

Gamemasters and Interactive Story: A Categorization of Storytelling Techniques in Live Roleplaying

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1 Abstract

This paper details an experiment that observed multiple gamemasters in live storytelling role playing games. A categorization of the interactive storytelling techniques employed by these gamemasters has been developed. The goal of the experiment was to explore the ways a human agent creates a story while allowing for the proper balance of user interactivity and strong narrative structure. The resulting techniques are categorized with the intent of enriching the storytelling programming in computerized interactive drama.

Keywords: Game, Interactive Drama, Narrative, Roleplaying, Gamemaster

2 Introduction

As computer games become increasingly sophisticated, there is a new movement to create a stronger element of narrative in gaming. One of the newest fields in generating narrative-based gaming is the creation of interactive drama. The goal of interactive drama is to create an exciting but participatory narrative that can be interacted with and altered by players in a computational space.

As opposed to typical computer games, interactive drama focus on creating a story with deep character interaction and story development, much more akin to the experience of being a character in a play. While technological strides are being made to create more believable and lifelike computer agents and increase language processing and voice recognition, writing a story script is an additional challenge of the medium. Dealing with unexpected user actions and incorporating them in to the story is described as one of the most difficult computational problems of creating an interactive narrative. As Young and Riedel wrote in 2003, "A central issue in the development of effective and engaging interactive narrative environments is the balance between coherence and control." The users can have some control over the experience, but if they have much control, the story may suffer in coherence. If they have too little control, the story is not interactive.

2.1 Interactive Drama

Interactive drama is an emerging field in computer gaming. Traditional computer games focus on hand-eye coordination or resource management as part of play. Many modern games have detailed and interesting stories, but the user has very little means by which to interact with those stories. Instead, the user watches a story, taken from story element to story element while interacting with the game in other ways (Crawford 2005). In an interactive drama, however, the user's primary goal is to participate in the creation of story. The game is set up with an interactive story that allows a two-way dialogue between the user and system, where a participatory computational narrative is the result.

Façade, developed by Michael Mateas and Andrew Stern, is one of the most advanced examples of Interactive Drama today (Dahlen 2005). It integrates two believable character agents, natural language processing for interactivity, and a complex story script organized to keep a narrative structure. It uses a system of story "mix-ins" and dramatic "beats" to keep the pace of the drama, adding new story elements in a naturalistic way with the flow of the character conversation (Mateas 2002). The OPIATE engine, created by Chris Fairclough, takes a different approach, by utilizing the narrative systems analyzed by Vladimir Propp to create a more folk-tale-like arc for an interactive story. The player of this system portrays a protagonist that will meet characters that fulfill many of Propp's defined character roles (Fairclough and Cunningham 2004). IDTension, a drama engine developed by Nicolas Szilas, utilizes a simple dramatic structure defining characters, goals, and the characters' obstacles to reach those goals (2003).

2.2 Story Directors

Several things stand in common among the successful and developing interactive drama systems. All of these systems have *character agents*, programs with the purpose of developing character personalities and controlling those characters in believable ways. A system often also has an agent called the *story director* or drama manager, which develops a story arc and narrative around the sequential events in the game. The drama manager program provides the overall story structure to an otherwise unrelated event sequence. For example, in IDTension, if the user tries to reach his goal too quickly, another obstacle will be generated by the program to intervene (Szilas 2003). Mateas sites the drama manager in Façade as being responsible for most of the program's story-level decisions, such as when to move on to the next phase of the story (Mateas 2002). The story director may

provide instructions on the character level, the scene level, or the micro level depending on what narrative path it has decided upon (Mateas 1997). It acts independently of the character agents, but provides them with instructions, creating what is called semi-autonomy, where virtual characters take actions to achieve their own goals unless story structure, guided by the story director program, specifically tells them otherwise.

2.3 Roleplaying Games: Overview

An often-overlooked, but important, parallel to the computerized interactive drama is the “Live Roleplaying Game,” or Tabletop RPG, genre of gaming. This type of game utilizes a leadership figure called the *gamemaster*. A typical setup of a tabletop RPG involves a gamemaster and more than one player. Four or five players are the commonly suggested number, though often groups can be smaller or larger (Rosenburg 2002, Wizards 2003). Louchart and Aylett refer to the gamemaster as a “guiding semi-authorial function” that directs the flow of a game’s story while allowing interaction with the players (2003). The gamemaster provides the world and the story, as well as controlling any character not controlled specifically by players. Each player around the table chooses a single character role to portray, and with the gamemaster, the players develop a story arc that involves their characters, aspiring to create a narrative that is interesting for all participants. Those characters under the gamemaster’s control are called “Non-Player Characters,” frequently abbreviated as *NPC* (Wizards 2003). Each player guides his or her character through the story world the gamemaster provides by making decisions, adding dialogue and taking actions. This hobby uses pen, paper, dice, and other props such as miniature figures for character representation, instead of relying on technological solutions. Roleplaying games are sold in print form, using instruction manuals to provide a set of rules for conflict resolution, and generation of character and story.

The earliest days of roleplaying were not characterized by story, as the game *Dungeons & Dragons* was derived from board games designed to simulate fantasy war. In these games, players controlled armies of characters, and did not concern themselves with those characters’ motivations. However, as roleplaying games shifted toward players playing a singular role, the gamemaster, who was before an impartial referee between players controlling opposing armies, instead developed in to a sort of god figure who provided opposition for players, who were now playing a party of cooperating characters. Around the 1980s, articles in roleplaying magazines

began to recast the role of the gamemaster as that of a storyteller (Mason 2004). This has resulted in a lot of discourse within the hobby as to how story is generated, and how to keep player interaction balanced within that story. In tabletop gaming, the act of holding players to a specific story arc and discouraging deviation is referred to as *railroading*. Game designer Ron Edwards defines this term as “the practice of a GM essentially scripting the majority of plot events and structures within a given play session or series of such.” (2005).

As explained by Louchart and Aylett, “The Game-Master’s intervention criterion is what is satisfactory for the players rather than what plot element comes next. The distinction between the two is may not be evident in the sense that the goal of the story manager is, by providing the users with an interesting story, to satisfy them on a narrative plan” (2003). What this generally means is that the Gamemaster is always free to judge how much entertainment the players are deriving from a particular story or actions taking place in that story. If the story is less than satisfactory or the players would like to pursue a different path, this is generally encouraged so that the story is more satisfying to their participation. However, providing an interesting story is intrinsically satisfying to players, since story coherency engages them.

The role of the gamemaster in live roleplaying games is a mirror of the role of the story director in interactive drama. The gamemaster is tasked with providing all characters not controlled by players, and guiding the plot of the roleplaying game to create a satisfying story. Because of this, the methodologies that a gamemaster uses, in balancing control and coherence of story with the freedom of his players to interact, has much to teach about how future story director programs in interactive drama can work together with their users to create richly interactive narrative in games. A need for research into gamemasters’ techniques has been acknowledged, but the techniques of the gamemaster have not been analyzed academically in the past (Louchart and Aylett 2003, Magerko 2006). The rest of this paper contains an observational study of those techniques.

3 Study

A study was designed to observe the techniques that a gamemaster uses to create interactive story. The gamemasters were all storytellers interested in interactive narrative. The subjects were observed for their technique: how characters were designed, how players were engaged, and how story was designed to create a worthwhile and fun experience.

3.1 Methodology

Four different gamemasters were enlisted to assist in this study. Gamemasters were initially chosen with no particular preference as to gender, group size, or their preferred rule set. The random selection resulted in a balance of two male and two female gamemasters, with ages varied from between 20 and 50 years. For the purposes of the experiment, we specifically chose to observe gamemasters running more than one genre of game, in order to explore a variety of different stories. Two gamemasters were running Dungeons and Dragons Edition 3.5. Of the other gamemasters, one ran Chill, a horror game set in a modern, real-world setting. The final gamemaster ran Star Wars: Living Force, a science fiction game set in the Star Wars Universe.

All four gamemasters ran a gaming session with a standard group for their type of play. Three of the gamemasters used their standard set of players for their home campaign. The gamemaster running Star Wars was using pre-printed adventure modules only, meaning he did not develop his own story but had a story plan which was pre-written and purchased. All four tables were made up of experienced game players.

The sessions were videotaped, paying special attention to the gamemaster but incorporating all the players and their actions in the footage. Game sessions typically lasted around four hours. One of the Dungeons and Dragons sessions lasted around six hours. No more than a day after the game, the gamemaster was brought in for a second discussion session. The gamemaster and researcher reviewed the footage of the game session, and specific questions were asked about moments in the game, what the gamemaster was thinking, and about the way he or she was incorporating the actions of the players.

After the second interview, paraphrased transcriptions from the audio interviews were made. The transcriptions were coded, marking what techniques the gamemaster was using at given times. The techniques were matched with techniques mentioned in literature. Unexpected techniques were also marked and documented. If the reason for player action or GM intervention was unclear from the audio interview, the tape was matched with the original live game footage for accuracy. Any time a GM used a particular guiding technique, the technique was marked and coded into one of several categories.

3.1.1 Game Versus Metagame

Metagame means, literally, *the game above the game*. Something which happens *metagame* in the context of a roleplaying game is that which happens above the world of the game, and within the game system instead (Wizards 2003). For example, a

decision made for a player's character using knowledge that the player has, rather than knowledge the character would have, would be considered a metagame decision. In the case of tabletop role players, metagame concerns typically influence the way game decisions are made. Gamemaster techniques below are broken into two categories: in-game, and metagame techniques. Metagame techniques include the use of techniques that gamemasters self-reported, as well as any metagame techniques empirically observed by watching and coding the games.

3.1.2 Attractors and Detractors

An attractor is a way of enticing people to behave in the expected way. Typically, it is a reward offered for expected behavior. In programming, attractors are used in pathfinding to help guide an agent toward a particular goal or a particular method for achieving his goal. In education, attractors are used to help guide learners toward correct answers. In roleplaying, the gamemaster uses specific *attractors* to guide players to do wanted actions. If the gamemaster is not using attractors to encourage the players to do something, it is implied that the gamemaster does not have a specific plan for what he or she would like for them to do. In those circumstances, they have free reign to explore the world, and may dynamically generate story elements depending on what they choose to explore.

Detractors, gamemaster actions designed to discourage players from taking particular actions, are another important aspect of gamemaster technique. Like attractors, detractors work in a combination of in-game and metagame. Unlike attractors, detractors are more difficult to use and employ, and more often backfire than attractors do. In some situations, a detractor may accidentally occur when an attractor was intended, which is discussed in the detractor which corresponds with that attractor.

3.2 Hypothesis

Based on literature written about gamemastering and game hooks, several types of wanted interactions were identified before games were observed. Most of these interactions had to do with how player characters (*PCs*) worked together or against one another, in addition to how they worked together or against gamemaster NPCs. Other actions were about player interaction with places in the environment, or objects that they might encounter, since people, places, and things can all be used as different story hooks and general ways of interacting with the environment. The hypothesis of the experiment was that there would be a categorizable set of techniques available for Gamemasters to encourage

the types of interactions they desired to illicit from players.

4 Results

Watching games and speaking to the gamemasters in this qualitative study, we observed a particular set of trends. Needed actions could sometimes be combined in practice. For example, the act of convincing player characters to leave one location was, in practice in the Star Wars game, simply a matter of using an attractor to put them at a

different location. What follows is a categorization of the gamemasters' techniques, subdivided into both game and metagame techniques. All techniques were empirically observed by gamemasters during the course of the games, save one technique, Expulsion, which was not used during observed sessions. Since it is possibly the most extreme detractor at the gamemaster's disposal, it was not observed but gamemasters reported in interview as having used it in the past.

| | Attractors | Use | GM | Detractors | Use | GM | Other | Use | GM |
|----------------------------|----------------------|-----|----|-----------------------|-----|----|-------------------------|-----|----|
| Game Techniques | Instruction | 10 | 4 | Presence of Authority | 3 | 2 | Fate | 12 | 4 |
| | Inverse Instruction | 2 | 1 | Suspiciousness | 6 | 4 | | | |
| | Focus | 14 | 4 | Lack of Reward | 9 | 4 | | | |
| | Character Hooks | 12 | 4 | Damage | 6 | 4 | NPC Action | 15 | 3 |
| | Spontaneous Conflict | 4 | 4 | Death | 2 | 1 | | | |
| | In-Game Reward | 4 | 3 | | | | | | |
| Metagame Techniques | System Reward | 3 | 3 | System Punishment | 1 | 1 | Knowing the Players | 4 | 4 |
| | Fortunetelling | 6 | 3 | Hassle | 4 | 2 | Social Pressure | 4 | 4 |
| | | | | Admonishment | 4 | 4 | Making Meta Comparisons | 2 | 2 |
| | | | | Expulsion | 0 | 0 | Rebalancing Challenge | 11 | 4 |
| | | | | | | | Phrasing | 3 | 2 |

Figure 1: Observed Gamemaster Techniques Categorized by Type and Frequency

The Use column by each technique shows the total occurrences of each technique from observation. The GM column is the number of gamemasters observed to use the technique.

4.1 In-Game Attractors

4.1.1 Instruction

“He hired them to go look at this keep.” The simplest form of attractor is surprisingly common to employ, and was used at least once in every game session observed. Put simply, an NPC agent under the GM's control asks the players to do something for him, and the player characters proceed to do it.

4.1.2 Inverse Instruction

“The ritual has already begun. ... You can do nothing about it.” The inverse of the instruction attractor is to utilize it in combination with a reverse-psychology approach. The GM has a villainous character, or any character the players do not like and know is an adversary. That character tells the PCs not

to do something, dares them to do it, or tells them it is impossible to do. This entices the players to attempt the “impossible” action.

4.1.3 Focus

Players seem to be attracted to whatever the most interesting thing in the room is. If the gamemaster should describe one area or person in particular detail, they will approach that area, object, or person, especially if there is nothing else interesting to look at or do in the area they have arrived.

4.1.4 Character Hooks

Many narrative-driven gamemasters concentrate much of their effort on the motivations of the characters. This involves knowledge of the role the player has taken up, and how that role is likely to act in specific situations. The gamemaster will then use

character motivations, such as threatening a relative of the player character, or putting a tailor-made adversary into the game for that character, to spur that character forward. This attractor works because the characters that players portray in roleplaying games tend to be very well-defined.

4.1.5 Spontaneous Conflict

Spontaneous conflict is placed into the game by a gamemaster who senses his story has gotten boring, and wants an instant way to prod the players to taking action. Most often, this occurs in the form of a physical attack, such as having a monster jump into the characters' path so that they can fight it. The player characters will be motivated to do something in response. Most often, this means they will begin a combat action and fight back so that the creature will not kill them. Like other types of roleplaying conflict, spontaneous conflict is not always physical. It can include a mystery dropped into the game which will provide a new story arc for characters and force them to think or look for clues.

4.1.6 In-Game Reward

An In-Game Reward is any reward given to players which is not specifically designed to interest one particular character. These include the more general attractors such as treasure items, and in-game money, as well as slightly less tangible rewards such as the favor of an NPC.

4.2 In -Game Detractors

4.2.1 Presence of Authority

In this detractor, a figure of authority that the players respect tells them not to do something. Even the presence of such an authoritative figure is enough in many cases to prevent otherwise errant behavior. The players do not want to take unwanted action around an important authority figure, so they are on their best behavior and are more likely to go along with suggestions.

4.2.2 Suspiciousness

If an object looks dangerous, players will avoid interacting with it. This detractor in a way the opposite of the Focus attractor, and involves using focus in a particular way to explain why interacting with something may be a bad idea. This detractor can sometimes occur unintentionally if a focus attractor is employed incorrectly.

4.2.3 Lack of Reward

"You don't find any useful information." If nothing happens at all from taking an intended action, clearly it was not the right action to take, and players will desist.

4.2.4 Damage

Damaging the character, often physically, is an immediately effective way to prevent him from doing that which caused the damage, or continuing to do something which has already damaged him once.

4.2.5 Death

The most extreme form of in-game detractor is killing the character entirely, during or before he takes a game-breaking action. Gamemasters interviewed mentioned they did not like to kill characters, but would not hesitate if the player had done something that merited it.

4.3 Other In-game Techniques

4.3.1 Fate

This is the type of technique which Chris Crawford refers to as a "Foldback." In a foldback, or using Fate, no matter which choice the players make in a branched situation, the results are similar to what the gamemaster was already planning to have happen (2005). It allows the players to make a decision, but that decision is illusory because no matter what choice is made, the final result is similar.

Despite the fact that using fate removes real consequence from player choice, this does not seem like negative railroading at all, if done correctly. In fact, the notion that this removes a certain aspect of player choice does not really occur as much to gamemasters who employ it as simply part of generating a dramatic arc. This technique *does* seem like railroading if the option of replay is presented. Using Fate attractors work very well for tabletop games because every tabletop game session is designed to be played only once by the same group of people. Fate attractors work extremely poorly if the players can replay the scenario, and will cause them to feel cheated instead of rewarded.

4.3.2 NPC Action

Action from an NPC does not always provide immediate conflict, but may provide attraction or detraction just by giving the players a small indication what is best to do next. This is typically a combination of in-game approaches.

4.4 Metagame Attractors

4.4.1 System Reward

A relatively new system for encouraging players to play along is to offer a predetermined metagame reward for an action the gamemaster likes. This is most often a moment of good in-character play or, in heroic games, a moment of self-sacrificing bravery, which gamemasters like to reward.

Three out of the four gamemasters observed had some form of this; even if the rules system they were using did not originally, it was added as a house rule. These were called “drama points” or “action points,” and sometimes represented by chips or markers handed out to players. They can be spent for bonuses to a roll, a special ability, or a re-roll in a tight situation later, depending on the GM. The reward for a good action is a useful device even if the player tends to hoard the points rather than using them.

The ability of the players to use the action points in a later tight situation benefits the dramatic arc as well. It is, after all, not interesting if a hero fails in the most climactic moment of an otherwise exciting story; such as near the end of the evening’s session. Those players that earn action points tend to save and spend them near the end of the evening, when the stakes are highest and success contributes more positively toward the narrative.

4.4.2 Fortunetelling

If a player is aware of the rules of the game, and knows which actions are most likely to net rewards versus other actions, he will be more likely to act on actions which he believes will provide a reward. The most common time this type of technique is used is during combat. During combat, the players are generally aware of all the rules that are used to guide their actions. They are likely to take actions which will net them a good result, as long as they can find some way to justify those actions in character.

4.5 Metagame Detractors

4.5.1 System Punishment

A set of metagame-influencing rules included in the roleplaying game itself can also hinder a player if he takes a gamebreaking action. The Star Wars system used in one game has an element called Dark Side Points which are the opposite of action points. If a player accumulates more than a few of these points, he may lose his character to the dark side and be removed from play. This bars him from taking evil actions, because the player does not want to be removed for a metagame reason. This kind of detractor, if it is point-based, does not prevent the player from taking an unwanted action once or twice, as sometimes it is used as temptation instead of outright detraction.

4.5.2 Hassle

In the case of hassle, nothing in the system is out-right preventing a player from taking this action, but the player knows, metagame, that the system that the rules provide for taking the action is annoying, arcane, or not worth the bother. Most gamemasters try not to use this detractor. Some gamemasters even try

to rewrite the system to reward players for being accepting of a hassle, for example, offering a System Reward like an Action Point for a player choosing a complex action over a simple one, in a case where the complex action was more interesting dramatically.

4.5.3 Admonishment

An extreme form of metagame detractor is to simply tell the player, out of character, not to take the action he is trying to take. The ultimate goal of the detractors listed above is to avoid using this particular one as much as possible, since, players will react to this with bitter disappointment. Admonishing players directly breaks the feel of being part of the game world.

4.5.4 Expulsion

This occurs when a player is kicked out of a game entirely. Naturally, it did not happen when observed, though some gamemasters had stories to tell about players to whom this had occurred. It is best to combine with in-game consequences, such as a character death, to keep the story progressing smoothly as well despite metagame interference.

4.6 Other Metagame Techniques

4.6.1 Knowing the Players

In post-game interview, all gamemasters said something to the effect that it is crucial to know the wants and needs of your individual players, in order to provide them with the best experience for their personal tastes. If a gamemaster is an author, in the players are in some way his audience. A good gamemaster will try to second-guess players by their individual natures, at least enough to anticipate their actions. All metagame leading techniques are derived from the art of trying to predict human actions, but many gamemasters try to predict the actions of their specific players rather than simply players in general.

There is another, slightly less obvious reason for getting to know one’s players well, outside of simply predicting their moves. As Robert Cialdini mentions in his book, *Influence: Science and Practice*, the more we like someone, the more likely we are to comply with that person’s requests, explicit or implicit (2001). Gaming is a social activity; those who game together either begin as friends, who find an activity that they all enjoy, or, become friends because they are able to bond over a mutually-agreed-upon activity. Game groups typically like one another because they all have something in common with each other: a love for roleplaying games, and they enjoy each other’s company in that context. The players become, or begin as, the gamemaster’s close associates and friends, and therefore, are inclined to go along with the gamemaster’s suggestions.

4.6.2 Social Pressure

Along with the Liking technique when it applies to the gamemaster, the presence of other players who are his friends will often cause a player to want to play along to help them out. The game is ultimately a group dynamic of players, and most players do not want to ruin the good time of other players, and will go along with the story they seem to be deciding on as a group. The social factor of group dynamics is most likely why a group size of four to five players is the most preferred and often-cited size for a gaming group (Rosenberg 2002, Wizards 2003).

The presence of other players not only encourages the player to follow the rules, it also discourages him from detracting from the story which might ruin the good time of that player's friends. Any player that is in a game to have fun with the group may be detracted from a game-breaking action if they feel it would ruin the experience of the other players at the table. Players are attracted toward actions that they perceive would strengthen group solidarity.

4.6.3 Making Meta Comparisons

One fast way of making situations seem familiar to the players on a metagame level is by associating them with a particular actor, genre, or setting. If a room in a dungeon, for example, is similar to a room depicted in an adventure movie, or other media element the players are familiar with, the players will approach it with the mindset that they are in the same situation depicted in that movie. The GM uses this technique metagame by describing things in a way that facilitates the action she would like them to try. Working with a published or well-known setting, such as Star Wars, makes this trick easiest to employ.

4.6.4 Rebalancing Challenge

"Failure is usually boring. It is the credible but unrealized threat of failure that is interesting." (Laws 2004) This quote from Robin Laws was repeated by a gamemaster almost verbatim during her post-game interview. The philosophy is that repeated failures are not fun for players and do not make a good story. On the other hand, the *threat* of failure is very important to build excitement, or else the challenges are too easy, and fail to make an interesting story. The challenge level in every way must be enough to keep the players engaged. It must threaten their characters visibly, but not so much as they are failing every turn.

In order to do this correctly, gamemasters are watching their game carefully, taking constant measures of how well the characters seem to be doing to keep up with their story. This metagame concern then reflects changes made to the in-game world, often on the fly. A new monster may be added to a future encounter if the encounter before it was too easy.

Some traps may be removed depending on whether the players can handle it.

4.6.5 Phrasing

The way that questions are worded becomes an important metagame factor. Some gamemasters self-reported that they were watching their words or tone of voice carefully, and others noticed, during the recording, particular things about their styling and posture. When one of the gamemasters asks a player if she is going to attack a foe, she gives her a hint as to her preferred action by the way she phrases her question. She wants to hint at what she would like to see, so, instead of asking, "Where are you moving?" she asks, "Are you moving in the general direction of the zombie?" Gamemasters may also use different speech techniques for different NPCs to promote their players liking, or disliking, those NPCs depending on what is best for the story.

5 Conclusion

The observations of gamemasters at work provided an excellent insight into the methodologies that these directors were using to facilitate narrative and player interactivity. Perhaps the largest variance among the gamemasters was their rigidity of story; while some remained focused tightly on a particular planned path, others played their narrative very loosely with little planning. The variety of techniques viewed provided excellent insight, and several techniques emerged that had not been previously considered in the initial technique hypothesis.

One of the strongest findings of the study was that metagame techniques became an equally important factor to in game techniques in order to drive story. Many traditional in-game techniques employed by gamemasters are used in current interactive drama systems as well, but in the case of gamemasters, metagame technique usage such as challenge rebalancing are a more prominent part of the development of the story. The calculated use of both metagame attractors, and the "fate" style attractors where much of the participation of the users is fairly illusory were also crucial to the gamemasters' planning.

The gamemasters' use of metagame reward and punishment to enrich the game itself is an important finding of this study. This approach embraces the game-like aspects of the otherwise drama-generating structure to an effect that gamemasters found to be positive. The ability of players to utilize their earlier good choices to cancel later failures with a metagame method enriches the dramatic arc of the story near its climax. It is definitely a technique that should be experimented with by

future interactive dramas to see if a computerized, visible, point-reward system might net similar results.

It is less clear how the social aspects of live gaming may be transferable to a computational environment. The gamemaster has access to many tools the computer does not; he or she may know the players and their preferences before the game begins, and he or she can also look around at the facial expressions and interactions of players to get a metric of their engagement with the current story. A computerized story agent, could, however, make interpretations of a player's preference based on his or her past actions within the system, and design future story points accordingly.

Despite the limitations that computerized systems still have, the parallels between the gamemaster's work and the work of a story director are very clear. The work in qualifying the different systems that gamemasters use should be beneficial to the designers of interactive story systems in multiple ways: mainly, in designing better attraction systems to get players of their storytelling games to follow along with their desires for story instead of going off on a tangent unintended by the story. A future interactive drama should be programmed based on utilization of these specific categorized techniques, particularly the metagame techniques which seem to net strong results among the players of tabletop games.

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