND, Fragged Empire puts emphasis on similar areas, with rules as randomness functioning in the general way, despite the use of different dice. On page 39, the process to make a roll is explained in detailed graphics. Once again, the player chooses their approach to the situation explained by the GM and decides how they wish to justify their actions mechanically, presenting a narrative-first system.

Inspiration in this rulebook is even more present than in DND, as players have plenty of traits to choose from and construct their character in smaller units of information, which allows for a greater number of combinations. GMs, on their side, have access to a GM guide that directly encourages them to "Invent their own rules" (p.291). Both roles participate in rules as inspiration, and the GM is left as an arbitrator and support for the players. Communication is once again arbitrated, but free between all players at all moments.

As an option, the resolution mechanic allows players to provide a description of how they face particular problems. GMs are left to consider if the character is playing to their strengths and being creative by using the world to their favor, resulting in a bonus for description. This bonus is however not automatically applied (p.38), and the players should earn it by providing proper descriptions. Rules act as a creative coolant to ensure that players look for the proper approach in each case.

To sum up, Fragged encourages many of the same types of creativity DND does, but it's more modular nature is representative of a higher potential for gaming creativity and system creativity, as to adapt the rules to the likings of the playgroup. It is worth noting that Fragged's recognition of this fact has been further developed in its second edition, which is currently in production.

The second edition rulebook includes next to certain traits symbols that define the creator's intention when creating them. Some of these icons are for "rules-light" options, meant for newer players, while others focus on the potential to create powerful combinations, and others on the narrative potential of the option. These icons are respectively connected to traits that benefit Gaming and Narrative or Acting Creativity.

6.1.13.3. In Microscope

To contrast the previous examples, analyzing Microscope reveals some significant differences. As a particularity of this game, rules as communication play an important role in managing the flow of information, as the game asks players to keep their ideas to themselves. The game also asks players to prioritize the rules, as they are few, by establishing what unit of information they are adding to the timeline before explaining what narrative it contains.

Absent too are rules as randomness, since the game avoids any random resolution mechanic. The uncertainty is instead generated by the other players' actions.

In its main turn mechanics, Microscope forces players to utilize a Focus in their creations. Making sure that all players add elements that pertain to the same theme ensures consistency and creates both a constraint and a source of inspiration. Although disagreements are meant to be few, some parts of the game, like Scenes, clearly define the functions of rules as arbitrator by giving control to each player of a primary character. The outcome of any action that affects their character can be typically only decided by them.

By focusing on these categories of rules, acting creativity shifts out of focus in favor of game world creativity, as the rules-first approach benefits this type. The

consistency provider aspect of rules contributes both to this type of creativity and narrative creativity, which supports the main goal of Microscope. Gaming creativity, although rules as arbitrator plays an important role in the game as a whole, loses importance as the rules are not complex nor is there a random system that makes all players equal, instead players' limits are only defined by their own creative ability.

6.1.13.4. In The Quiet Year

The actions in the Quiet Year also help the player choose rules first and then explain what their contribution to the map is. The rules for communication are also restricted, as seen in the recommendations the rulebook does on restraint (p.7). The authority being equally distributed between the players has a similar effect to that of Microscope on arbitration, with each player having the last say during their turn.

While the game does not provide a focus on creation, the existence of the Abundance and Scarcity of Resources helps the players be constrained to draw inspiration from this table and look for ways to progress the table. All of the questions linked to the cards drawn are the clearest source of inspiration and of constraints. These help drive the game forward while keeping a consistency with what the players are trying to answer by guiding their actions.

6.1.13.5. Observations

Analyzing these particular cases, it would seem that storygames have a tendency to function in a rules-first manner, with the implication that this helps develop game world creativity. This could be a feature of these two games, and not representative of the genre as a whole. What is a determining factor is the absence of rules as randomness at large, as even the random system where the players draw cards from a deck in the Quiet Year is constrained to a limited number of answers, all of which are likely to appear in different orders, with the exception of the Winter cards, which could be promptly interrupted by the end of the game.

Acting creativity seems to be of lesser importance as the interpretation of characters is avoided or simplified, as is the gaming creativity of more complex systems. In fact, storygames appear to center themselves on game world creativity completely or a combination of narrative creativity and game world creativity. Therefore, it is extremely important to develop rules in its rules as inspiration role to ensure that the game can lead to the proper types of creativity. Rules as creative coolant and consistency providers can also ensure that the structure of the game is ordered and the result, which in storygames is an artifact considered to be of great importance, is cohesive.

6.1.14. Creation of Artifacts

Building mostly on Hymes' considerations for artifacts (2020,2021), how the game handles the creation of documentation and artifacts of play determines several aspects, from how it distributes control to the creation of immersion.

6.1.14.1. In DND and Fragged Empire

By analyzing the games themselves, they do not usually require players to create any documentation, except for one essential element: character sheets. Players write about the features and abilities of their characters as a level tracking tool, which fulfills all the requirements to be considered an artifact of play.

Everything else will be personal to the playgroup (Hymes, 2020). GMs typically have to create maps, NPC sheets, rule summaries, etc. that help the players picture the fictional world and clarify their character's intentions mechanically and narratively. Even though most GMs do this, their level of depth and detail will change depending on the system and the particular story being told.

Likewise, players have a tendency to take notes and keep information about their characters in written support, but how much they write and how useful as an artifact

those journals might be will be an expression of the player's willingness to treat them as such.

As a whole, many groups have a tendency to create resources, external to the game, which could be considered as documentation of play, depending on their particular skill set as people. Character drawings, music, written fiction, memes, etc. Most of these expressions are not considered by the rulebook, but instead are an emergent result of the player's involvement with the TTRPG.

6.1.14.2. In Microscope and The Quiet Year

In contrast to the other two games, these storygames present a clear artifact of play, which is constructed during play and is, in fact, the main objective of the game itself.

The distinction between the story of Microscope and the map of the Quiet Year is based solely on the materials used and the object expressed. Interestingly enough, while artifacts are partially defined by their ability to be revisited and reminisce about the events of play, these games go further and allow the same artifact to be expanded upon in future play sessions, as many as players desire. I believe that this characteristic is not a strict requirement for storygames, but it does increase their appeal and replayability in a distinct way from traditional narratives, where exploring the same story twice might generate a lack of interest in players.

6.1.14.3. Observations

As previously defined, storygames are greatly characterized by their ability to generate significant, major artifacts of play that form the greater part. By Hymes' commentary on artifacts, these games allow all the players to put their creative input into the final product, which correlates to Hymes' considerations about the way artifacts express how authority and control are shared.

6.1.15. Scope

As previously defined, Scope is understood through two main factors: its Breadth and its Depth. The bounds and limits of a fictional world define its breadth and the explicitness of its parts and its depth. Depths tend to fluctuate across breadth, but the average levels show how in which scales a fictional world is meant to be interpreted.

6.1.15.1. In DND

Dungeons and Dragons implies the existence of a multiverse, which features a number of Planes. Most planes are left undefined in reach, but most dnd worlds occupy the space of a world of similar dimensions to Earth. This creates a wide playing field for GMs to explore and create all sorts of campaigns.

Figure 10. Map illustrating the multiple planes of existence.Source: Author's creation from Mearls, Crawford, 2014a (p.57).

With the first entire chapter of the *Dungeon Master's Guide* (Mearls, Crawford, 2014a) dedicated to having the GM create their own world, Scope as a point of the discussion appears early (p.14). The suggested breadth of the scope ranges from settlements to continents, with many degrees of separation.

Depth, in turn, is left to the GM to create depending on the degree of breadth they chose for their world. Instructions are varied and touch on many topics, from organized religion to forms of governance, but always with the GM having the ultimate authority over their created world. This feature makes DND similar to storygames in that they allow the players with authority to define the scope of the world, which implies that, as previously stated, this falls onto the GM and not all of the players.

The GM-created world is defined as the "Material Plane". This plane is always accompanied by several others, more rigid in their definition (p.43-68), which don't include a great amount of depth. A description of the overall tone and feel of the plane is given, alongside some of the most notable landmarks.

6.1.15.2. In Fragged Empire

As a science fiction game, Fragged Empire features elements of intergalactic travel and space exploration. This implies that the breadth of the universe is quite large, including multiple systems and sectors. On pages 8 and 9 of the manual, maps for the main points of the setting are shown, featuring a sector and the Haven system, the origin for most of the player species.
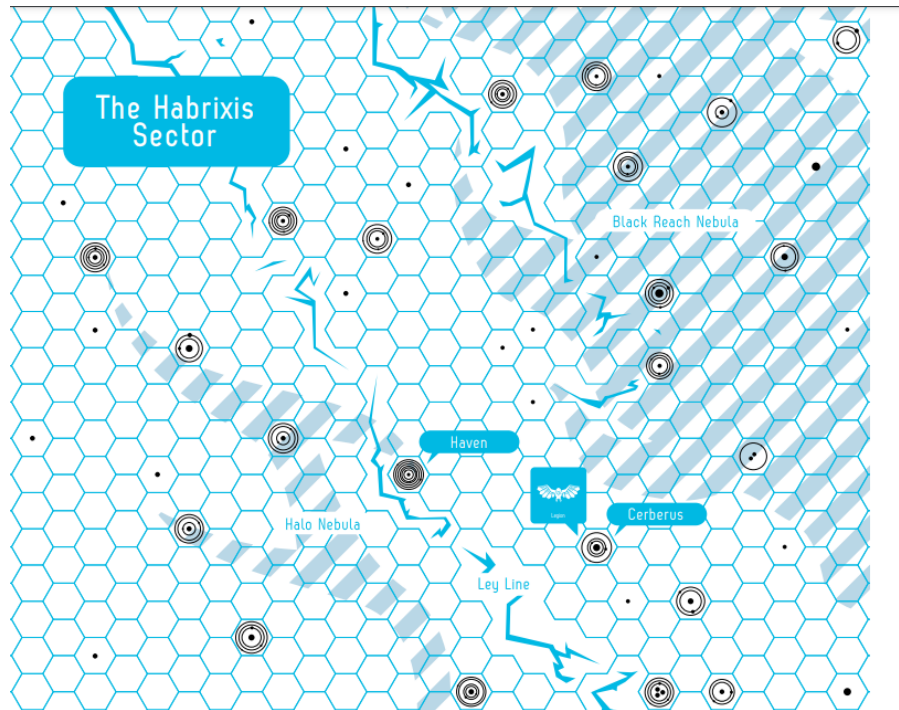
Figure 11. Map illustrating a portion of the Habrixis Sector. Source: Author's creation from Dyer, 2015 (p.8).

As the initial proportion for breadth is of great size, depth is considerably reduced, particularly when compared with the other games being analyzed. In its setting guide (p.182-288), the rulebook concentrates on a handful of planets and their significance to the multiple playable species. In fact, it is in these species that the game puts most of its effort into creating complex cultures and clear differences between them. This allows GMs to always have a clear baseline when defining any part of the universe they wish to explore by taking the base culture of the predominant species of the planet and making any particular modifications they wish to implement.

This approach is a particularly interesting work around the lack of depth that a game like this would suffer, where focusing on a handful of wide-reaching species instead of overpopulating the universe with hundreds of poorly defined civilizations helps create a more consistent whole and manage player's understanding better.

6.1.15.3. In Microscope

Microscope's world can be defined at any size, which means that breadth is highly flexible, allowing players to tell an entire story reaching multiple galaxies, or not leaving a single house in the game world.

Its depth, however, is interesting in that, unlike other systems that describe objects and locations to construct depth, Microscope focuses on telling its story by creating multiple levels of concretion. As explained previously, periods contain events, which contain scenes. This facilitates comprehension and links all events. It is this structure that gives the name to the game, as players have the ability to zoom in or out depending on what level of depth they prefer to work at.

How deep and wide each of the three types of units Microscope utilizes is greatly defined both by the breadth of the world at large, but also by the breadth of the temporal timeline. A story told in a handful of hours will necessarily feature events that take minutes. When the termination points define a timeline of ages, periods span hundreds of years. Scenes, as they require roleplay on a 1:1 scale from the time of the fiction to the time of play, tend to not be dilated or collapsed in proportion.

6.1.15.4. In The Quiet Year

The game focuses on a small community on a map, stating that by default it has sixty to eighty members. With the idea that it should occupy a third of the map, it is safe to say that Quiet Year defines its prototypical world to span a small area of square kilometers.

This, in turn, allows the Quiet Year to stand out in its potential for depth. Starting with a rough sketch of the area, players immediately introduce details and sketch simple

drawings to represent their creations. However, these details can be of an incredibly varied nature, allowing to create landmarks, natural resources, smaller communities, zones of conflict, etc. with ease.

Individuals are also created and specified, as the community becomes better defined and more vivid. Although the game explicitly advises against focusing too much on fleshing out particular individuals (p.8), they can be named and assigned roles within the community. The most important objective remains to construct a community and its surroundings.

Observations

What can be observed is that scope is not a defining factor of difference between storygames and other TTRPGs, since games like DND and Fragged Empire could perfectly adapt themselves to operate in an area with the same breadth as the map in the Quiet Year.

However, it is particularly worth noting that depth plays an instrumental role in how we define these games. Depth gives storygames players a clear idea of what they should be creating and at what scale.

When creating a prototype, a defined area such as the one employed by The Quiet Year is easier to manage and control in design, at the cost of losing more freedom to expand breadth. Instead, the prototype could focus on defining that small area, but utilizing the generalist hierarchy of species and factions shown in Fragged to imply that the created world is a smaller part of a whole with shared elements, even if mildly modified.

6.1.16. Genre

As the ontological rules for genre defined by Ryan are quite extensive, the following analysis covers the findings for each of the study cases, while the definition of each genre's characteristics is left as a reminder in the corresponding section (p.).

6.1.16.1. In DND

As the world can be plausibly full of fantasy races such as dwarves, elves, goblins, etc., worlds present a different inventory of individuals with different properties. The fauna presents regular animals alongside fantastical creatures (Augmented natural species), and the modification of the laws of nature is left to the DM to change, although magic is a common trope, as players often require the ability to cast spells.

The space of the geographical world is that of a "plane", with access to other planes as needed, but usually in a completely fictional world.

Technology is often less advanced, although it can include speculative, more modern elements. Time is typically representative of a speculative late medieval European with elements of magic introduced. The logic of the world is constant, although some random elements can be present when utilizing more chaotic character options, such as the Wild Magic Sorcerer in the *Player's Handbook* (p.103).

Figure 12.Part of a table illustrating the multiple results of the Wild Magic Surge ability.Source: Author's creation from Mearls, Crawford, 2014c (p.104).

What can be inferred from many of these observations is that DND is set in a high fantasy world, with exotic species, magic, and an overall medieval feeling to its worlds.

6.1.16.2. In Fragged Empire

Opposite, Fragged Empire takes the primary universe where our primary world exists and engages in a speculative future, which has a much more advanced technological level and is populated by possible races engineered by humanity's descendants, which are different from any real characters. Players are free to explore entire galactic systems and journey between planets in weeks or days worth of travel.

The natural species are once again augmented by fictional creatures, and the laws of the world are augmented by science and technology which can perform feats similar to those of magic. The logic of the world in this case is solid and always respects its internal consistency, even as that consistency is based on fictional elements.

The universe in this case is based on science fiction, indicated by the advanced technology, the amplified cosmology, and the focus on science and future speculation.

6.1.16.3. In The Quiet Year

The Quiet Year is extremely flexible in its world, allowing players to set the events of the game in any world they want, even being able to represent situations in the primary world, making use of historical individuals.

It is through its technological level, which is implied to have taken a regression recently that a trope of the post-apocalyptic genre can be seen, which is the intended setting for this game.

6.1.16.4. Observations

The difference in genre between the traditional TTRPGs and storygames comes from a general lack of conciseness in the storygames' setting. This information is left intentionally vague, with the exception of minor details as seen in The Quiet Year, to allow players to create the world to their liking.

Microscope is absent from this analysis, as players are completely able to create a world that falls into any categorization of genre. Perhaps the most stable characteristic is that of logic, as players can add any new element they wish to, but can not contradict any previously established information.

Following are the items pertaining to Hergenrader's Structures (2018). As they have been defined at length, this section of the analysis includes solely the results when appropriate for the studied games, as well as any relevant observations.

6.1.17. Governance Structure

6.1.17.1. In DND

In the *Dungeon Masters Guide*, the creation of the world entails defining several factions and governments. By default, DND reverts to medieval feudalism, where people pay taxes to a government of nobles, that in turn protect them from threats and serve as a way to pay for commodities and social services. Nobles also appoint agents to collect taxes and apply the law from individuals usually native to their communities that hold the respect of the people they protect (p.18). It is also not unusual for a leading noble to be counseled by lesser nobles or representatives from the most important factions of the settlement, such as scholars or merchants with sufficient influence.

The manual, however, facilitates players escaping from this basic formula by providing a list of forms of government, arranged alphabetically from autocracy to theocracy, with the corresponding definition to assist players in creating a varied political landscape.

6.1.17.2. In Fragged Empire

The Fragged Empire setting covers a large area of many planets, so establishing the governance structure in a uniform manner can prove to be difficult. However, knowing that planets are assigned a main species, which has the biggest population and influence over the planet as a whole, determines the predominant political stances of that world. Each species has its own governance system, which is connected to its beliefs and culture. The Corporation has a plutocracy based on merit and is the core of the capitalist philosophy. Kaltorans, as a culture revolving around family, utilize councils of elders to make decisions. Other species similarly differ in their political outlook.

As with government presence, rule of law and social services are highly dependent on the planet being analyzed. Different crimes are assigned very distinct punishments depending on the judicial force's species. Likewise, social services have a high dependence on the regulating government. Corporates have high economic power, but take little care of the general welfare of the population. Species like Kaltorans and Remnant (the latter being later added into the game) are much less focused on hoarding wealth, as they prefer to create a sense of community and protect the less fortunate.

The main use of the Governance structure can be understood as establishing more differences between the races by expanding each of their cultures.

6.1.17.3. In The Quiet Year

The biggest difference in this game is that, while the players do not represent any particular characters, they can make decisions for the community as if they led it. This causes all substructures of governance to be defined by how players decide to apply their power through their actions. Players can Hold Discussions to agree on judicial decisions or how the community should be managed. Other options would include players starting projects to enhance or worsen social services, and other matters such as creating law enforcement groups or institutions.

Similar to DND, governance has to be defined, but players get to decide how it is shaped, not just the GM.

6.1.17.4.Observations

As an interesting conclusion, a difference appears in this section that will be a constant throughout all of the substructures. DND and the Quiet Year provide

freedom for players to create the world where play takes place, or where the world itself is the play. However, this power is given to those who have authority in the game, meaning that it falls to the DM in Dungeons and Dragons to create the governments of the world, while in the Quiet Year all players can weigh in and change the behavior of the leaders of the community.

6.1.18. Economics Structure

6.1.18.1.In DND

When designing a world, the guide for the GM features several sections that pertain to the economy (p.19-20). In their sections "Commerce" and "Currency", the game details how settlements of all sizes can provide adventurers with supplies of various nature, focusing on weaponry, protection, and lodging. Economic Strength is not discussed, as the GM will be able to decide where a settlement is strong and weak in terms of resource production.

Figure 13. Coins typically accessible to players in a game of *Dungeons and Dragons*
.Source: Author's creation from Mearls, Crawford, 2014 (p.20).

However, the larger a settlement is, the more specialized the products and services players will be able to acquire are. In that sense, wealth distribution seems to be implied by the existence of different occupations that have strong ties with poverty or lack thereof in the real world: bandit, merchant, villager, noble, etc. While the game does not force any particular part of its setting to be subject to this classification, GMs are freely available to do so and create societies with economical divides.

Agriculture and Trade, however, are greatly important, as expected from the historical setting that the genre enforces. In a fantastic, but medieval environment, both agriculture and trade were essential in keeping society functioning and connecting distant settlements, both in sharing information and resources.

6.1.18.2.In Fragged Empire

In the focal point of its setting, Economics is put front and center when defining the different cultures, with various systems being cornerstones in the player species. The economic strength of each faction is extremely variable, as each species assigns value to different objects, with some focusing on bartering instead of more modern currencies typical of science fiction and cyberpunk settings.

Therefore, the wealth distribution can be understood to be in a certain balance of power in that no species is left without its essential resources. However, by how the setting is constructed, particularly in the Haven System, the Corporation has taken the reins of the rebuilding efforts, and has the major economic power of all species, placing them on top of the political management of the larger interstellar whole. Agriculture and Trade are treated as essential parts of survival and are usually handled by those on the lower parts of the economical hierarchy, while the rich focus on investigation, leisure, and other less basic endeavors.

As with Governance, Economics is utilized to further distinguish the different species and flesh out their cultures even further.

6.1.18.3. In The Quiet Year

As the game does not greatly define its genre or its landscape, players are left to establish the nature of the resources available to the community. However, the rulebook defines the progression of a community rebuilding from a conflict. Therefore, its economic strength can be understood to be frail, as its resources are divided.

The Quiet Year makes use of a mechanic in preparation for play where players state that resources are in Abundance or Scarcity. A resource is something that the community wants and needs. All resources chosen to be scarce or abundant are added to the map in one way or another. The lists represent the health of the community and can be changed through the player's actions, or whenever the circumstances indicate that it is appropriate to do so.

In terms of wealth distribution, the community is normally understood to form a homogeneous group, but the rules allow for divisions to appear (p.8). This can be a result of a large project and allows players to discuss as members of each different community. The nature of this division is left unspecified, meaning that it could pertain to an inequality in the distribution of wealth, creating higher and lower classes. Agriculture and Trade are given a minor role as generators of creativity for Resources, with the consideration that their role in the community is greatly affected by whether they classify as abundant or scarce.

6.1.18.4.Observations

As can be seen, Economics is not a particularly important point of separation between traditional role-playing games and storygames, as the Quiet Year

implements a fairly simplified, but still effective, structure of resources that informs its economic substructures.

Perhaps an interesting point to be made is that DND focuses on how economics functions as to how the players will perceive it when playing, not on how the world can economically sustain itself. Villages' economies are only important as to how they can supply the player characters. Fragged instead utilizes its economy to define the world around the characters, not how the world will bend to them.

6.1.19. Social Relations Structure

6.1.19.1. In DND

When discussing social relations in DND, Race relations are perhaps one of the most important parts of the games as a whole. In the *Player's Handbook* players have a wide array of race options to choose from (p.17-44). Each race has a brief description of its characteristics, but also all of its subraces and typical groups. Furthermore, the race gives important mechanical attributes to a player, which are related to the innate abilities of members of that race are supposed to have. Certain pages even go as far as to define what some species think of others (see figure below).

SLOW TO TRUST

Dwarves get along passably well with most other races. "The difference between an acquaintance and a friend is about a hundred years," is a dwarf saying that might be hyperbole, but certainly points to how difficult it can be for a member of a short-lived race like humans to earn a dwarf's trust.

Elves. "It's not wise to depend on the elves. No telling what an elf will do next; when the hammer meets the orc's head, they're as apt to start singing as to pull out a sword. They're flighty and frivolous. Two things to be said for them, though: They don't have many smiths, but the ones they have do very fine work. And when orcs or goblins come streaming down out of the mountains, an elf's good to have at your back. Not as good as a dwarf, maybe, but no doubt they hate the orcs as much as we do."

Halflings. "Sure, they're pleasant folk. But show me a halfling hero. An empire, a triumphant army. Even a treasure for the ages made by halfling hands. Nothing. How can you take them seriously?"

Humans. "You take the time to get to know a human, and by then the human's on her deathbed. If you're lucky, she's got kin—a daughter or granddaughter, maybe—who's got hands and heart as good as hers. That's when you can make a human friend. And watch them go! They set their hearts on something, they'll get it, whether it's a dragon's hoard or an empire's throne. You have to admire that kind of dedication, even if it gets them in trouble more often than not."

Figure 14. Extract detailing dwarves' perception of other player races. Source: Author's creation from Mearls, Crawford, 2014c (p.19).

Also in terms of race, DND has had a certain tendency to classify all members of sentient species as evil, as they appear in the *Monster Manual*. As more material has been added to the Fifth edition of Dungeons and Dragons, the design has moved away from this tendency and has allowed players to explore good moral alignments with races previously only considered to be enemies.

For gender and sexual orientation, the *Player's Handbook* allows freedom for players to play any gender or sexual orientation, without benefits or penalizations, aside from those that could be imposed by the cultural expectations of the game world. Certain races, such as the drow, are typically characterized as a matriarchy, but these are specific exceptions, and players can work around them or ignore them altogether. Certain gods and figures of power, such as the androgynous hermaphroditic elven

god Corellon Larethian, do not conform to heterosexuality or cisgenderism. This fact does not influence the game in any significant way for better or worse. As a minor note, age plays a similar role in a cultural aspect, with coming of age and experience being important parts of racial culture and governance.

Ableness is not handled particularly well, as certain conditions such as being blinded or deafened are treated as impediments to combat. Similarly, mental conditions in combat can range from drunkenness to mental illnesses such as paranoia and schizophrenia. The reductive nature of how disabilities are treated paints a picture of a world that by default focuses on able people, and does not concern itself with issues of accommodation for functionally diverse people.

Lastly, in its medieval setting, DND often presents themes of tension between classes, as the strata of societies create divides between nobility and the general populace, and plenty of people resort to criminality to better their living conditions. Certain societal structures, such as the aforementioned drow, are deeply hierarchical and expect members of lower ranks to obey these restrictions.

6.1.19.2. In Fragged Empire

Fragged puts one of its setting core pillars in racial tension. Species in the Fragged universe are part of a web of connections and past conflicts that have formed an ecosystem of relations between them. For a plethora of reasons, species think less of each other or show respect and appreciation. This is reflected throughout the rulebook, and best exemplified by simple mechanics such as Prejudice, which imposes a penalization when interacting with members of a species that has a prejudice against them.

With class relations, most of the tension can be observed by the differences in Economic systems. While no single Species is truly under another in terms of class, the ones that hold economic and political power over the majority of the system of the setting consider themselves to be of a higher class than others. While interspecies relationships are not defined by class relations, elements of them appear in certain intraspecies analyses. The Corporation as a capitalist meritocracy is very focused on acquisitive power and plenty of less powerful people are considered so for their inability to get rich.

Gender is not a significant part of the setting save for certain exceptions. The Kaltorans (p.217), which also consider old age to be an extremely relevant part of their culture, tend to favor one gender over all others when deciding who has a better right to lead, with this decision being taken by every individual community. The Nephilim (p.249) are genetically engineered to fulfill certain functions and, as such, do not concern themselves with matters of gender, many of them not even being able to reproduce. In contrast, a certain type of Nephilim named Emissary has been introduced in the setting, to create diplomats to interact with other species. Emissaries are made to be physically attractive, which means accommodating them to gender expectations, whichever that gender is. No comments on sexual orientation are made, which can be understood as a way to free players to decide for themselves.
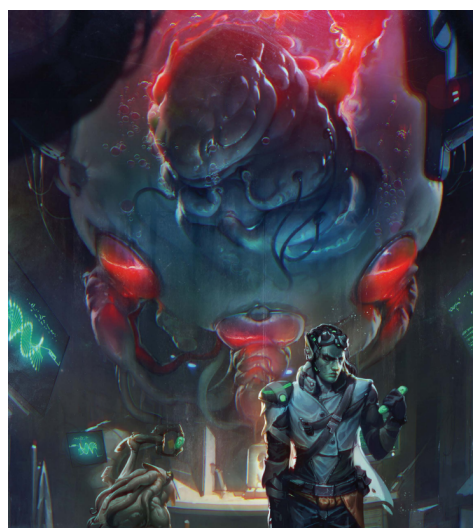
Figure 15. Image depicting a Nephilim being artificially grown in a laboratory environment. Source: Author's creation from Dyer, 2015 (p.243).

Similar to DND, physical and mental disabilities are oftentimes reduced to a mechanical effect that hinders the character (p.76). Nonetheless, the modern focus of the setting allows for more specialized abilities, such as Medicine and Psychology, to help players better understand these conditions, from a more expert and respectful perspective.

6.1.19.3. Observations

As seen only the traditional TTRPGs, with a defined setting, show class relations in their respective rulebooks. The Quiet Year, which appeared in the previous two structures, does not include any conditioning factors for race, class, gender, sexual orientation, age, or disability. This absence of information is something that players can explore if they desire, as they would be able to in Microscope, but the game does not specify.

In this case, it would be interesting to make a storygame that took advantage of this structure by setting constraints on its social relations to create a different experience from that of The Quiet Year.

6.1.20. Cultural Influence Structure

6.1.20.1. In DND

As the game takes place in a feudal medieval setting, the genre of high fantasy tends to set certain expectations about the technological level, as the average technology is comparable to that of the primary world in that age. As military-influenced, the game is deeply focused on combat, with mechanics for multiple types of weaponry and armor. This tends to put combat at the center of conflict and the progression of

the game as a whole. While this is true of the players, military influence at a larger scale can be of any size, with the world being barely militarized or in constant warfare.

Perhaps the most noticeable influence in the construction of the world is the religious influence, as defining a pantheon takes up the first significant section of the world creation chapter in the *Dungeon Master's Guide* (p.10-14). Beings of great power can make sense of certain fantastical elements, as well as create organizations that help to flesh out the world. Certain character classes like the Cleric or Paladin usually depend directly on a deity to function, and so religion is elevated to a status unusual to other TTRPGs.

Turning to arts and culture, each of the race options has its own pre-established story and culture, which can be seen throughout the *Player's Handbook* (p.17-44). Perhaps the most distinguishing feature is the addition of a chapter in the *Dungeon Master's Guide* (p.263), where the rulebook advises the GM on how to create new options and modify existing ones, including sections on how to slightly alter cultural elements of races (p.285), which should subsequently change mechanical rulings of said races.

The game also puts certain importance on establishing its relationship with the natural world. One of the class options, the Druid, is a magical class that has deep ties with the preservation of nature and extracts its magical power from it.

6.1.20.2. In Fragged Empire

Fragged puts most of its setting information in service of establishing a collection of well-defined, distinct cultures.

The backdrop of the setting is one of reconstruction after a great war and a period of darkness. During the war, all species had varying experiences, with some like the Legion being created solely for the purpose of combat (p.25, 228), and others like the Kaltorans effectively-being war refugees (p.212). Although this large-scale conflict ended years ago, the remnants of this war remain scattered along with the galaxy, and the tensions it created between the races still affect the current political relations.

The overall technological level, as corresponds to science fiction, is much more advanced than that of the primary world. Fragged Empire puts a particular interest in the field of genetic engineering since all playable species have been created and are descendants of long-extinct humanity. Religion, as a consequence of the genre, is less explored in favor of other characteristics. The later addition of the Remnant as a species came with a mysterious figure called the All-Being. Different subcultures of the Remnant pray to this entity and their identity as a species is constructed surrounding this being.

In arts and culture, each of the playable species has a section dedicated to explaining their particular cultures (p.200, 217, 230, 244), which have been defined to be easily identifiable and establish the most relevant parts of each respective society.

6.1.20.3. In The Quiet Year

In a similar vein to Fragged's background, most of The Quiet Year's military influence is drawn from its backstory. An undefined faction, called the Jackals, waged conflict against the community, and just now have left, initiating a year of quiet, relative peace (p.3).

The other cultural influence this game focuses on is the technological influence (p.8). In a section called "Weird Artifacts", the rulebook defines its setting to be collapsed, apocalyptic, and strange. It is up to the players to decide which "weird" things they

want to include in their community, referencing advanced technology as one of the options. The community can be prone to changes in this department, but the game recommends that once the middle of Summer is reached, the strangeness level is kept stable.

6.1.20.4. Observations

Cultural influence is seen to be a great factor in differentiating player options, mainly in race or species. In the Quiet Year, however, the option to choose a race does not exist, so the game offers the players control to establish certain aspects for the community as a whole since it expects a single culture to exist within it.

The conclusion extracted here points to the fact that culture is a great way to differentiate species that would otherwise only present biological distinctions.

6.2. Game Study Cases Conclusions

After performing the extensive analysis based on the twenty selected features, a number of multiple conclusions were established on the determining factors that separate a traditional TTRPG from a storygame. As not all of the items of the analysis bore observations with relevance, the following conclusions are summaries of several items that express the same concept.

The first notable difference is the shift in the hierarchy of power, which has great repercussions on how the game functions as a whole. An absence of a GM figure in both storygames means that roles, communication, conflict, player connections, authority, resolution, information management, and role of rules (items 2, 3, 4, 5, 8, 9, 11, and 14) all function under the assumption that there is an equal share in power

between all the players, even when the system itself limits them, as seen on the constraints on information and creativity.

The second notable difference is the change in how player characters are utilized. In these two particular examples, players are not assigned a single character but they are able to control several characters throughout the story (Microscope), or abstract groups of characters into currents of thought (The Quiet Year). This puts the focus on the Contemplation side of the Wu-Ge model and puts the spotlight on Narrative and Subcreation, whereas typically TTRPGs focus on the Concrete with Interpretation and Narrative. The simplification of characters has repercussions on several items, such as communication, progression, or fruitful void.

The third is their absence of random mechanisms for event resolution. This decision helps avoid players being forced to make creative decisions that go against their plans based on a random value. This does not mean that storygames are determined by their lack of random generation. Instead, they rely on the creativity of the players to make every experience distinct. In addition, the rules also put constraints on player communication to ensure that players do not democratize the creation process and put obstacles in each other's way, which leads to more interesting stories and creations.

The fourth and final discussed difference is the lack of specificity of the fictional world in storygames. As the goal of these games is to create the world during play, the initial subcreation is vague in most aspects to encourage creativity. While this is more true of Microscope than The Quiet Year, both games work toward stories that are highly improvised in the performative spectrum (Reed,2017), in support of the idea that the intention of the game is to provide a high level of agency for the players.

6.3. First Prototype Creation

Following the utilization of the framework to analyze differences between traditional TTRPGs and storygames, this section presents the steps followed to create a prototype for a storygame, focused on the conclusions drawn from the analysis and collaborative worldbuilding as a whole.

With this in mind, the process begins by specifying the core of the game. This is done through a mission statement (Rugelj et al., 2018, p.24), a sentence that sums up what the game is actually about. While "creating a world" is an obvious choice, the game would need some other determining factor that helped it to distinguish itself from other similar storygames. Microscope focuses on telling a story through history, while The Quiet Year sets the game in a very restricted area and makes it about a community in the throes of reconstruction.

In this case, the idea put forward for an original storygame is to build a world by establishing different societies and groups and working the similarities and differences between them into a fictional world. From this concept, the mission statement would be:

"Build worlds transformed by fragmented societies"

6.3.1. Design

With this basic premise in mind and the analysis complete, the SADDIE method asks to follow the steps for design.

6.3.1.1. Topic, Game Universe, and Game Plot

The topic of the game, or the themes to be explored, are those of creation of worlds, but further than that, themes surrounding divisions in society and the multiple ways people can be different but still share certain things. This game, therefore, has a great focus of topic on the structure of social relations, in a similar way Microscope has a focus on sequence and the Quiet Year takes advantage of its genre and the economics structure.

As far as the game universe is concerned, leaving the setting mostly undefined is an observed characteristic of storygames to encourage creativity. In this instance, the minimum requirements the game asks players to include is several factions in society, based on divisions in certain aspects, be it race, status, organization, etc. Although the work of Rugelj and others delve into several considerations of the setting, these are dedicated to the game designer who makes the game universe, not to the player. In the case of a storygame, players should be the one to create the game universe, so they will be left undefined to allow more freedom for the players.

On the plot of the game, the focus of the thesis on collaborative worldbuilding and a desire for innovation has resulted in the idea of building the world as a static image. In this sense, the objective of the fictional world is not to tell a story during play, but to be a tool to generate stories in the future, thanks to its basic features and the connections between all the factions. A consideration to make according to the original process is that of Creativity (p.26). Rugelj and the other authors talk about three means of allowing creativity for players. **Pillars** are units of information that have no context but include rich descriptions, meant to express themes and the mood of the setting. **Walls** establish what is appropriate for the game based on the fiction. **Webs** are combinations of items of the fiction and their interaction.

As the game wishes to create connections between different groups within society, webs will be of great help at connecting the pillars that players put into play.

6.3.1.2. Game System

When creating the game system, the main consideration that applies to the prototype is to avoid dice and random generators that influence the flow of play. Although The Quiet Year succeeds at its purpose while using a deck of cards, it is best to focus on components that allow for better defined mechanics while not introducing unnecessary randomness. Therefore, the resolution system needs to be based on Choice or Drama, as previously mentioned.

A possible way for players to be able to create with certain conditions is to include tokens, that specify how much they can talk about topics. As they require a physical component, they could instead be replaced by a point pool including information public to all players.

The points considered in this part of the methodology begin with the addition of meaningful choices. In this instance, players' creativity has to be encouraged by the system, while adding certain restrictions that allow it to be more consistent. As Rugelj suggests, it is easier for players to make a choice from a restricted range of strong options, usually three or four. To this end, the solution presented is to offer players Categories, similar in definition to Hergenrader's structures, that help players decide what they wish to focus on during play.

6.3.1.3. Character Profiles and Non-Player Characters

As the game is made without the intention to develop a narrative, having players interpret characters is inconsistent with the idea of the world as a static image. Therefore, characters of all types are not contemplated in the design of this particular prototype.

However, the methodology includes a section on the distribution of responsibilities (p.31), which discusses the typical figure of the GM, alongside more novel takes on diegetic control. In this case, the distribution will be made in a similar fashion to both of the storygames analyzed, with all players holding the same amount of power, but having ultimate authority during their turn to play.

6.3.1.4. Levels of Difficulty

The consideration for levels of difficulty can be considered to appear connected to the affirmation that a combat system is one of the most important parts of a system (p.28). In fact, most of the suggested values to determine difficulty seem to be geared towards the idea of an opponent and the strength of the player.

While this consideration does not align particularly well with the intended design for the prototype, it could be worth considering the inclusion of different modes, based on difficulty or other factors, in a similar vein to the expansion to Microscope, Microscope Explorer (Robbins, 2016).

6.3.1.5. Time Frame

Similarly, the question of time frame is closely related to the context of games in education, as the separation between long and short games is based on the proper duration for a class of one hour and thirty minutes. By observing the references of Microscope and The Quiet Year, the prototype should be able to be played in a single session, with a length ranging between two and four hours.

6.3.1.6. Number of Players

Agreeing with the observations of Rugelj and other authors, the addition of too many players could hinder the development of play, so the amount of players would best be

limited to four to six players, to ensure enough perspectives are being intertwined, but not so many that the game creates long waiting times between turns.

6.3.1.7. Accessories and Multimedia Aids

Although the addition of these elements would facilitate certain aspects of the game, the presentation of the prototype is done solely through the game manual, as the game should not require much to be played, save for a drawing and writing support and a way to track any currencies being used.

6.3.2. Core Design Document

Preceding the creation of the game manual during the Development phase, is the definition of a Core Design Document, composed of nineteen questions which help inform the decisions made during the creation of the prototype. The Core Design Document for the prototype can be found in Annex 1: Core Design Document.

6.3.3. Development

The development section of Rugelj's work (Rugelj et al., 2018) pertains to the game manual and advice on writing instructions correctly. Applying these recommendations resulted in the creation of a first iteration of the game manual, present in Annex 2: Prototype Rules (First Iteration).

6.3.4. Implementation (First Prototype)

For the first version of Contrast, a total of four playing sessions were conducted, with the author acting as an arbitrator in all instances of play. Sessions lasted for one and a half hours to two hours and included different players. As a possible bias, three of the four sessions had players with ages ranging between 18 and 25 years. The remaining session had a minor and two persons with ages between 50 and 55 years. The results of playtesting are defined in the following section.

6.4. Playtesting (First Iteration)

The last step of the SADDIE method refers to Evaluation, where the results of the prototype can be examined and some conclusions can be drawn in order to iterate on the game to accomplish the goals better.

Through the playtesting sessions, impressions by the participants were overwhelmingly positive, with many of the players asking for the resulting artifact as to use it for later narrative purposes and inspiration. Some saw the value of the tool as a method to construct worlds, while others affirmed that it had the potential to function in education to show social relationships between different groups in a fictional context, a project which would not be dissimilar to that of other recent authors (Kleinen, Kurz, 2021; Johnson, DeBoeser, 2020; Witte, Bindewald, 2020).

After finishing the play session, a brief discussion over the design of the prototype took place, where the participants were free to express their thoughts and offer solutions, although as not all of them possess game design knowledge not all of this feedback has been taken at the same level of consideration. When playing, the following issues were observed:

1. Players struggled to choose Heritages and especially Categories. Some of the least creative persons in the playgroups found it difficult to think of a good Category that they were happy with.

2. The Category points system was not considered to be positive or negative and did not apparently add anything of interest to the game as a whole.

3. Even as the system to draw Connection was clearly understood, it became apparent that the initial distinction across the two characteristics (Equal-Different and Positive-Negative) was not enough for people to depict how they perceived each connection.

4. It became clear that the time between turns was too long, which did not help with engagement of the players and meant that they were easily distracted and the turn order was disrupted.

5. Players did not have a positive reception of the inability to connect groups from different Heritages. This became a restriction to what the game could do and, overall, limited players' creativity more than it put a constraint that encouraged exploration.

Other minor complaints, such as the fact that the game required a high level of involvement and creativity, were dismissed, given that it is a problem pertaining to an audience which does not belong to the target for the game. All of these complaints were addressed in the following iteration of the prototype.

6.5. Final Prototype Creation

For the second version, the prototype has gone through the SADDIE method, and therefore returns to a stage of Design, skipping Specification and Analysis.

6.5.1. Design

As the basics of design according to the SADDIE methodology have already been defined, this design has the sole intention to tune the parts of the game that relate to the issues seen during prior evaluation.

To address the first issue, the manual now includes lists with more examples of Heritages and a list of Category examples, as well as graphical symbology for Categories, in order to reinforce clarity and provide information in an easier to read format. This will be especially useful for future implementations where the author is not able to arbitrate and players are left with only the game manual to choose these characteristics.

Figure 16. Symbols for the Categories of Geography, Law, and Science. Source: Author's creation.

For the second problem, the points system was reconsidered and ultimately taken out, as it did not provide anything relevant to the game. The intended purpose of this system was to have every player contribute to each chosen Category, but this issue can be addressed by simply stating that they have to, or by introducing rounds where every player has to talk about a single Category. In addition, points were meant to be used as a Currency which could be spent to add effects to players' actions. Since these effects were not utilized for the first prototype, they have also been removed, possibly to be later implemented if a new Currency system is devised.

The third problem in relation to the depiction of Connections between groups has led to the use of more graphical examples in the correspondent section of the game manual, such as unilateral relationships being represented by an arrow instead of a line, and commentaries of stances of each group involved. With this change, Connections should feel more flexible as a tool and encourage players to explore different types of relationships in society. The use of the characteristics of similarity

and agreement remains the same, instead being replaced by simple symbols, meant to reinforce clarity.
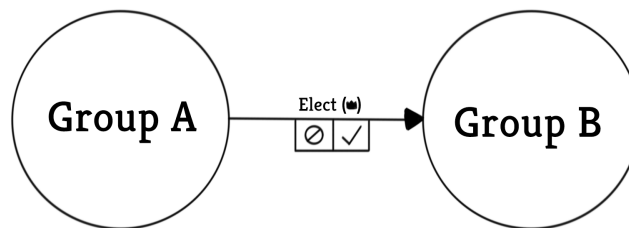
Figure 17. Connection diagram depicting a unilateral relationship between two groups, symbolized by the use of an arrow. Source: Author's creation.

To help with the engagement of players, now players are able to use a third action during their turn in addition to "Create a Connection" and "Establishing a Truth". This new action is called "Call for the Table" and has the player choose a group in a Heritage. In order and starting with the player to the left of the active player, moving clockwise, each player proposes a statement about this group. This fact is not constrained by the choices of Category. Once the active players add their statement, they choose which of the statements are considered to be true and add them underneath the chosen group. With this new action, players are encouraged to be engaged with the game and think about each group as a unit, with the understanding that at any moment they might be asked to provide information and ideas about them. It should also help to encourage less creative players to ask for opinions, but still keep only the ideas that they resonate with the most and conserve a better sense of consistency.

The fifth issue had to do with players feeling limited by only being able to connect two groups of one Heritage. As this felt reductive and forbade other options, rules for additional types of Connections have been added. Players are now able to establish internal conflict within a group, as well as connect groups from different Heritages. The latter option is restricted to the latter rounds, as the new structure of play centers on defining Heritages early.

Once the iteration process finished, a second version of the game manual went into development. This version is present on Annex 3: Prototype Rules (Second Iteration). Unfortunately, the deadlines for the thesis did not allow for further implementation, evaluation, and iteration. Therefore, the version of the game present in Annex 3 is considered to be the final iteration in the context of this thesis. The game might be iterated in the future if the reception continues to be positive and its goals are accomplished.

7. Conclusions

This thesis focused on analyzing existing theory in the fields of TTRPGs and worldbuilding to better understand the differences between traditional TTRPGs and Storygames. Through examining the focus of prior research into this topic, and selecting the most interesting frameworks for RPG study, a sheet to analyze all sorts of role-playing games was made. Four games, two on the traditional side and two of the storygame genre, were observed under this tool to determine the main differences between traditional and indie table-top RPGs. This bore a number of conclusions, which were taken into account when creating a prototype for a storygame focused on worldbuilding.

7.1. Limitations

The construction of the analysis sheet was based on prominent theories both from the fields of RPG theory and worldbuilding. In forming the theoretical framework, it became quickly apparent that neither of these fields has been given proper attention from academic communities.

RPG theory is highly based on amateur communities (Edwards, 2001; Boss, 2008)that make use of certain models which are notable for their longevity and lack of updates, with some of the highly regarded theories first introduced more than twenty years ago. In fact, theory pertaining to TTRPGs seems to be inextricably attached to video game studies, and this is something that has gone against the former, since the differences between analog and digital forms of role-playing is often overlooked, as are the development and innovations of the analog RPG market.

On the side of worldbuilding, formal approaches depend on a handful of authors such as Wolf (2012,2018), which make most of the effort to produce compilations of short essays on this topic. Others, such as Hergenrader (2018), form a significant part of

the worldbuilding theory present in this thesis while the source is depending on the opinions of one author and pertains to the commercial market, not to formal spheres.

With this in mind, it is highly possible that the frameworks and characteristics shown in the resulting analysis sheet are prone to touch on many similar topics, or be dependent on few, established theories. As this thesis does not include all frameworks and theory pertaining to both fields, the analysis sheet is an exclusive result of this particular selection of sources and it can be subject to change as new theories appear, or be reconsidered with existing theory not present in this thesis.

The second major limitation observed was the lack of time to handle more iterations of the final prototype. This impacted everything from the quality of the product to the design and development process, including the playtesting sessions. These sessions have all been conducted by the author and included similar groups in terms of age, which might have created a significant bias. Stronger conclusions could have been derived if more playtesting sessions had been conducted, including a more diverse range of participants.

As a minor consideration, the SADDIE methodology utilized to produce the prototype (Rugelj et al, 2018) was useful for this particular purpose, but certain aspects of the process were greatly affected by the educational intent of the original method. A different methodology focusing on the design and development of analog role-playing games could have resulted in a better final game.

7.2. Reflexions

The analysis sheet created for this essay includes twenty items, which are divided according to the four fields of study present in the Wu-Ge model (Konzack, 2015), considered to be the most actualized and complete framework. What the thesis aimed to do was to observe multiple frameworks of study in TTRPG theory and

worldbuilding theory, with the objective to distinguish those that analyzed different aspects of play and the rules. This led to finding the most prominent concepts and methodologies in both fields, as well as the lack of unifying definitions or theories.

In this particular matter, several definitions of game by different authors were examined, specifically those that consider role-playing games to be fringe cases of games because of their inability to fulfill all requirements (Juul, 2003; Salen, Zimmerman, 2004). In contrast, definitions of role-playing games provide with new definitions that defend their legitimacy as games and point to the different versions and basic features of the genre (Zagal, Deterding, 2018; Arjoranta, 2011).

This combination of theories provided an analysis tool that provides significant information about the way any TTRPG is constructed, and is specially useful to check if the object of analysis is closer to traditional or indie TTRPGs, according to the conclusions drawn from the analysis of four study cases. The games analyzed were all real games that have their own communities, and are recognised for their potential to tell different kinds of stories. *Dungeons and Dragons* (Mearls, Crawford, 2014) and *Fragged Empire* (Dyer, 2015) were selected for their nature of traditional TTRPGs, as well as to provide examples of more recognizable games set in different genres (high fantasy and post-post-apocalyptic science-fiction, respectively).

Through the analysis, a first version of the prototype was constructed, followed by a playtesting session. The intention was to undergo multiple iterations to produce a storygame that focused on worldbuilding and fulfilled all of the intended goals. Both the analysis sheet and the final prototype were made with the intention for others to use them in future investigations and recreational use.

7.3. Future Research

After composing an analysis tool for TTRPGs based on preexisting theories, multiple lines of research can be drawn. The analysis tool can be refined through its use on more study cases, as to discern if the observed conclusions about the differences between traditional TTRPGs and storygames are accurate, as well as to iterate any of the items which are of little use by changing their focus, or replacing them entirely. Future attempts to generate similar analysis tool should concentrate on characteristics that touch on the four fields of study of the Wu-Ge model (Konzack, 2015), and expanding this particular model with new, observed fields of study.

Outside of the scope of this thesis, it is apparent that more work analyzing TTRPG theory and worldbuilding theory has to be conducted to create new unifying principles and concepts, in the hopes of consolidating both fields of study within the academic community at large, and narrative and game studies at a minor scale.

Further taxonomization of worldbuilding processes could also be highly useful for future use in worldbuilding storygames, to provide better groundwork for players and encourage creativity. The study of the indie TTRPG scene has been scarce, and brought down by the lack of exposure of these games when compared to other forms of role-playing. Their knack for innovation is highly worthy of observation and application for new lines of research into this game genre as a whole.

8. References

This thesis has made use of sources originating from many different materials, from academic essays to commercial books, but also audiovisual content from platforms like Youtube, which appear in the Webgraphy, and all of the games mentioned across the entire work and the study cases, present in the Ludography.

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9. Annexes

This thesis adds three distinct annexes, all related to the practical side of the study, focused on the development of a worldbuilding storygame.

Annex 1 has the Core Design Document based on the SADDIE methodology presented by Rugelj and others (2018). It consists of 19 questions that consolidate the design principles of a role-playing game and facilitate posterior development.

Annex 2 presents the first iteration ruleset for Contrast, which was the result of following the aforementioned methodology and later utilized in playtesting sessions. Annex 3 contains the second and final iteration of rules for Contrast, with all the proper changes considered after playtesting.

9.1. Annex 1: Core Design Document

Working Title

Contrast

Mission Statement

Build world transformed by fragmented societies

1. What is your game about?

The game is about creating a world that contains a society divided into several different groups, which connect to each other through similarities and differences, and how those connections, in turn, impact the world.

2. What are your goals for the game?

Goal 1: Play results in the creation of a fictional world that is consistent.

Goal 2: Play results in the creation of a fictional world that divides individuals according to multiple categories.

Goal 3: Play results in the creation of a fictional world that can be utilized to develop narratives.

3. Who is your target audience?

The target audience is people, who are knowledgeable in TTRPGs and are looking for a game that encourages them to create. It is also a good fit for play groups

looking to create a setting for their next campaign in a different system, as the resulting world will have generated interesting narrative threads to explore.

4. What do the characters do?

The game does not have player characters, which implies that the answer to this question is not vital to the development of the game.

5. What do the players do?

Players first divide the society of a fictional world in several groups, and then participate in a collaborative effort to create said world by adding true statements that inform its various characteristics based on the established divisions.

6. How does your lack of setting reinforce what your game is about?

As the game is based on constructing a fictional world, a lack of setting is essential to allow for the most freedom possible. It is worth noting that not all parts of the setting have to be undefined as players will need to create the different factions as Pillars of creativity before adding their contributions to the world.

7. How does the Character Creation of your game reinforce what your game is about?

The game does not have player characters or character creation, which implies that the answer to this question is not vital to the development of the game.

8. What types of behaviors of play does your game reward (and punish if necessary)?

The game, by its very nature, is more rewarding to those players who are creative, which aligns with the target audience state. These players will enjoy playing more than those who struggle to get ideas, as the basic premise is made with very little detail as to allow for more flexible contributions.

9. How are behaviors rewarded or punished in your game?

The game would not include any particular rewarding systems that would encourage or discourage behaviors, as the enforcement of these systems comes from the authority, which in this case, lies with all the players. The system would trust each player to self-regulate their behavior if they were incurring improper patterns of play.

10. How are the responsibilities of narration and credibility divided in your game?

As the game is meant to depict a static image, narration is not a main responsibility that is assigned or regulated. Instead, credibility is given the spotlight. Each player has total authority to add credible elements to the setting during their turn, as long as they do not contradict any information previously established. If this were to happen, any other player is free to point out the contradiction and begin a discussion about how to mend it.

11. What does your game do to command the players' attention, engagement, and participation?

In its original design, the game does not include any particular mechanics that players can realize between turns, which might be an issue when retaining attention. The shared control of the world and the prospect of creating something as a group is considered to be a good starting point to create and hold engagement for the duration of play.

12. What are the resolution mechanics of your game like?

When a player takes their turn, the state of the game is conditioned by what all of the other players have already added to the board. The options they have are to either establish a connection between two groups of society and draw something in the map that represents it, or to establish something about the world and draw something in the map that represents it. The thing they add pertains to a category previously chosen by the players. Once every round, a player gets to add something that belongs to a category not chosen.

13. How do the resolution mechanics reinforce what your game is about?

As player actions always add something to the map, the world is built with every idea that players have. Furthermore, by drawing connections between different groups of society, these factions become more fleshed out and the webs represent a more complete and consistent whole.

14. Do characters in your game advance? If so, how?

The game does not have player characters, which implies that the answer to this question is not vital to the development of the game.

15. How does the lack of character advancement reinforce what your game is about?

The lack of character development does not necessarily reinforce the concept of the game, but adding it would be a deterrent against players exploring factions as a whole and might make players change their attention to something that is not the theme of the game. The Quiet Year runs into a similar problem, devoting an entire section on the idea that personal narratives are not advisable.

16. What sort of product or effect do you want your game to produce in or for the players?

The intended product of the game is an artifact of play consisting of a hand drawn map of a section of the world, accompanied by diagrams that explain the connections between all of the different groups that form society and other statements that are true for the world as a whole. This artifact should provide a solid foundation for the world as a setting for other narrative endeavors.

17. What areas of your game receive extra attention and color? Why?

The game attempts to focus on social relations between groups, of any kind and nature. To this end, players have to devote a part of preparation to establishing the divisions of society and each of the resulting groups. This is done as a result of attempting to design a game based on the social relations structure. A second motive stems from the fact that this game is intended to be a tool to generate settings for a different TTRPG, which is currently in production.

18. Which part of your game are you most excited about or interested in? Why?

To see if the game can create good settings in many different genres and, in general, to see what people can come up with when given this kind of tool. Games that help players create without restrictions and function as tools are greatly interesting for their applications, especially for the focus of this thesis on subcreation.

19. Where does your game take the players that other games can't, don't, or won't?

The game puts players at the center of a web of factions that rival each other. It's an exercise of connecting different perspectives to form a coherent whole, which is a starting point for storygames that has not been explored excessively.

9.2. Annex 2: Protype Rules (First Iteration)

Contrast

Technical Information

Name of the Game

Contrast

Number of Players

4-6 Players

Minimum Age

Ages 10 and Up

Play Duration

2 to 3 hours

Material Required

Sheets of paper and writing utensils (preferably, a pencil for each player). A4 and A5 are the recommended paper sizes.

Description

In Contrast, several players collaborate to create a fictional world where society is fragmented into many different groups. As players add new elements to the world, new connections between factions will appear and, in turn, shape the landscape into a complex net of vibrant conflict and unity.

Objective

The goal of the game is to produce a static image of a fictional world, based on the society living in it and the tensions that arise from all different discrepancies between its people. This setting is intended to be highly useful for creative authors to utilize as a backdrop for their work: artistry, narrative, role-playing, etc. In this sense, Contrast functions both as a game and as a tool for world creation.

Preparation

Before regular play begins, players will need to prepare the game. Prepare all writing and drawing utensils and put the sheets of paper in reach of all of the players.

The steps to set up a game of Contrast are the following:

1. Establishing a Genre or Premise

2. Establishing the Scale of creation

3. Creating Heritages

4. Choosing Categories

Genres and Premise

For the first step, players brainstorm concepts for the world that can be summed up in the form of a genre or a simple phrase. Examples of genres include fantasy, sci-fi, horror, etc. Examples of specific premises could be 'subaquatic world', 'the only intelligent species are mutant jellyfishes' or 'everything is made out of cloth and yarn'. Take a sheet of paper and write them down for everyone to see.

This is done so players have a solid understanding of the kind of world they wish to create, by setting up expectations and common tropes associated with the chosen genres and premises.

While using a single genre or premise can lead to a fun game, the most interesting ideas appear when two or three concepts that initially sound like a weird combination are mashed together.

Scale

Scale is a reference to the space the world occupies. This can greatly range between a world that spans multiple universes to one that only takes place inside of a single house. Given that the world can be really big to be created in one session, players have to agree on how big the part of the world they want to create is. Write it down on the sheet of paper under the genres and premises and draw a basic sketch in a circle of the basic geographical features of the extension players are going to develop: a city, a continent, a planet, etc.

Heritages

In Contrast there are no player characters, people are always referred to as groups. For this part, the players need to create two or more Heritages. A Heritage is a distinction that divides society in different groups. To clarify what this means, here are examples of different types of Heritage:

- Racial Heritage: It's a common trope in fantasy and science fiction to have characters that belong to different species. While it's not essential for all members of a species to share certain traits, there's inherent differences in how each species is.

  Human, Elf, Dwarf, Gnome, Orc... are a classic example of Racial Heritages in fantasy.

- Class Heritage: In societies marked by a lot of social conflict, it's usual that a structure of classes emerges, creating an unbalance of power. While this has been traditionally associated with nobility or acquisitive power, players can feel free to establish what gives status in this society and what classes emerge as a result.

King, Nobility, Clergy, Knights, Artisans and Peasants are all part of feudal society and a good portrait of a Class Heritage rooted in reality.

● Factional Heritage: Unrelated to any particular criteria, people decide to become part of the same group, and there are multiple groups that pertain to a certain topic. This kind of Heritage has a great deal of expressions, but each of the groups contained within it has a different current of thought regarding a topic.

The different guilds present in the plane of Ravnica in Magic: The Gathering are a good example of a Factional Organization based on how to run a city. Factional organizations can touch on topics of objectives, religion, politics, and many other factors that could cause contempt between multiple groups.

Players need to create two or more Heritages, each of them containing at least three different groups. This will help to divide and group the people of the fictional world. Heritages can take any form but have to accomodate to certain rules:

● No Heritage can repeat an element from a different Heritage.

● Any one person living in the fictional world should be able to be in any group of an heritage independently of their other heritages. This means that all individuals of a group in a Heritage can not be only from one group of a different Heritage.

As the Heritages are chosen, name each of the groups and draw neighboring circles to represent them. These circles will be used to establish the connections between different groups.

Categories

With the basics of the game laid out, choose a starting player randomly. Starting with said player and moving clockwise, each of the players has to choose something to talk about, a topic that's referenced here as a Category. These will limit what you can talk about in this game and represent the fields that people are the most interested in knowing about. Some examples might include: flora and fauna, politics, laws, economy, science, art, species, religion, magic, technology, gastronomy, astronomy, work, diseases, energy, etc.

Once everyone has picked a category, now each person has to vote for one of the other chosen categories. The best option for voting is the category that you are most interested in out of all of the options. Categories can be picked by more than one person. Each person starts with one point in each category, and each time a category is chosen by someone, it gets another point. Note the points of each player under the premises and scale on the sheet of paper, as well as the categories chosen by each player.

For example, in a game with three players, the following categories are chosen: flora and fauna, politics, and magic. Then, its turn to pick categories, flora and fauna is chosen by two players and magic by one player, politics is not chosen. This means that each player will start with 3 flora and fauna points, 2 magic points, and 1 politic points.

Before starting the game, the players have to choose between doing two things: moving their points around categories, or determining something about the game.

If they choose to move their points, they can subtract points from one category to add them to another category. Players need to have at least one point in each category. For example: one player wants to move one of the flora and fauna points to politics, so now they have 2 in each category rather than the 3-2-1 they had before.

If they choose to say something for the game, they can choose to tell a truth for this world that belongs to a category not chosen by any player. This will not be able to change and must be true during all the game. The truth is formulated as a statement, which is added to the map by adding an element or landmark that represents it and writing down the statement, accompanied to the category it belongs to.

Once every player has gone through this choice, the first round starts with the starting player previously chosen.

Order of Turns

During their turn, a player has two options. They can spend a point in a Category that's been chosen this game and either:

- Establish a connection between two groups of the same Heritage of that Category, and then they may draw something in the map that represents this connection.

OR

- Establish something of that Category in the world as a truth, and then they may draw something in the map that represents this connection.

Once they have finished drawing all of the necessary parts, the turn goes to the person to the left. Once every player has had a turn, the starting player for the round gets to perform an extra action, utilizing a category that has not been chosen. Then the player to the left of the starting player becomes the new starting player, and the next round begins.

Connections

When establishing a connection, a player is creating a line that ties two groups of a Heritage together. While doing this, the player chooses a category and explains what these two groups have to say about it.

As a player creates a connection, they need to explain what their idea for a connection is and what category it belongs to. Write a few words that convey the basic message on the line that connects both groups.

Now, the player has to decide two things:

- If the Connection is **Equal** or **Different**. This means if both groups think the same or do things in a very similar way. It can also reference that both groups have an equal relationship, with both providing the other with a resource or service. Choosing different could represent groups disagreeing or a unilateral relationship.

- If the Connection is **Positive** or **Negative**. This explains how both groups see this connection, in an amicable way or if it's a matter of contention for them, that augments tension.

With the connection established, the player then can draw something in the map that represents this relationship. It could be anything from a building to a geographical feature to an abstracted symbol, so all players can remember the connection and the world is impacted by this choice.

Establishing Truths

The second option players have in their turn is to establish something to be true in the world, unrelated to the diagrams of connections. To do this, the player simply explains their idea in the form of a statement and they write it down on the sheet of paper, near to the map, adding the corresponding Category.

The player can also then draw something in the map that represents this truth. Alternatively, the player might choose to do the drawing first and then write the statement that it represents.

End of the Game

The game ends whenever a round is ended and players agree to do so. When a player has no points to spend on adding more elements, each other player gets an additional turn, and then the game ends.

9.3. Annex 3: Protype Rules (Second Iteration)

Contrast

Technical Information

Name of the Game

Contrast

Number of Players

4-6 Players

Minimum Age

Ages 10 and Up

Play Duration

2 to 3 hours

Material Required

Sheets of paper and writing utensils (preferably, a pencil for each player). A4 and A5 are the recommended paper sizes.

Description

In Contrast, several players collaborate to create a fictional world where society is fragmented into many different groups. As players add new elements to the world, new connections between factions will appear and, in turn, shape the landscape into a complex net of vibrant conflict and unity.

Objective

The goal of the game is to produce a static image of a fictional world, based on the society living in it and the tensions that arise from all different discrepancies between its people. This setting is intended to be highly useful for creative authors to utilize as a backdrop for their work: artistry, narrative, role-playing, etc. In this sense, Contrast functions both as a game and as a tool for world creation.

Preparation

Before regular play begins, players will need to prepare the game. Prepare all writing and drawing utensils and put the sheets of paper in reach of all of the players.

The steps to set up a game of Contrast are the following:

1. Establishing a Genre or Premise

2. Establishing the Scale of creation

3. Creating Heritages

4. Choosing Categories

Genres and Premise

For the first step, players brainstorm concepts for the world that can be summed up in the form of a genre or a simple phrase. Examples of genres include fantasy, sci-fi, horror, etc. Examples of specific premises could be 'subaquatic world', 'the only intelligent species are mutant jellyfishes' or 'everything is made out of cloth and yarn'. Take a sheet of paper and write them down for everyone to see.

This is done so players have a solid understanding of the kind of world they wish to create, by setting up expectations and common tropes associated with the chosen genres and premises.

While using a single genre or premise can lead to a fun game, the most interesting ideas appear when two or three concepts that initially sound like a weird combination are mashed together.

Scale

Scale is a reference to the space the world occupies. This can greatly range between a world that spans multiple universes to one that only takes place inside of a single house. Given that the world can be really big to be created in one session, players have to agree on how big the part of the world they want to create is. Write it down on the sheet of paper under the genres and premises and draw a basic sketch in a circle of the basic geographical features of the extension players are going to develop: a city, a continent, a planet, etc.

Heritages

In Contrast there are no player characters, people are always referred to as groups. For this part, the players need to create two or more Heritages. A Heritage is a distinction that divides society in different groups. To clarify what this means, here are examples of different types of Heritage:

- Racial Heritage: It's a common trope in fantasy and science fiction to have characters that belong to different species. While it's not essential for all members of a species to share certain traits, there's inherent differences in how each species is.

  Human, Elf, Dwarf, Gnome, Orc... are a classic example of Racial Heritages in fantasy.

- Class Heritage: In societies marked by a lot of social conflict, it's usual that a structure of classes emerges, creating an unbalance of power. While this has been traditionally associated with nobility or acquisitive power, players can feel free to establish what gives status in this society and what classes emerge as a result.

King, Nobility, Clergy, Knights, Artisans and Peasants are all part of feudal society and a good portrait of a Class Heritage rooted in reality.

- Factional Heritage: Unrelated to any particular criteria, people decide to become part of the same group, and there are multiple groups that pertain to a certain topic. This kind of Heritage has a great deal of expressions, but each of the groups contained within it has a different current of thought regarding a topic.

The different guilds present in the plane of Ravnica in Magic: The Gathering are a good example of a Factional Organization based on how to run a city. Factional organizations can touch on topics of objectives, religion, politics, and many other factors that could cause contempt between multiple groups.

Players need to create two or more Heritages, with all of them containing at least two different groups and one containing three or more. This will help to divide and group the people of the fictional world. Heritages can take any form but have to accomodate to certain rules:

- No Heritage can repeat an element from a different Heritage.

- Any one person living in the fictional world should be able to be in any group of an heritage independently of their other heritages. This means that all individuals of a group in a Heritage can not be only from one group of a different Heritage.

As the Heritages are chosen, name each of the groups and draw neighboring circles to represent them. These circles will be used to establish the connections between different groups.

Categories

With the basics of the game laid out, choose a starting player randomly. Starting with said player and moving clockwise, each of the players has to choose something to talk about, a topic that's referenced here as a Category. These will limit what you can talk about in this game and represent the fields that people are the most interested in knowing about. Some example Categories presented are:

- **Geography:** Connected to how the world is made and its geographical futures. Possible Subcategories could be Geology, Climates, Cosmology, etc.

- **Flora and Fauna:** Connected to all living beings, whether or not they are carbon-based lifeforms like the ones on Earth. Possible Subcategories could be Flora, Fauna, Intelligent Species, etc.

- **Phenomenons:** Connected to phenomena and certain common occurrences in the world. Possible Subcategories could be Diseases, Mutations, Weather, etc.
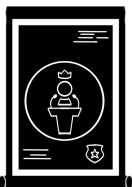
- **Politics:** Connected to how the people are led and how decisions in the society are made. Possible Subcategories could be methods of Governance, Executive Power, Public Services, etc.

- **Law:** Connected to how justice is considered and administered. Possible Subcategories could be Civics, Crime, Rule of Law, etc.

● **Economics:** Connected to how currencies are utilized and how acquisitive power is defined. Possible Subcategories could be Currencies, Class relations, Industry, etc.

● **Resources:** Connected to what elements of the world are more valuable. Possible Subcategories could be Alimentation, Energy, Materials, etc.

● **Science:** Connected to the study of the world and consideration of those who perform it. Possible Subcategories could be Physics, Chemistry, Mathematics, Biology, etc.

● **Art:** Connected to the consideration of art and specifics of its creation. Possible Subcategories could be Architecture, Sculpture, Writing, etc.

● **Religion:** Connected to faith and the beliefs of the people. Possible Subcategories could be Gods, Religious Ethics, Festivities, etc.

● **Magic:** Connected to that which can not be explained by science, technology, or any other discipline considered to be objective. Possible Subcategories could be Magical Creatures, Magic Types, Magic Limitations, etc.
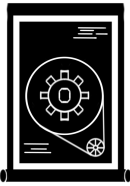
● **Technology:** Connected to the development of methodologies and tools for work. Possible Subcategories could be Engineering, Transport, Military, etc.

● **Labor:** Connected to how work is seen in society and those who perform it. Possible Subcategories could be Professions, Hierarchies, Civil Rights, etc.
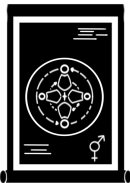
● **Social Affairs:** Connected to how society treats those who are different and determines what is considered to be acceptable. Possible Subcategories could be Gender and Orientation, Race, Functional Diversity, etc.

Once everyone has picked a Category, each player can establish something about the game that pertains to a different Category.

If they choose to say something for the game, they can choose to tell a truth for this world that belongs to a category not chosen by any player. This will not be able to change and must be true during all the game. The truth is formulated as a statement, which is added to the map by adding an element or landmark that represents it and writing down the statement, accompanied to the category it belongs to.

Once every player has gone through this choice, the first round starts with the starting player previously chosen. This first player selects one of the Heritages. This will be the Heritage for the round.

Order of Turns

During their turn, a player has three options. They can use a Category that's been chosen this game and either:

- Establish a connection between two groups of the round Heritage of that Category, and then they may draw something in the map that represents this connection.

OR

- Establish something of that Category in the world as a truth, and then they may draw something in the map that represents this connection.

OR

- Choose a group in the round Heritage and have ALL of the players provide a statement about them. Later, they get to choose which statements are true, and then they may draw something in the map that represents this information.

Once they have finished drawing all of the necessary parts, the turn goes to the person to the left. Once every player has had a turn, the starting player for the round gets to perform an extra action, utilizing a category that has not been chosen. Then the player to the left of the starting player becomes the new starting player, they get to choose a different Heritage, and the next round begins.

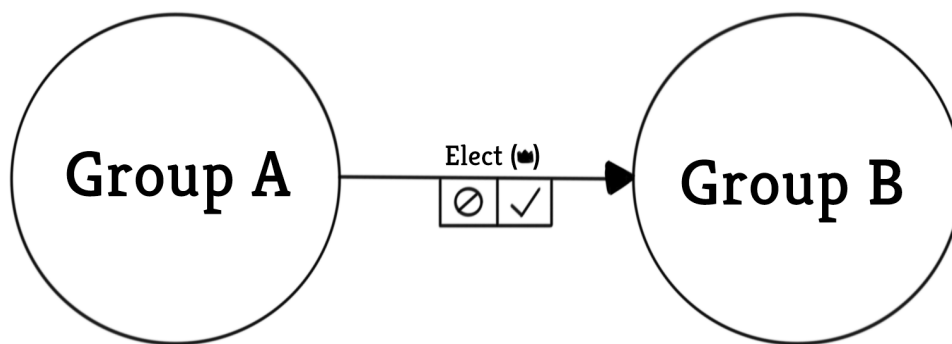When all Heritages have been developed at least once, players are free to connect

Connections

When establishing a connection, a player is creating a line that ties two groups of a Heritage together. While doing this, the player chooses a category and explains what these two groups have to say about it.

As a player creates a connection, they need to explain what their idea for a connection is and what category it belongs to. Write a few words that convey the basic message on the line that connects both groups.

Now, the player has to decide two things:

- If the Connection is **Equal** or **Different**. This means if both groups think the same or do things in a very similar way. It can also reference that both groups have an equal relationship, with both providing the other with a resource or service. Choosing different could represent groups disagreeing or a unilateral relationship.


In this instance, there's a unilateral relationship between both groups, as members of Group A elect the members of group B for government. The unilateral relationship is indicated by the arrow.

- If the Connection is **Positive** or **Negative**. This explains how both groups see this connection, in an amicable way or if it's a matter of contention for them, that augments tension.
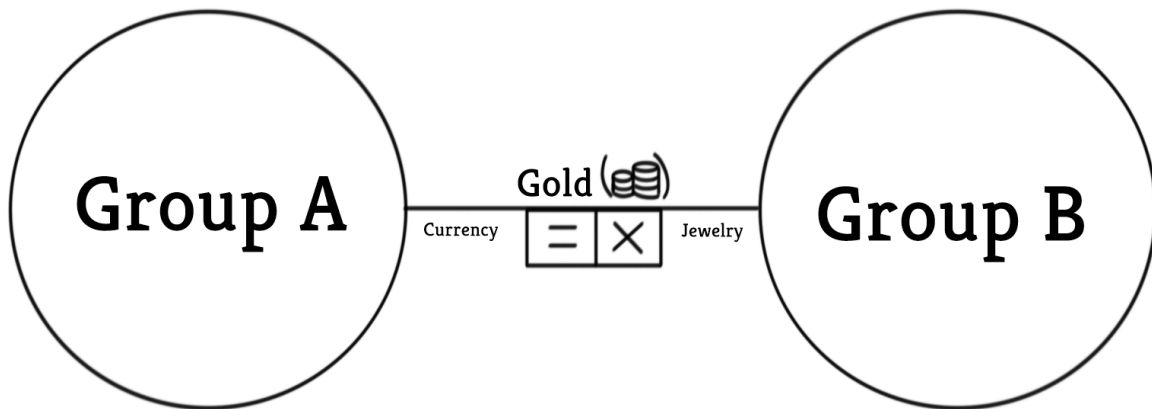
In this example, we see that both Group A and B give value to Gold as a resource (Equal Connection). However, because one uses it as a currency and the other sees it as a decorative piece, this similarity actually creates tension between both groups (Negative Connection).
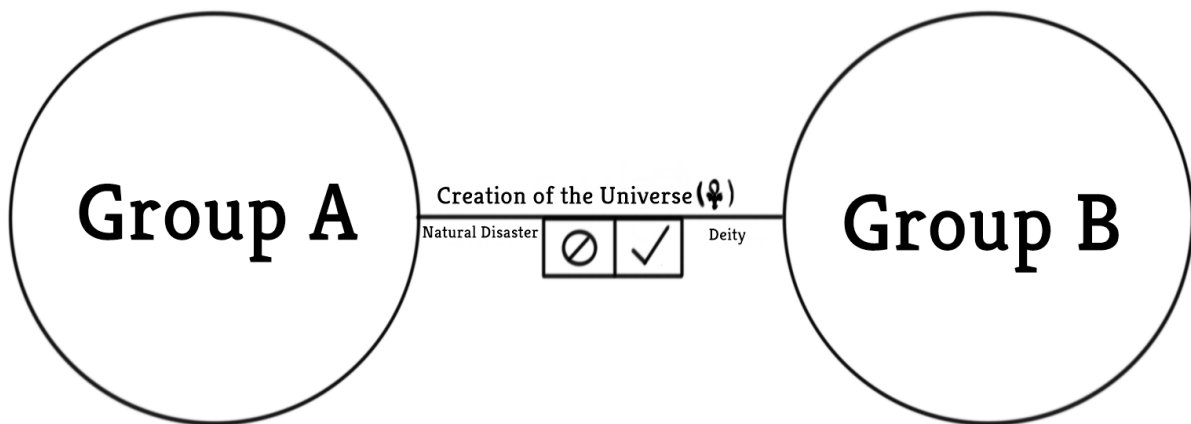
In contraposition, this example shows that groups A and B have different opinions regarding the Creation of the Universe (Different Connection). However, A and B respect each other's beliefs in this matter and are tolerant (Positive Connection).

With the connection established, the player then can draw something in the map that represents this relationship. It could be anything from a building to a geographical feature to an abstracted symbol, so all players can remember the connection and the world is impacted by this choice.

Alternatively, a player can connect a group with itself, this follows all of the steps previously shown, but the line or arrow cycles around and returns to the same group. Once established the topic of the connection, establish if it's equal or different, and if it's positive or negative.

After players have chosen all Heritages for the round, players are also able to create connections between groups from different Heritages. These connections follow the same rules explained, but must never break any of the major rules.

Establishing Truths

The second option players have in their turn is to establish something to be true in the world, unrelated to the diagrams of connections. To do this, the player simply explains their idea in the form of a statement and they write it down on the sheet of paper, near to the map, adding the corresponding Category.

The player can also then draw something in the map that represents this truth. Alternatively, the player might choose to do the drawing first and then write the statement that it represents.

Calling for the Table

For their third action, the active player chooses a group in one of the Heritages. Starting with the player to their left and moving clockwise, each player says something about this group in the form of a statement. Once the active player adds their statement, they choose which ideas are true. Write them under the circle that represents that group. They then can choose to add any ideas as Rumors, things that are not necessarily or completely true but are said about this group.

What players add is not constrained by the chosen Categories and is meant to add to one of the already existing groups. After adding all of the new information under the corresponding group, the active player can draw any elements in the map that represent these statements.

End of the Game

The game ends whenever a round is ended and players agree to do so. When a player has no points to spend on adding more elements, each other player gets an additional turn, and then the game ends.