Interactive Narrative, Plot Types, and Interpersonal Relations

Marie-Laure Ryan

University of Colorado, Boulder
marilaur@gmail.com

Abstract: The design of an interactive narrative begins with the choice of a type of story. In this paper I examine the potential of three kinds of plot for active user participation: the epic plot, which focuses on the struggle of the individual to survive in a hostile world, the dramatic plot, which deals with the evolution of a network of human relations, and the epistemic plot, which is propelled by the desire to solve a mystery. I distinguish two basic types of immersion—ludic and narrative, the latter subdivided into spatial, temporal and emotional variants, and I discuss the ability of the three kinds of plot to generate these various forms of immersion.

Keywords: Interactive narrative, design of interactive narrative, computer games, agency, user role, plot types, epic plot, epistemic plot, dramatic plot, interpersonal relations, ludic immersion, narrative immersion

1 Introduction

The design of an interactive narrative begins with the choice of a type of story. In this paper I propose to examine the potential of three kinds of plot for interactive implementation: the epic plot, the epistemic plot, and the dramatic plot.

1.1 Three Types of Plot

Aristotle recognized two forms of narrative: the epic and the dramatic. Although the distinction was primary based on the mode of presentation--the epic representing events through verbal narration (*diegesis*) and the dramatic through an imitation of action (*mimesis*)--the two genres also differ from each other through the form and content of the plot: as Aristotle wrote, "one should not compose a tragedy out of a body of materials which would serve for an epic--by which I mean one that contains a multiplicity of stories" [1].

The epic plot is focused on the exploits of a solitary hero; it "preserves the memory of glorious deeds performed by superior beings" who "show their mettle in battles against human foes, monsters, or the powers of nature" [3]. Since every feat adds to the glory of the hero, the story can be endlessly expanded by adding new feats and new episodes. Epic narratives focus on physical actions, and the human relations that

motivate the hero to act remain fairly simple. Take the archetypal plot of the fairy tale, as described by Vladimir Propp [10]: a villain causes harm to a family, typically by kidnapping a princess; the hero is dispatched to repair the situation; after a certain number of tests he fulfills his mission by defeating the villain with the help of a donor, and he is rewarded for his actions with the hand of the princess. Throughout this plot, there is no evolution in personal relations: the hero is the faithful servant of the dispatcher; he remains opposed to the villain until the end (there is no reconciliation); nobody changes side during the fight between the two factions; when the hero marries the princess, they live happily ever after.

Dramatic narratives, by contrast, focus on evolving networks of human relations. Here are some examples of this evolution: in the beginning, x is allied with y; then x betrays y and sides with z, and in the end x and y are mortal enemies; in the beginning x has always been faithful to y; then x falls in love with z; y becomes jealous and kills x and z; in the beginning x and y are friends, then y insults x and they are enemies; but in the end x redeems himself, y pardons x and they are friends again. In a dramatic plot, the action is mental rather than physical: most of the events consist of acts of verbal communication between the characters; and when the characters perform physical actions, the significance of these actions resides in what they reveal about the mind of the agent and in how they affect interpersonal relations. Another difference from epic plots is that dramatic narratives present a closed pattern of exposition, complication, crisis and resolution (also known as the Freytag triangle) that defies expansion. The focus on interpersonal relations of the dramatic plot describes both the tragic and the comic genre. [1]

In the nineteenth century, a third kind of narrative made its appearance: the epistemic narrative, driven by the desire to know. Its standard representative is the mystery story. The trademark of the epistemic plot is the superposition of two stories: one constituted by the events that took place in the past, and the other by the investigation that leads to their discovery. While the seed of the genre can be found in earlier forms of narrative--for instance, in Sophocles's *Oedipus Rex*--Walter Ong [9] attributes its emergence to the invention of print. The intellectual appeal of the mystery story lies in challenging the reader to find the solution before it is given out by the narrative; in order to do so, the reader needs to sort out the clues from the accidental facts, and to submit these clues to logical operations of deduction and induction. This mental activity would not be possible if the print medium did not give her the opportunity to parse the story at her own pace.

2   The Aesthetic Goals of Interactive Narrative

Janet Murray [7] proposes the Holodeck of the TV series Star Trek as the ideal model of interactive narrative. The Holodeck is a computer-generated, three-dimensional simulation of a fictional world. The user is invited to step into this world, to impersonate a character, and to interact through language and gestures with synthetic

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[1] With the development of the novel, and even earlier, in *The Iliad*, the prototypical epic and dramatic plot were hybridized into open plots and action-centered stories that present much more complex interpersonal relations than the archetypal fairy tale.

agents. No matter what the user says or does, the synthetic agents respond coherently, and integrate the user's input into a narrative arc that sustains interest. The Holodeck, as a whole, may be a castle in the air, but this does not take anything away from the validity of its individual features as goals to pursue for researchers and developers of interactive narrative, even if it is often necessary to sacrifice one goal to another.

- Natural interface. Ideally, users should interact with computer-generated worlds in exactly the same way they interact with the real world: through language and the body. But for practical reasons, interactive narrative must often settle for less natural, but more efficient interfaces: the symbolic performance of physical actions through the manipulation of controls, and the selection of items from a language-based menu.
- Integration of user actions within the story. Just as, in real life, all of our actions contribute to our life story, in an interactive narrative, all of the user's actions should move the plot forward. This means that these actions should be more than a mean to unlock the next episode in a story told primarily through film clips and other non-interactive media. There should be a close thematic relation between the tasks offered to the user and the plot of the story.
- Frequent interaction. In real life, we interact with people and the world on a fairly constant basis, though there are moments when we are stripped of agency and forced to watch as spectators the events that determine our destiny. To reproduce this aspect of life, interactive narrative should make interactive moments the rule and passive moments the exception, rather than limiting agency to a few decision points separated by long stretches of passive watching.
- Dynamic creation of the story. Though interactive narrative will always rely on pre-scripted elements, the plot should be created as much as possible in the real-time of the user's interaction with the system. A reasonable number of different variations should emerge from different visits.

While the purpose of the preceding goals is to bring interactive narrative as close as possible to life, the next goal transcends the simulation of life by elevating it into art.

- Ability to create narrative immersion. By narrative immersion I mean an engagement of the imagination in the mental construction and contemplation of a storyworld. I contrast it with ludic immersion, which is a deep absorption in the performance of a task, comparable to the intensity with which a violinist performs a concerto. The relative importance of ludic and narrative immersion with respect to each other spells the difference between narrative games, in which the player pursues a specific goal associated with winning, and playable stories, in which the production of an aesthetically rewarding story is a goal in itself. Narrative immersion can take at least three forms [11]: spatial (a sense of place and pleasure taken in exploring the storyworld), temporal (a burning desire to know what will happen next) and emotional (affective reactions to the story and to the characters) .

3 Interactivity and the Epic Plot

The epic plot has long been a favorite of game designers. We find it in shooters, in adventure games, and in the quests of MMORPGs. It is easy to see why it is so popular. The most common mode of interaction in computer games is through the keyboard, or through game pads. The range of actions that can be symbolically performed in real time through these controls is limited to the physical kind: players can move the body of their avatar, inspect or pick up objects by clicking on them, and trigger the behaviors encoded in these objects, such as firing weapons. The archetypal narrative pattern of the quest makes the most out of these limitations. The deeds of the hero are relatively easy to simulate through the game controls, the basic sequence of accomplishment-reward can be repeated endlessly, allowing the player to reach higher and higher levels in the game, the basic script of the quest lends itself to great variations in setting and in the nature of the tasks, and the solitary nature of the hero's quest makes interpersonal relations dispensable. Even when the player needs the assistance of system-created characters or of other players to perform the tasks (as happens in MMORPGs), he advances in the game on his own, and other characters are usually reduced to the fixed roles of either antagonists or helpers. Just as the epic genre highlights the physical deeds of the hero, the games based on this narrative pattern give players the opportunity to distinguish themselves by performing "exploits"--a term which, in hacker jargon, designates an extraordinarily daring and original way to accomplish a task, usually by taking advantage of a hole in the system. Another reason for the popularity of the epic pattern in video games lies in the graphic capabilities of computers. Epic narratives are basically travel stories that recount the adventures of the hero in a world full of danger. The ability of 3D graphic engines to adapt the display to the position of the player's virtual body makes them very efficient at simulating movement as an embodied experience, thereby creating spatial immersion.

4 Interactivity and the Epistemic Plot

The epistemic plot runs a close second to the epic plot in its compatibility with user interaction. It casts the player in the well-defined role of detective, it combines an authorially defined story--the events being investigated--with a variable story created in real time by the actions of the player; it takes advantage of the visual resources of digital systems by sending the player on a search for clues disseminated throughout the storyworld, and it is fully compatible with the types of action that can be easily performed by game controls: moving across the world, picking objects, examining them for clues, finding documents, and interrogating non-playing characters, ideally through a dialogue system but, more efficiently, through a menu of canned questions. An occasional fight against an antagonist can be thrown in to raise the adrenaline level of the player. The desire to know that drives the epistemic plot situates the immersivity of the genre on the temporal level. Temporal immersion includes three narrative effects [12]: curiosity, surprise and suspense. The first two dominate the mystery story, while the third is more typical of thrillers. When participation takes the

form of spatial exploration and leads to unexpected discoveries, its motivation is curiosity, and its reward is surprise. It is relatively easy for a game system to take away control from the player and to throw in events that suddenly solve the mystery in a totally unexpected way. Suspense however is much more resistant to interactivity, because it requires a long-range planning by the system and a top-down management of the player's expectations. Like epistemic curiosity, suspense is created by an intense desire to know, but while epistemic curiosity concerns events that already happened, suspense is focused on the future. People experience suspense when they can foresee two or more possible developments, and they are dying to find out which one of these paths the story will actualize. But when players can determine the path through their choice of actions, the uncertainty is lost. And if the system generates an accidental event to prevent the player from fully controlling the outcome of the story, the effect will be surprise rather than suspense.

5 Interactivity and the Dramatic Plot

The dramatic plot is the most difficult to implement because of its emphasis on the evolution of interpersonal relations. In the goal-oriented action of narrative games based on epic and epistemic plots, characters mostly matter to the player because of their capacity to help or hinder the achievement of tasks. Their relation to the player is fixed, and their relations among themselves are practically non-existent. Very rare are the cases in which the player regards NPCs as human beings rather than as means toward an end. According to Michael Nitsche [8], such a situation occurs in *Deus Ex* when the player must kill a formerly friendly NPC who has turned into a zombie in order to progress in the game. Some players develop such attachment to this characters that they experience extreme discomfort at treating her like an object that needs to be eliminated. The change in relation from friendly to inimical, and the moral ambiguity felt by the players--an ambiguity that temporarily distracts them from the game goals-- represents a small step from an epic, strictly goal-oriented narrative game to a playable story with a dramatic plot.

The implementation of the dramatic plot raises countless problems. What will be the goals of the player and what kind of algorithm will it take to make these goals interact with the goals of the system-created characters? In an epic plot the player is given a goal by the dispatcher, and all of his efforts are geared toward the accomplishment of the mission. Similarly, in an epistemic plot, the player remains focused on the elucidation of the mystery until he finds the solution. But in a dramatic plot with evolving interpersonal relations, the goals of characters evolve together with their relations, and they must be constantly redefined. This requires of the system a much more powerful ability to simulate human reasoning than in epic and epistemic plots. Will players spontaneously adapt the goals and plans of their avatar to the current situation, or will the system tell them what to do through a NPC? Will NPCs be equipped with an AI sufficiently sophisticated to read each other's mind, as well as the mind of the player, and to adapt their beliefs, wishes, and plans to every change in situation? The emphasis of the dramatic plot on mental states requires from all the participants--whether human or system-created--an ability to form what is known in

cognitive science as "theory of mind," this is to say, representations of the thoughts of other characters. Does she love me or doesn't she? Is he trying to help or to deceive me? Does she intent to keep her promise? Does she know that I know that she loves him? Can I believe what he says, or is he lying? These are the questions that propel and motivate the dramatic plot--whether tragic or comic--, the questions that the characters must ask in order to know how to respond to the actions of other characters. The creation of dynamic interpersonal relations between the player and the characters and between the characters themselves makes enormous, if not unrealistic demands on the AI that runs the system.

When--and if--all these issues are resolved, the question will remain of what kind of role should be given to the player, in order to make the visit to the storyworld into a truly pleasurable experience. I seriously doubt that people would enjoy emulating the heroes of tragedy and comedy by turning themselves into objects of pity or laughter. This suggests that the safest role for the player is that of a marginally involved observer or confidante whose interventions serves mainly as a stimulant that affects the behavior of the synthetic characters and triggers changes in their relations. Or, as Cavazza *et al*. suggest [2], the player could use his agency to change the world, in order to see how the characters will adapt to the new circumstances. As a peripheral character the user combines the roles of agent and spectator without assuming responsibility for the development of the story and without relinquishing the guidance of an author. As Glassner observes [4], most users do not really want to become improvising actors. If they are truly interested in creating their own scripts, they will be much better off participating in online virtual worlds where they will be able to interact with naturally intelligent agents.

5.1 Emotional Immersion in Interactive Narratives

The trademark of the dramatic plot lies in its ability to create an emotional type of immersion. In real life we experience two main types of emotions: those directed toward ourselves, and those directed toward other creatures through a vicarious experience known as empathy. Self-directed emotions concern our desires and the success of the actions through which we try to fulfill them. Even when these emotions involve feelings toward others, such as love and jealousy, the other is an object in a bi-polar relation determined by the desires of the experiencer. Not so with empathy: it is by mentally simulating the situation of others, by pretending to be them and imagining their desires as our own that we feel joy, pity, or sadness for them.

Passive media such as film, theater and novels have a unique power to generate emotions directed toward others. Aristotle paid tribute to this ability when he described the effect of tragedy as purification (*catharsis*) through terror and pity. By contrast, the emotions we experience while playing games--excitement, triumph, dejection, relief, frustration, relaxation, curiosity, and amusement [5]--are overwhelmingly self-directed ones, because they reflect our success and interest in playing the game. But their range is much smaller than the self-centered emotions of life: computer game players may fight to rescue a princess, and they may receive her hand in reward, but unlike the heroes of love stories, they are not motivated to act by romantic feelings.

While narrative games based on epic patterns deliberately sacrifice characters to action, playable stories based on interpersonal relations have only been able to create characters sufficiently lifelike to generate emotional reactions by limiting the player's agency. A case in point is the interactive drama *Façade* [6]. The player develops intense feelings of dislike and contempt for Grace and Tripp, a professionally and socially successful couple whose seemingly perfect marriage turns out during the dialogue to be a mere façade that hides a deeply fractured personal relation. The player's visit with Grace and Tripp may act as a catalyst of the couple's hidden feelings, but she is limited to an observer role, and while her agency allows variations in the dialogue that exposes diverse facets of Grace and Tripp's personalities, the drama unfolds according to a relatively fixed script imposed top-down by the system. She may hate or despise Grace and Tripp, but unlike the player of a competitive game or online world, she does not entertain strong feelings for her avatar, such as caring for her character's personal relationship to Grace and Tripp. I certainly did not experience sadness over a lost friendship when the couple expelled me from their apartment at the end of the evening to sort out their problems between themselves.

6 Conclusion

With the epic quest structure of most video games, interactive media have mastered what could be the oldest form of narrative (or at least the oldest form of fictional narrative, for gossip must be older): the struggle of the individual against a hostile world. What remains to be conquered is the dramatic narrative, the plot form that knots together several destinies into a dynamic network of human relations and then disentangles them to let characters go their own way. Some steps in this direction have been taken with games interspersed with filmic clips and with interactive drama, but in both of these approaches, the involvement of the player remains peripheral: with film clips he relinquishes agency while the plot is being knotted, while with interactive drama (or at least with *Façade*, currently to my knowledge the only publicly released example of the genre), he is confined to an observer role. As the example from *Deus Ex* suggests, it may be relatively feasible to introduce system-created characters who inspire emotions to the player in a narrative game with an epic structure. Though emotional involvement conflicts with the pursuit of the game goals, these goals can always be temporarily suspended and resumed later. An online world could for instance be filled with interesting characters who tell moving stories to the player, momentarily distracting her from her current quest, or a friendly character could be turned into an enemy, causing a fleeting sense of betrayal in the player. It is much harder, and perhaps not desirable, to engage the player as a protagonist driven by strong self-centered desires in a playable story with a dramatic plot, because if the player identifies strongly with her avatar, the drama could become too much like life itself: an occasion for suffering and frustration, rather than a pleasurable experience. Finding a formula for an enjoyable combination of the self-centered emotions that come from our active engagement in a world or in a game with the other-centered emotions inspired by the fictional characters of narrative is the most daunting of the tasks that awaits the designers of narrative games and playable stories.

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