

Tales for the Many: Process and Authorial Control in Multi-player Role-Playing Games

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Abstract. Multi-player Role-Playing Games form rare examples of interactive, collaborative storytelling systems, especially within the tabletop format. However, despite recent advances in the theory and general knowledge of the field, models of the operation of the storytelling process in multi-player non-digital role-playing games remains relatively unspecific. In this paper, a critical synthesis of the available theory is combined with observations from a series of experiments, in a detailed model for the gaming process.

Keywords: Role-Playing Game, collaborative storytelling, game master, game process.

1 Introduction: Non-digital RPGs and Storytelling

With the increased focus in the games industry on reaching casual and current non-gaming segments of the market, and the interest in interactive storytelling [12,13,16,17] and agent-based systems [20], the ability to provide personalized experiences to users is becoming increasingly important. However, technological and resource limitations mean that e.g. game designers are forced to create the stories in virtual worlds with technologically and financially imposed limits on player freedom [2], for example by relying on pre-authored plots [7]. Table-top Role-Playing Games (RPGs) (also called Pen-and-Paper RPGs) are therefore subjects of increasing interest in academia and industry as a source of inspiration in the development of interactive storytelling systems, for use in computer games, education and interactive entertainment [12,13,20]. While table-top RPGs are expressed through a different medium than computer-based RPGs, the game forms share several features, notably the underlying rules systems and mechanics, thematic game worlds, incentive systems and often a lack of clearly defined victory conditions [10]. Even though table-top theory has taken great steps forward in recent years, there has yet to be successful attempts at modeling these games in a manner that is conducive to the creation of a digital variant with the same in-built flexibility. This has several reasons, notably that much of the theory e.g. [3,5,8,11,14,15,18] has not been created with this purpose in mind but to advance the design and gaming experience of RPGs [24], or to investigate RPG culture [6]; secondly that the game process itself is reliant on human interaction, which spans a variety of responses and cognitive processes that are challenging to

model e.g. [12,13,17]. A line of thinking has emerged in the past few years that may eventually lead to models of the RPG gaming process which can be utilized in the construction of digital systems [1,4]. Kim [10], inspired by discussions on online discussion forums, developed a model of the RPG gaming process that outlined communication channels between the game participants and integrated the concept of a shared game space where the players communicated the actions of their characters within the shared, imagined, fictional world. Henry [8] advanced this idea by modeling the basic information flow of RPGs, with the game components and participants forming a network of data sources and entities. Mäkelä et al. [13] further addressed this line of thinking by deconstructing RPGs into a series of processes. Tychsen [21] noted that RPGs could be modeled as information systems, combining the previous ideas into a coherent framework.

This paper presents a critical synthesis of the existing models of the process of non-digital RPGs, and theory pertinent to the actual collaborative storytelling process in multi-player tabletop RPGs; and presents a model of the RPG process from an information systems viewpoint. The model is based on existing knowledge and in part on observations during a three-year project on storytelling and player interactions in multi-player RPGs across non-digital and digital platforms. During the project, more than 150 hours of multi-player RPG sessions were run and the data sources include audiovisual recording, observation, screen capture (of digital RPGs), surveys and interviews [23]. Focus will be on non-digital RPGs - the way stories are formed between the game participants, the distribution of authorial control and the operations of the Game Master (GM), a participant who traditionally is responsible for directing the gaming experience and provide feedback to the players as to the effect of the actions of their fictional characters in the context of the game world. The GM is therefore an analogy of an automated interactive storytelling system, although the interaction between the players is also important to the gaming experience [1,4].

2 Building Premise

When a group of persons engages in a role playing game, there is a range of conditions that must be met before playing can begin. These conditions describe the knowledge that the players must have about the game in order to play it, what expectations the players have from the game, how they are going to be playing it, genre, characters, distribution of authorial control, style of play etc. The establishment of these conditions by the players and the agreement or framework for the game thereby established is termed the game **premise**. If the players do not agree to a premise, their different assumptions, expectations and goals will conflict during play. Premise can be broken down into components, all of which are renegotiable during play:

1) Fictional game world: When embarking on a RPG, the players have to agree upon a specific fictional game world that forms the setting, or stage, for the game. The game world can be specified to great detail, including such features as a history of the game world, geological/biological information on its nature and appearance, any civilizations and so forth. The game world needs to be understood to avoid confusion.

2) Fictional contract: Fictional worlds are governed by rules, which determine how the fictional world functions, e.g. the damage of specific weapons, whether the laws of physics are observed, and so forth. Some of these rules impact the players directly and is usually quantitative (the damage of weapons), some indirectly (gravity means you need an airplane or magic to fly). Because the fictional world has to follow certain rules, this means that the fictional world conversely can affect the game. This leads to an important concept, the fictional contract: *The agreement between the players as to how the world fiction operates and what rules govern it*. The fictional contract ensures that even though every player may visualize the fictional world setting differently, they agree as to how their characters interact with the fiction, and the basic principles of the fictional world. The fictional contract is integral in facilitating the understanding of the fictional world itself and how it operates. Without it, rules and setting are not communicated successfully to the players. Rules of communication, authorial control etc. between the game participants and similar mechanics that occur outside the fictional world does not fall under the fictional contract, however, it does detail how the *characters* can interact.

3) Player characters: Each player controls usually one, but potentially more (e.g. in the RPG *Ars Magica*) fictional characters, which are generally the protagonists of the game story. In relation the establishing the premise, these characters must be defined in terms of their stats, abilities, personalities etc. to the extent desired by the players and/or required by the game rules.

4) Visuals: While not a strict requirement of the premise, illustrations, music, sound tapestries, and similar game elements can be utilized to enhance the atmosphere and visualize the fictional world or similarly. In a digital RPG, color is often provided via an introduction sequence, which also serves to communicate and reinforce the fictional contract (e.g. *World of Warcraft*, *Neverwinter Nights*, *Baldur's Gate*). The general visual element of digital RPGs also serve in this regard and potentially has an advantage over non-digital RPGs in ensuring all participants have a common understanding of the game world, which can be a problem in RPGs [20].

5) System: Because multi-player RPGs are based on a shared understanding of events occurring in an imagined, fictional game world, the method for which these events, the game world and the associated character actions are described and agreed upon is vital to the game process. Edwards [5] and Kim [11] referred to the shared understanding of the fictional game world and the events taking place therein as the “shared imagined space”. Importantly, while the fictional contract governs the functionality of the game world and provides the framework and game rules for character actions, it is somewhat malleable and subordinate to the principles governing the actual game play, or the game system. The system of a RPG is the means by which the participants distribute the authorial control, or credibility, to make statements about what takes place within the shared imagined reality of the game world (the shared imagined space) [24].

Traditionally, players have the credibility to define the actions of their characters, and what their characters say. The GM (who can have various titles), has the credibility to decide on the success or failure of actions, possibly guided by the game rules, and the reaction of the game world and the inhabitants of the world, to the

actions of the characters – generally guided by the need for game story, entertainment value etc. Authorial control is important to the development of the collaborative story, as it determines how the participants can affect the game world, the other characters, and thereby the game story. Importantly, system is not the same as game rules. The game rules may define that a sword does more damage than a knife; however, it is the system that defines who has the credibility to use the knife in the first place. In essence, rules have authority to give credibility to statements; however, rules do not have authorial control in themselves [25]. The players need to decide whether a rule applies, and how to interpret it, before the authority of the rule is valid. The use of dice and other resolution mechanics are like rules a means of supporting the game system, providing authority. E.g. a player can roll a dice to determine whether a given character action was successful according to the rules. If this succeeds the statement of the player that the action was taken has substantial credibility. Whether a GM or the other players can ignore the rules is also part of the game system.

6) Social contract: While the rules and the system govern the interactions between the players and the characters, the characters and/or the fictional world, and objects/entities within the fictional world, they do not govern interactions between the players. The social contract is the umbrella term utilized for the rules of social conduct during game play, the ambitions and desires of the players with the game playing activity, and what style of play that to be carried out. The agreement to the above conditions bears resemblance to the concept of lusory attitude [19], which is defined as a certain state of mind that is required of players for them to enter a game. The formation of the game premise can be an extended process, especially if a group of strangers gather around a game table to play. While running the game experiments mentioned in the introduction [23] it was observed that the premise-building phase could take an hour or more to accomplish in these cases. In the groups observed where the players had prior joint gaming experience, this process was reduced in temporal length. Following an introduction to the rules system used, the game characters and the fictional world, these groups quickly began playing.

3 The Gaming Process

The gaming process of a multi-player RPG can be viewed from a variety of angles, and this has caused substantial problems in defining a coherent model for these games. There is no one correct way of modeling these games, and different theorists have applied different methods in order to evaluate specific features. The approach that is adopted here, which aims at incorporating existing theory with observations from the empirical work described above, is to separate what could be termed the “**processing**” component of RPGs from the “**storytelling**” components. The processing component covers the basic framework of these games, modeled and described as an **information system** [26]. The way the participants handle authorial control, conflict resolution and other elements of the collaborative story can vary, however, importantly they will always utilize the same communication channels, and will have the same means of processing, storing and retrieving information.

3.1 RPGs as Information Systems

Pen-and-Paper RPGs are games where the state of the game world changes due to the actions of the fictional characters within the game world, as directed by the players. A cyclic behaviour in the system originates because there exists a communication between the real world of the players, and the fictional game world of the characters. The decisions of the players lead to their characters taking specific actions. Via the GM, the game world (or objects/entities therein) provides a reaction, which is fed back to the players, who subsequently processes the feedback, before making a decision about what to do next (individually or as a group) (Figure 1). With each cycle (or each step of the cycle), the game is brought to a new state. This top-down view of RPGs is applicable to all forms of these games and encompasses the interactive nature of the game playing activity itself. This behavior can be further detailed by considering RPGs as information systems. In this context, an information system is a collection of people, processes and technologies (in this case books, dice, rules, possibly computers, artwork etc.) to support the information needs of the participants and provide the framework for the gaming activity. In this viewpoint, the game elements and the gaming process itself is described in terms of distinct, dynamic and static data sources, entities that actively interact via specific communication channels and which support the processing of information, with the purpose of generation the information to support the game and the game story.

Different entities have different information needs, and different rights of data access and ways of affecting information flow and -processing. In the context of RPGs, these rights depend on the distribution of authorial control. For example, a GM might have different information requirements than the players, e.g. in relation to knowing the motivations of NPCs, and will also have the rights to access additional information and change it in real-time. The overall action-reaction system of RPGs represents a simplistic version of the actual gaming process that takes place in these games. While the generally cyclic nature of progress from game state to game state appears to be valid, each cycle can be subdivided into numerous component processes, depending on the level of detail required in an analysis.

During the observation of the RPG experiments mentioned above, it was commonly observed that the participants were able to follow and/or participate in multiple conversations at the same time, jumping back and forth in the game story, in the chronology of the game world, and even following different events in different geographical locations of the imagined, fictional world. It was not unusual to observe individual players conversing with two or three other players during tense sections of the game sessions, producing a sound landscape that is incomprehensible to any observers, while being deeply immersive to the participating players.

In order to be able to model this level of detail, the feedback cycle of RPGs need to be broken down into systems of sub-processes (Figure 2). A sub-process can occur at any of the stages in the regular feedback cycle (decision – action – reaction – processing). Importantly, players of RPGs have the opportunity of processing information (decide on their response to the game world state update), before their characters take action. This processing stage can range from the very simple to the complex. Players do not react uniformly to a given game world state change, and can even react at different times to the same input from the game. During the processing

stage, more than one sub-process can operate at the same time. For example, in a multi-player RPG, a game world state update from the GM can result in the players internally discussing what their next action should be and queries to the GM for detailed information about a specific section, object or entity of the game world. Furthermore, players need not make their characters react at the same time in the same way: One player can engage opponents while another talks to a merchant NPC. In this case, the cyclic process is split into several sub-systems, up to one for each individual player. These sub-processes keep operating until a point in the playing of the game where the player characters again move or act more or less coherently, e.g. by the GM aligning all the characters at the same geographical, chronological and contextual point within the game world and game story.

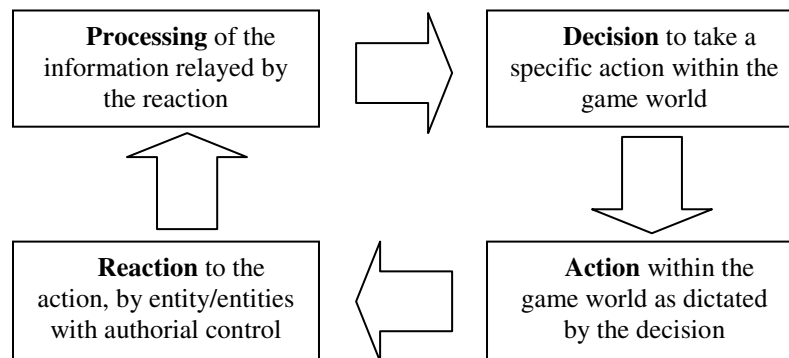


Fig. 1. A simplified view of the information feedback cycle of RPG gameplay

What is obvious from the above is that communication and actions in RPGs can be viewed at different scales of resolution. Importantly, game progress equals a change in the game world state [9], and how this is defined depends on the scale of resolution. The cyclic model can be described at various levels of resolution or with the focus aimed at different forms of game state progress (narrative progress, advancement in the tasks the game sets for the players, advancement in game mechanics, e.g. character level). In a digital RPG, moving an avatar from point A to B causes a game state change. However, such an action will not necessarily cause communication, result in narrative progression or similar. Similar to non-digital RPGs, actions, player communication etc. can be viewed at different scales of resolution. Likewise, sub-processes can be of different scale, depending on the level of resolution of the main process model (Figure 2). If a sub-process is identified as causing substantial game progress, the feedback loop in question is a double loop, and needs to be separated into two serially connected cycles. Defining game progress is here purposefully left vaguely defined as the variable resolution value of the interaction model presented here means that game progress will need to be specified for each specific application of the model.

An important feature of the RPG information systems is that the entities have varying degrees of data access to a series of dynamic and static repositories [21]. In a

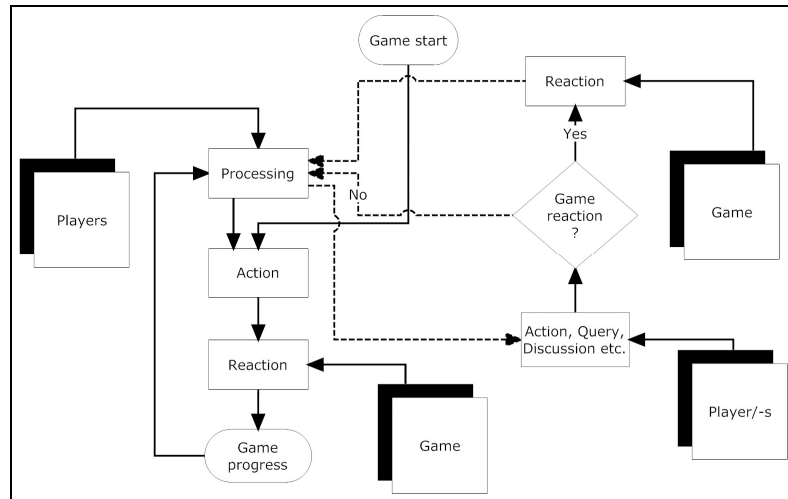


Fig. 2. A model of the game process of RPGs (left), including a sub-processing loop (right). From a starting condition, players act upon the game world via their characters, prompting a response and update of the game world state, as decided upon by the GM. This leads to progress, and the process repeats. Symbols as for standard data flow diagrams (DFDs).

RPG, the players typically have access to their character, rules, and some knowledge of the fictional world, e.g. through books provided by the game publisher. The character can be viewed as a dynamic repository, as it will change status throughout game play, e.g. it may become wounded or gain new abilities. Rules are in comparison static; however, as noted above the participants have the option of changing the rules of a RPG. The GM, normally has access to additional sources, notably the game module (the manual for the story), as well as additional game world information. In a digital RPG (computer-RPG or Massively Multiplayer Online RPG, MMORPG) the game code/engine would feature as an additional set of information that can be accessed. Related to the subject of data access is content creation rights and regulations; however, this is a subject that is out of scope of the current study.

3.2 Creating the Game Story

Modeling RPGs in their capacity as information systems provides knowledge about how the game process operates, however not how the authorial control operates in shaping the game story. In order to analyze this process, the basic concept of authorial control has to be expanded. The game story of a RPG can be defined as the sum of everything that takes place within the fictional world (this definition purposefully ignores the debate about games, stories and interactive narratives). This does not include the communication between the players that does not relate directly to the actions of their characters – for example, questions about the game rules or requests for information [22]. When observed from the outside, the story of a RPG appears to run progressively from the opening scene to the final scene, and it is not immediately obvious that the players and GM are continually selecting between different paths as

they go along. [22] divided the game story of a RPG into **perceived** and **conceived** parts, with the former being the part of the game story that has been communicated through the shared imagined space (the shared play space).

The conceived story rests within the pre-planned materials and notes of the GM, as well as the mind of the GM and the players, i.e. their intentions for the game story and the un-mapped actions of the characters. As a result of the cyclical game process, the conceived story is gradually transformed to a specific perceived story. The process through which this transformation takes place is at least partly cognitive, and has yet to be analyzed in detail; however, it can to some degree be described by analyzing the distribution of authorial control and the way that the GM manages the game story.

Variations in authorial control, different means of conflict resolution and styles of GM story management in conjunction provides a very wide solution space that RPG groups can adopt in order to facilitate collaborative storytelling in a manner that suits their specific ambitions: Storytelling in RPGs can vary from the GM and the players establishing an initial situation in the game world, and improvising from there, making up the story and its characters as they go along; to a strictly linear experience where the players merely fill in the blank space in a rigid story structure.

Compared to digital RPGs (single-, multi- and massively multi-player), such as *Neverwinter Nights*, *Temple of Elemental Evil*, *World of Warcraft*, *Lineage*, the variety of storytelling modes in table-top RPGs is greater, because digital games are constrained technically and financially. Technically, a human GM has the ability to on-the-spot create new environments and situations, while a digital game requires pre-programmed content, although it should be noted that techniques for procedurally generated and emergent content in digital games holds the potential to expand the flexibility of digital RPGs. Financially, while a GM can invent content for free, developing content in digital games costs resources, and any game production is limited in this regard. From the perspective of the player, table-top RPGs provide the potential to direct player characters to perform any plausible action within the imagined fictional environment, unlike in digital RPGs where the numbers of choices are strictly limited by programming. Adding multiple players in the digital RPG context somewhat remedies the situation by adding unpredictability; however, the basic technological framework of these games means that there are limits to the flexibility possible in terms of storytelling. These limitations have not prevented developers from creating immersive and engaging, multi-linear and/or branching storylines and characters in digital games, e.g. *Knights of the Old Republic*, *System Shock II*, *Bioshock*, where the game engine itself takes on a role akin to that of the GM. However, the operational space is smaller compared to the shared imagined space of tabletop RPGs. This is also the case in MMORPGs, where role-playing oriented guilds in e.g. *World of Warcraft* have managed to transfer some of the storytelling principles of table-top RPGs and live action RPGs, and adapt them to the unique context of MMORPGs (i.e. chat-based interaction, use of props and costumes), but which are similarly limited in the flexibility of what they can show and do within the confines of the virtual environment.

Personal vs. shared story: Before considering the story generation process in detail, it is important to realize that there is no single game story arising from a RPG game session. Rather, a series of stories that vary depending on the eye of the beholder: First of all, there is the game story that can be recorded and observed in a RPG

gaming session. Secondly, each participant will have formed their own version of the game story. This second viewpoint is related to a key feature of RPGs, the concept of a personal imagined space, which supplements the shared imagined space. The personal imagined space operates within the mind of the individual gaming participants, and it is here that the personal perception of the game story is being formed, which can vary to a greater or lesser degree from the story expressed in the shared imagined space and the personal imagined spaces of the other game participants [11]. While this has not been examined empirically, anecdotal evidence indicates that the variations in the personal imagined game stories are largest at the fine level of story detail, e.g. most players will imagine the characters in a room if the GM informs them they are in one, even though the image of the room conjured will likely vary from player to player. Where the story expressed in the shared imagined space can be recorded directly, the personal story can only be accessed indirectly, i.e. via the player recounting their perception of the game. For simplicity, when discussing game story in the following, the shared and personal stories of the game participants are evaluated as a coherent construct.

Distribution of authorial control: As an entity in a game system, the traditional role of the GM is to provide information about the fictional game world and the development of the storyline (to the best of his ability, considering that the players are, at least to some degree, in control of the story protagonists), refine it through player queries, and arbitrate player interaction with the rules structure, while following the conditions of the premise and ensuring that the various ambitions of the players (and the GM) with regards to the gaming activity, are met. The players in turn utilize the input and description from the GM to formulate a response and new actions, and to construct individual mental model of what events are taking place. In other words, the GM is in charge of facilitating game flow and –story, provide the environmental content of the fictional reality, and possibly arbitrate conflicts. The GM is therefore a participant but rarely a player. The degree of authorial control the GM has depends on the level of credibility of the players (a RPG could even operate without a GM, by distributing authorial control completely among the players): The more authorial control the players have, the more adaptable and flexible the GM has to be in the management of the game story. An extreme case is represented by most digital RPGs, where the players have a very limited authorial control beyond opening boxes, attacking MOBs and carrying out pre-planned conversations with NPCs. The distribution of authorial control among the players is related to the concept of **stance** [5]. Stance refers to the relationship between the character, the player and the shared imagined space and determines: 1) The degree to which the player can direct the character according to his/her own motivations, or has to follow the motivations of the character; 2) The degree to which the player can affect the fictional game world in a manner that is outside the abilities of the character (Table 1), The traditional GM can be viewed as an extreme case of the Director stance, which is unbound by a specific character. While authorial control can be described and defined for any given RPG, the distribution of authorial control in a game session varies during game play. Players can change stances with regards to their character, the GM can vary the amount of control imposed on the game world, etc., and the game play can therefore be compared to a continuing negotiation process where different participants discuss, debate and propose statements about events occurring in a fictional game world.

Table 1. Definition of four types of stance (source: Modified from Young [25])

Stance	Definition
Pawn	The character is a token utilized by the player to act within the game world. The character performs only actions that the player wants it to do. It does not matter if the actions of the character make sense within the world fiction. The player is limited to interact with the game world via the character.
Actor	The player directs the actions of the character according to what the player believes the character would do in the given circumstances. Authorial control of the player is limited by the character as well as the thoughts of the character and the abilities it has to affect the game world.
Author	The player can utilize his/her own knowledge and motivations in deciding on character actions, and thereby apply direct control on the game story. However, character actions need to be justified in terms of the character, e.g. by creating a reason for why the character acted in a given way.
Director	The player has the authorial control to directly affect the shared imagined space (the game world), which is outside of the control of the character. The degree to which this control can be applied can vary substantially.

The illusion of authorial control: The division of and fluctuations in authorial control in a RPG situation generally determines how the collaborative story is formed at the point between the conceived and the perceived story. The story management of the GM is in turn directly dependent on the way authorial control is distributed. Different distribution models lead to specific ways of managing the game story. Importantly, because authorial control can fluctuate throughout a game session, the style story management can also vary. In the above, it has been assumed that authorial control was real. However, the authorial control that a player has to affect the game world is not necessarily directly proportional with the amount of control the player has over the game story. E.g., a player may direct a character to perform an action that eliminates an NPC, and have the credibility to do so. However, the GM may subsequently decide to resurrect the opponent NPC, or introduce a different NPC with similar importance to the game story. The player may not ever realize that his/her action did not result in a substantial alteration of the game story, merely a change in the delivery of it. In this situation, the player is subjected to an illusion of authorial control, a perceived freedom that does not in fact exist. A simple way of illustration how illusionary authorial control can be used by GMs (and game designers) is to consider the situation where a player character is positioned in a room with two doors. Irrespective which door the character chooses, the GM decides that it will lead on into the same room. Should the player check first one door, then another, the GM can in real-time improvise a means of preventing this behavior, e.g. by having a noise occurring from the door the character checks first, prompting the player controlling the character to turn back to the first door. The player may believe that the character had freedom to choose both doors, without this being the case.

The relationship between perceived and actual authorial control is important to GM management styles: In one extreme, the actions of the player characters are devoid of impact to any significant degree. The GM counters and adapts the game story to any action the characters may take, and the players are not aware of this. The GM is at all times in control of how the story will develop and the level of variance permitted to

the players. It may also be the case that the players are aware that the GM is in effect telling them a story, and that they can only affect the game story in a very limited capacity. The GM is in this case still utilizing the illusion of authorial control; however the players accept it. This form of story management is comparable to digital RPGs where technical and financial limitations impose limits on flexibility [2,7].

With increasing player freedom, decisions will impact on the game story beyond the insignificant. The story is adjusted throughout play to accommodate the actions of the players, however, the players implicitly or explicitly follow the clues, prompts and hints of the GM. The challenge in this form of RPG is the completion itself; however, the path from beginning to end can vary. The game module utilized by GMs can vary from defining a sequence of scenes/events, a network of events or a list of conditions and circumstances. The smaller the degree of pre-definition of the game story, the more challenging it is for the GM to keep the game story under his/her control, and the more the players will be able to impact the story. Further increasing player freedom reduces the GM to establishing the fictional game world and possibly some key situations or NPCs, but otherwise falls back to a role where he/she reacts to the actions of the players and attempts to improvise a story. This type of RPG play requires high engagement on behalf of the players, as well as GM management. The players enjoy a high degree of authorial control in the actions of their characters [25].

4 Conclusions

In this paper a critical synthesis of current role playing game theory combined with observations from a series of empirical experiments with table-top RPGs [22,23]. The preparational steps and mechanics of the gaming process have been modeled, and the division of authorial control utilized by game participants, including the GM, to create collaborative storytelling environments has been examined. This study and those referenced herein represent however initial steps in the way to fully analyze the RPG situation and ideally create heuristics for digital storytelling systems [12,13,17,20]. Because RPGs are games that operate partly within the mind of the participants, it remains uncertain if the principles of GM behavior can be transferred directly to digital systems, or whether only partial models can be integrated. Future studies in this area will therefore need to include analysis of the cognitive process of story management that takes within the mind of GMs – as well as players. When interviewing the GMs involved in the empirical multi-player RPG experiments, as to how they manage RPG games, a wide variety of answers were provided, and most agreed that the process was partly improvised: Because RPGs are based on conversations in real-time, the GM will at some point have to improvise or role-play on-the-spot, without the ability to consult NPC charts, scene overviews and similar. There was further agreement that the GM during a game session continually revises the ideas or plans for the game story, at several different levels of story detail and planning, based on the interactions with the players.

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