

Player Agency in Interactive Narrative: Audience, Actor & Author

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Abstract. The question motivating this review paper is, how can computer-based interactive narrative be used as a constructivist learning activity? The paper proposes that player agency can be used to link interactive narrative to learner agency in constructivist theory, and to classify approaches to interactive narrative. The traditional question driving research in interactive narrative is, ‘how can an interactive narrative deal with a high degree of player agency, while maintaining a coherent and well-formed narrative?’ This question derives from an Aristotelian approach to interactive narrative that, as the question shows, is inherently antagonistic to player agency. Within this approach, player agency must be restricted and manipulated to maintain the narrative. Two alternative approaches based on Brecht’s Epic Theatre and Boal’s Theatre of the Oppressed are reviewed. If a Boalian approach to interactive narrative is taken the conflict between narrative and player agency dissolves. The question that emerges from this approach is quite different from the traditional question above, and presents a more useful approach to applying interactive narrative as a constructivist learning activity.

1 INTRODUCTION AND MOTIVATION

How can computer-based interactive narrative be used as a constructivist learning activity? The question is significant because computer-based narrative is increasingly being used in education: in schools, in corporate training, and elsewhere. In the academic literature some theory does exist that allows us to approach the question, yet not much is known about the learning effects of interactive narrative. Pursuing this question will shed light on new approaches to interactive narrative in education and will inform new designs for interactive narrative environments.

For the purposes of this review, a *constructivist* learning environment is one in which active and critical (not passive and receptive) learning is produced, and in which learners construct their own understanding of the content (they are not led to specific truths by the teacher). A constructivist learning environment involves some degree of structure in order to ensure learning objectives are achieved. But within that structure, the emphasis is on maximising free exploration, interaction, and enjoyment for the learner — maximising *learner agency* — to ensure that learners arrive at their own understanding.

The question of interactive narrative as a constructivist learning activity will be pursued by looking at existing approaches to interactive narrative, and using *learner agency* as a key analytical tool with which to formally classify them. Learner agency is a crucial aspect of constructivist learning, and will be shown to be antagonistic to tra-

ditional approaches to interactive narrative. The review concludes by proposing a way to resolve this conflict.

2 A BRIEF INTRODUCTION TO INTERACTIVE NARRATIVE

The model of narrative most frequently found in the interactive narrative literature is that of the structuralist approach to narratology. As Lindley explains, “the model is very useful when applied to the analysis and design of interactive narrative and story construction systems, and the identification of several levels of narrative meaning clarifies the relationships between different strategies for interactive narrative and story construction” [11, p.7]. This structuralist model makes a distinction between a *story*, defined as “the narrated events, abstracted from their disposition in the text and reconstructed in their chronological order, together with the participants in these events” [20, p.3] and the *text*, defined as the “spoken or written discourse which undertakes the telling” of the events of the story [20, p.3]. The reader (or listener) does not have direct access to the story, only to the text, and in the text “the events do not necessarily appear in chronological order, the characteristics of the participants are dispersed throughout, and all the items of the narrative content are filtered through some prism or perspective” [20, p.3]. The word ‘narrative’ is understood to refer to this text: “The text itself is *the narrative*” [11, p.6]. Although narratology traditionally considers spoken or written narrative fiction, Lindley explains that “the concept of a text has been generalised to cover audio-visual media, since many of the ways narrative functions semiotically are the same across different media forms” [11, p.5]. The motivation for this distinction between *story* and *narrative* is to clarify that “the same story may be expressed in many different narratives, either within the same medium or across different media” [11, p.6].

Meadows gives the following definition of *interactive narrative*:

“An interactive narrative is a time-based representation of character and action in which a reader can affect, choose, or change the plot. The first-, second-, or third-person characters may actually be the reader.” [15, p.62]

The key is that ‘interactive narrative’ is not merely the presence of interaction and narrative in the same experience. An interactive narrative is understood as an experience in which the reader (player), through meaningful interaction, is able to change the events that occur in the narrative. This can mean affecting the events themselves, or affecting which events occur and which do not, or a combination of both. The interaction can be on a moment-by-moment basis as in ‘emergent narrative’ (see ‘Emergent Narratives’ in section 3) or can

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consist of fewer decisions with longer-term effects as in a ‘branching story’ (see ‘Modulated Plot’ in section 3) or a combination of both.

This definition raises the question of how to define ‘plot.’ The idea of *continuity of action* by means of *causal relations* between the events represented has traditionally been central to the notion of plot, as Forster’s definition shows:

“We have defined story as a narrative of events arranged in time-sequence. A plot is also a narrative of events, the emphasis falling on causality. ‘The king died and then the queen died’ is a story. ‘The king died and then the queen died of grief’ is a plot.” [4, p.93]

Alternatively, Meadows describes plot as “the author’s planned organisation of the events of the story...a planned topology that has an implied opinion and perspective” [15, p.27].

Forster and Meadows describe two different aspects of causality in the definition of plot. Forster focuses on the chain of cause and effect within the narrative: the queen died because she felt grief because the king died. Meadows focuses on the author’s role: the queen died because the author required it to fulfil the needs of the plot. In an interactive plot both aspects of causality are present. The defining property is that the plot consists of chronologically ordered and causally interconnected events.

3 PLAYER AGENCY: AUDIENCE, ACTOR AND AUTHOR

A *player* in an interactive narrative can be a spectator in the sense that she is a witness to the dramatic spectacle. She can be an actor in the sense that she plays the role of one of the characters in the narrative. And she can be an author in the sense that she collaborates with the system (and perhaps with other players) to produce the resulting narrative experience. The player is not exclusively a spectator, nor an actor, nor an author, but in any given example of interactive narrative the role of player combines these three traditional roles to different degrees.²

Player agency is a concept that is crucial to the formal nature of interactive narrative as a medium, and that relates interactive narrative theory to learner agency in constructivist learning theory. In the context of interactive narrative, Murray defines agency as:

“the satisfying power to take meaningful action and see the results of our decisions and choices.” [16, p.125]

and Mateas as:

“the feeling of empowerment that comes from being able to take actions in the [virtual] world whose effects relate to the player’s intention” [13, p.2]

Mateas further clarifies that agency is a phenomenal category: it depends “on what’s going on in the interactor’s head, on what’s communicated between the technical system and the person, not only on technical facts like counting the number of system actions that are available at each moment.”³

² The role of *game designer* is a separate role, distinct from the role of player. Because ‘author’ is used in this review to denote one of the traditional narrative roles with which the role of player in interactive narrative is described, care has been taken to use the word *designer* rather than author to refer to the procedural designer of an interactive narrative environment.

³ Michael Mateas commenting on his weblog *Grand Text Auto*, the post is titled *Interaction and Agency* and dated 6th August 2003, <http://grandtextauto.gatech.edu/2003/08/06/interaction-and-agency/>

The form of agency experienced by an audience member, an actor and an author is different:

Audience: an audience member can critically analyse the narrative (she can think about it) but she has no power to act within the narrative.

Actor: an actor can act within the narrative, from the perspective of one of the characters in the narrative, but only within the limits and from the perspective of the role designed for her.

Author: an author shapes the narrative experience from without, acting on the structures and processes that make up the narrative as an artificial construct in order to express some form or opinion. But an author is limited by the tools at her disposal, her distance from the audience, and her reliance on actors to manifest her intentions and on the audience to comprehend her intentions.

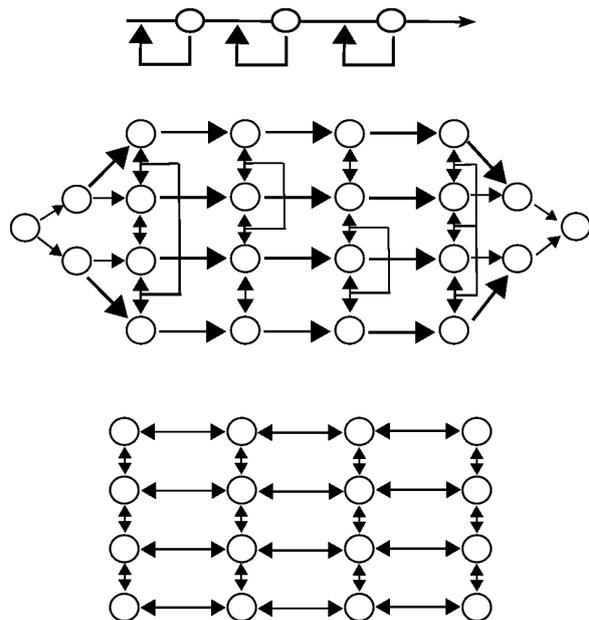


Figure 1. Meadows’ nodal (top), modulated (middle) and open (bottom) plot structures [15, p.64]. The lines represent possible plot transitions, the circles represent decision points at which player behaviour can choose between plot transitions.

Meadows and Jenkins provide two classifications of some of the narrative structures and devices available to interactive narrative designers. Meadows describes three plot structures for interactive narrative⁴ [15, see figure 1] that exist along a continuum from *Impositional* (the plot is heavily controlled by the game designer, only allowing the player a narrow margin of decisions, or particular moments of interactivity) to *Expressive* (the plot is heavily controlled by the player, the game behaves more like architecture, the player roams freely, explores, investigates, and changes the environment, the breadth of interactivity is much wider but the specifics of a narrative plot are far less defined). The three plot structures represent key descriptive points on the impositional—expressive continuum.

⁴ Meadows explains that “interactive plot structure is more a system of connections than a curve or arc” [15, p.63], and that these plot structures are an “analysis tool” and “don’t have much to do with emotional punch or aesthetic interest.” Meadows is aiming to differentiate his plot structures from formal descriptions of plot that focus on dramatic or emotional progression, such as the rising and falling dramatic action of the Aristotelian theory of theatre.

Nodal Plot “a series of non-interactive events, interrupted by points of interactivity” [15, p.64]. This is the most impositional plot structure, with the most support for the classic dramatic arc. Stories of this form have one beginning and two endings. The player fails and must start again from an earlier point in the narrative (this can happen at many points) or the player succeeds and finishes the game. This plot structure provides few affordances for player agency. The player cannot change the direction of the plot, but can only change the pace at which the plot progresses along its linear path. At each decision point, player action decides whether the player fails (and the game restarts from an earlier point in the plot) or succeeds (and the plot progresses).

Modulated Plot player action chooses which path the plot will follow by choosing from finite sets of pre-defined options at fixed decision points in the plot. The player chooses a path through a finite ‘plot graph.’ These decision points provide affordances for player agency, but their finite nature means that agency is somewhat limited.

Open Plot this structure is “the most expressive for the [player], far less so for the [designer]” [15, p.66], providing the most points of interactivity for the player. The player affects the plot through many small decisions, rather than a few big decisions. The classical dramatic arc may be completely abandoned in the interests of exploration, modification, and investment from the player. The story is usually based on the development of character or the development of environment, or both. The potential for player agency is great. But if the player cannot find meaningful ways to express her intentions on the plot and assess the consequences of that expression, a sense of agency may fail to materialise.

Jenkins describes four devices with which to create “the preconditions for an immersive narrative experience” [7, p.3] in what he calls ‘environmental storytelling’:

Evocative Spaces an interactive environment can build on stories or genres known to the players, painting the narrative world only in broad outlines and leaving it to the player to fill in the rest. This device provides no affordances for player agency in terms of player *action*, but may provide the player with a degree of agency similar to that of a traditional narrative audience as the player’s imagination is given some freedom to help paint the narrative world.

Enacted Narratives an interactive narrative can allow players to perform narrative events. The designer controls the narrative by setting broadly defined goals or conflicts for the characters and inserting localised, non-interactive narrative incidents. The narrative is episodic: “each episode (or set piece) can become compelling on its own terms without contributing significantly to the plot development” [7, p.6] and within each episode the “sequencing of actions may be quite loose” [7, p.6] allowing for much interaction. This device allows player action to affect the details and ordering of events within an episode, though this freedom is limited by the action constraints of the interactive environment and the higher level plot episodes themselves remain static.

Embedded Narratives Jenkins relates this approach to the traditional detective story. The story is seen “less as a temporal structure than a body of information” [7, p.8]. It is put together, piece by piece, by the player: “narrative comprehension is an active process by which viewers assemble and make hypotheses about likely narrative developments on the basis of information drawn from textual cues and clues.” [7, p.8]. The designer controls the progression of the narrative by distributing narrative information throughout the interactive environment. The embedded narrative

can be linear while still being closely tied to player agency as the player focuses on discovering and unscrambling narrative elements. The result is two narratives: one controlled by the player as she explores the environment, and another controlled by the designer and embedded in the environment to be discovered.

Emergent Narratives the narrative is not pre-structured but takes shape through game play. The game designer creates “a world ripe with narrative possibilities,” “a kind of authoring environment within which players can define their own goals and write their own stories” [7, p.9]. The aim is to provide a form of player agency more similar to that of a traditional author than an actor or spectator.

Taken together the two classifications from Meadows and Jenkins describe a large portion of the approaches to interactive narrative and provide a good introduction to the field.

One way to classify approaches to interactive narrative is to use the concept of player agency to ask to what extent the player is audience, actor, and author in the narrative. In this review these three traditional roles will be used to analyse three theoretical approaches to interactive narrative. Each of the three approaches gives a different way of looking at the three roles, and each positions player agency differently with respect to the three roles.

4 AN ARISTOTELIAN APPROACH TO INTERACTIVE NARRATIVE

Lindley [10, p.2] gives a description of “the central notion of narrative in modern commercial cinema.” A narrative of this type has three main parts:

1. A beginning, in which a conflict involving a dilemma of normative morality is established.
2. A middle, in which the consequences of the conflict are played out, propelled by a false resolution of the dilemma.
3. An end, in which the conflict is resolved by an act that affirms normative morality.

Each of these three acts culminates in a moment of crisis, the resolution of which propels the story into the next act (or into the final resolution). The involvement of a central protagonist in the narrative is also key, as is a sense of continuity of action represented by causal connections between events. This narrative structure is known as the three act restorative structure. It is closely related to Aristotle’s concept of narrative as an imitation of action that is an organic whole, having a beginning, a middle and an end which fit together naturally and are connected by causes and effects over time.⁵ It is also related to Freytag’s reworking of Aristotle’s model in his Freytag triangle, which expresses a narrative as a function of time in three phases: rising action in which the crisis or complexity of the plot increases, culminating in a dramatic climax, followed by a period of falling action in which the crisis and plot are resolved [6].

In *Poetics* Aristotle organises the different parts that make up a *tragedy*⁶ into three hierarchical categories: Objects, Medium and Manner. The objects are the actions (the plot of the drama, made up of causally related events), the characters (the agents of the plot) and the thoughts of the characters that lead to the actions they take in

⁵ Aristotle, *Poetics*, 350 B.C.E, available online <http://classics.mit.edu/Aristotle/poetics.html>

⁶ For *Poetics* see previous footnote. *Tragedy* is a form of drama popular in Aristotle’s time, involving a conflict between the protagonist and the law, the gods, or society and having a tragic ending.

the drama (if not explicitly described, these thought processes may be inferred by the audience). Medium refers to the medium through which the objects are presented, for example colour and form, voice, rhythm and harmony, or diction and song. Manner refers to the manner of presentation used, e.g. the drama can be narrated or enacted.

With his *neo-Aristotelian theory of interactive drama* [12, 13] Mateas builds on Laurel’s application of Aristotle’s description of tragedy to human-computer interaction [9] and Murray’s description of player agency in interactive narrative [16]. To describe the role of the player in an interactive drama Mateas places *User Action* at the level of character in the Aristotelian hierarchy. That is, the player acts in the drama as one of the characters in the drama, and when the player takes action in the drama “The player’s intentions become a new source of formal causation” [13, p.4] in the model that was not present in Aristotle’s original model.

To support this, Mateas explains that the player’s intentions are constrained by the *material for action* provided by the system “The only actions available [to the player] are the actions supported by the material resources present in the game” [13, p.4] and by *formal constraints* that provide the player with dramatic reasons to want to take particular actions: “the formal constraints afford *motivation* from the level of plot” [13, p.4].

An example from Mateas and Stern’s interactive drama *Façade* [14] will illustrate the Aristotelian approach. In *Façade*, the player takes on the role of a character in the drama and sees from the first-person view of this character. Dialogue is the main form of interaction: the player communicates with the virtual agents by typing text, the virtual agents communicate by sequencing pre-recorded sound-bites and with facial expressions and hand gestures.

The *Façade* architecture is an attempt to break free of the plot structures and narrative devices described by Meadows and Jenkins (see section 3). *Façade* dynamically sequences dramatic beats from a large library. Each beat is a small collection of interactive, coordinated behaviours to be carried out by the agents of the drama, and is tagged with preconditions for selection and the consequences of each potential beat outcome on the dramatic arc of the drama. The beats can be reordered in many ways while remaining coherent, and any play of the drama need only contain a subset of the available beats. *Façade* attempts to select a coherent and dramatically ‘good’ sequence of beats while remaining responsive to player action.

The premise of the drama is that you (the player) have been invited over to the apartment of Grace and Trip (the virtual agents). The short drama takes place in the apartment, where soon after you arrive it becomes obvious that Grace and Trip’s marriage is on the rocks. What happens depends partly on your actions in the 5-15 minutes that make up the drama.

Figure 2 is a transcript of an interaction with *Façade* [1]. The player is controlling the character named Audrey in the transcript, and Grace and Trip are the virtual agents. There are two things to notice in the transcript. First, when the player types an input that the system does not understand the agents try to gloss over the failure by acting briefly confused, then continuing with the intended narrative, ignoring the unwanted input. Second, as can be seen in the last two lines of the transcript, the agents respond to keyword triggers. The player inadvertently triggers the ‘sex’ topic. This topic is not supposed to come up until later in the drama, so Trip tries to redirect the player onto the topic of drinks, again trying to continue with the intended narrative despite the unwanted input from the player. If the player persists in her uncooperative behaviour, the agents will close the door on her and the game will be over. As the player who produced this transcript commented, “don’t ever go to this apartment in

(Audrey knocks on the front door.)
 (Trip opens the front door.)
 TRIP: Audrey!!
 AUDREY: TRIP I’VE BEEN SHOT!
 TRIP: Uh...
 TRIP: Well come on in...
 TRIP: Uh, I’ll – I’ll go get Grace...
 GRACE: Audrey, Hi! How are you? I’m so happy to see you after so long! – (interrupted)
 AUDREY: CALL 911
 GRACE: Uh...
 GRACE: So, come in, make yourself at home...
 AUDREY: OH, F**K THIS
 TRIP: Ha ha! Oh I think we’re going to need some drinks first if we’re going to talk about sex.

Figure 2. An edited transcript of an interaction with *Façade* [1]

case of emergency.”⁷

The tendency in the Aristotelian approach to interactive narrative is to try to hide the underlying mechanics of the experience and maintain the player’s ‘suspension of disbelief.’ In this approach, the player’s role is something like that of a *passive spectator* and that of a *constrained actor*. The interactive narrative tries to “steer not only a players’ action and emotions, but their perceptual behaviour and conceptualisation of events” [18, p.3] and to transport the player into the artificial reality: “the quest is to provide more immersive, more engaging and more affective experiences” [18, p.1].

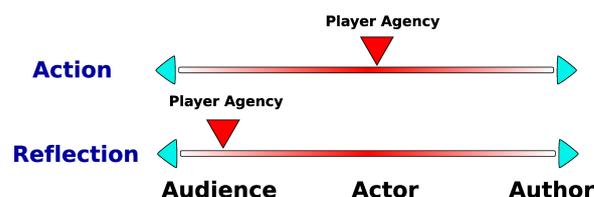


Figure 3. The role of player agency in the Aristotelian approach to interactive narrative

The key aspect here is the role of player agency in the Aristotelian approach, described by figure 3. The player *acts* from the perspective of an actor within the narrative structure with a limited range of actions. The player *reflects* on the narrative as a passive spectator, from a perspective within the narrative, thinking what her character thinks and feeling what her character feels. Player reflection is embedded within the artificial representation of reality that is the interactive narrative. To clarify, imagine the modulated plot structure that was described in section 3. In the Aristotelian approach, the player acts from the perspective of one of the characters in this narrative structure, choosing from finite options at certain points in the plot. The player is an actor within the narrative. But the game designer uses drama and spectacle to try hide this underlying plot structure from the player, so that the player does not perceive the limits within which the experience has been designed for her. Alternatively, in terms of the enacted narrative device (described in section 3), the designer guides the player’s progression through the narrative by setting the player’s global goals and interrupting free interaction with fixed, non-interactive plot incidents. Again the player acts within the limits defined by the designer, and the designer aims to use drama

⁷ Internet forum post, accessed January 2nd, 2007, <http://forums.idlethumbs.net/showthread.php?t=2895&page=2&pp=25>

and spectacle to prevent the player from becoming too aware of this restriction. In both examples, player reflection on the narrative structures is passive and receptive.

In this Aristotelian approach the balance of power between game designer and player is antagonistic to player agency: player agency is inevitably restricted and the player manipulated to distract attention from this restriction. The player is given a limited role in the experience. Within the Aristotelian approach there is no solution to this problem: as the player's interactive freedom increases, the system needed to support the interaction becomes more complex, and quickly impossible. An interactive narrative cannot "be all things to all players" [1]. To resolve the conflict with player agency, alternative approaches at the formal level must be considered.

5 A BRECHTIAN APPROACH TO INTERACTIVE NARRATIVE

German dramatist Bertolt Brecht Brecht argued that the Aristotelian approach to theatre, by focusing on illusion and empathy and a passive role for the audience, places the audience in a receptive state of mind in which they are encouraged to passively accept a fictional representation of reality. In response, Brecht created a theory of theatre, the *Epic Theatre*, in which the audience are discouraged from becoming empathically immersed with the action and characters on stage, and encouraged to form a distanced, critical relationship with the drama instead. Where Aristotle employs empathy, catharsis and illusion to transport the audience into the drama, Brecht employs techniques designed to prevent empathy and catharsis and break the illusion, to get the audience to reflect on the drama as an artificial representation. Brecht's techniques are used to alienate or distance the audience from the drama, reminding them that they are witnessing an artificial representation, and drawing critical attention to the function of the drama and the real-world issues being represented.

Pinchbeck applies Brecht's thought to modern First-Person Shooter (FPS) computer games. He argues that "Successful immersion implies, by definition, an acceptance of the rules of the artificial experience at a perceptual and behavioural level" and that these rules "are both vastly simplified and highly structured" [18, p.7]. The effect is that "users are steered towards an uncritical relationship with the affordances of the experience, even though these affect the scope of available actions as much as the content" [18, p.7]. To support this, drama is used "to detract attention from the manipulation towards an increased engagement with the reduced corridor of affect of the narrative structure" [18, p.7].

Pinchbeck suggests applying Brecht's theatre techniques to computer-based narrative, embedding devices into the game experience that reveal its innate tendencies without altering its fundamental form. The aim is "to force an audience to consider the implications of the action in the real world by highlighting the artifice and displacement of control within an artificial reality" [18, p.9]. Specifically Pinchbeck suggests pausing the game experience and using in-game narration and music to break immersion and promote critical reflection.

America's Army is an online multiplayer FPS game in which players take on the role of U.S. soldiers from a first-person perspective in combat scenarios. It is an example of Aristotelian interactive narrative, just the sort of thing Brecht might try to subvert. *Dead in Iraq*⁸ is an in-progress 'online gaming intervention' being conducted by Joseph DeLappe of the University of Nevada Reno. DeLappe's intervention is an example of how the Brechtian approach could be

applied to interactive narrative. DeLappe enters the online gaming environment of *America's Army* and uses the game's text-messaging system, through which players can type messages to each other as they play, to type the names of U.S. soldiers who have been killed in Iraq. By taking screenshots of the game that show the most recent messages from players at the time of the screenshot, DeLappe collects players' responses to his intervention (figure 4).

```
- i think they are dates of deaths of
  soldiers. are those real people??
- are you enlisted? reserve? have you been to
  iraq?
- u arent encouraging me to join the services
- bin-lad-en: i am sriry
- i dunno ..was thinkin of joinin the army
  soon
- its propaganda
```

Figure 4. Selected players' responses to DeLappe's 'online gaming intervention' *Dead In Iraq*.

As the responses show, DeLappe's intervention, considered as an attempted Brechtian technique,⁹ has been successful to some extent. The players' comments show some discussion of the real world consequences of the fictional actions, consequences which are not sufficiently represented in the artificial experience. But this approach is limited: DeLappe is not formally modifying the interactive medium itself, he is merely doing something novel within it.

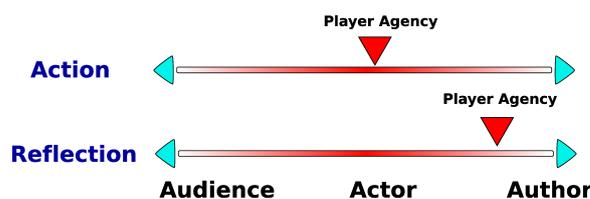


Figure 5. The role of player agency in the Brechtian approach to interactive narrative.

Figure 5 describes the key conclusion: the role of player agency in the Brechtian approach to interactive narrative. The player *acts* from the perspective of an actor within the narrative with a limited range of actions. As in the Aristotelian approach the player may find herself acting from within a modulated plot structure, choosing from fixed options at fixed points in the plot, or she may find herself acting within global goals and fixed plot incidents setup by the designer to guide the experience following an enacted narrative approach. But in the Brechtian approach the player *reflects* on the narrative from a perspective similar to that of an author, from *outside* of the narrative construct, reflecting on the structures and processes that make up the experience as an artificial representation. The player may reflect on the designed plot structure or global goals and non-interactive plot incidents, and the perspective this representation presents of the reality being simulated. The player need not necessarily accept the designer's perspective. The Brechtian approach changes the perspective of player reflection, so that manipulation of the player by the game designer is reduced. But the perspective of player action remains unchanged, so the player remains in a limited role in the experience. Ultimately, this is the limit of the Brechtian approach: the game designer tries to get the player(s) to reflect on the interactive narrative

⁸ <http://www.delappe.net/>

⁹ DeLappe himself does not relate his intervention to Brecht

as an artificial representation, rather than to accept it as reality, but retains control over player actions as in the Aristotelian approach. The Brechtian approach does not formally resolve the conflict between narrative control and player agency. An approach that formally modifies the experience is needed to give player agency a greater role in the narrative.

6 BOAL'S THEATRE OF THE OPPRESSED

A theatrical approach that may provide a suitable model for interactive narrative is Brazilian director Augusto Boal's *Theatre of the Oppressed* [2], which is used in radical popular education movements. The aim of Theatre of the Oppressed is "to change the people — "spectators," passive beings in the theatrical phenomenon — into subjects, into actors, transformers of the dramatic action" [2, p.122].

One of the interesting forms of Theatre of the Oppressed is the *Forum Theatre*. An example Forum Theatre, 'It's Too Late,' will illustrate the form. 'It's Too Late' is a short improvisational play. The stage contains three desks, and a clock on the wall. Three actors, 'the oppressors,' play clerks standing behind the desks. A fourth actor, 'the oppressed,' plays a citizen who enters the stage carrying a document, with the goal of using the document to complete a transaction with the oppressors. The rules of the improvisation are that the oppressed must visit each desk in turn and try to enact the transaction with the oppressor. The oppressors must find ways to deny the request based on the idea that 'it's too late.'

A scripted version of the play is first presented to the audience by the actors. This version ends badly — the oppressed is turned away without completing the transaction. In this version, the oppressed makes at least one clear social or political error in trying to solve the oppression. This version, called the 'anti-model,' presents a problematic view of the world to the audience. The audience are asked if they agree with the solutions advanced by the protagonist, with the expectation that they will not.

The actors then act out the play again, but this time audience members are instructed that they may put up their hand at any time to freeze the play and take on the role of the oppressed. An audience member, or 'spect-actor,' goes onto the stage when he or she feels the oppressed is making a mistake and replaces the actor playing the oppressed for a time, to try to enact a better solution to the problem. As soon as a spect-actor enters the stage the oppressors intensify their oppression, responding to the spect-actors solutions with new forms of the oppression. The actor who has been replaced moves to the side of the stage and verbally assists the spect-actor to stay in role and encourages him or her to continue attempting solutions in the face of adversity. The Forum Theatre becomes a creative game or competition which pits spect-actors against actors. The actors try to force the spect-actors to accept the world as it is, as it was presented in the anti-model. The spect-actors try to find a solution, to change the world. A sense of urgency is vital to this game. The actors, when playing oppressors or oppressed, move the narrative toward the same ending as in the anti-model. To prevent this ending the spect-actors must continuously fight the oppression until they break it.

The improvisation may be repeated several times over, and in this way the actors and spect-actors creatively discuss and enact an oppressive problem and potential solutions to the problem. In the example play 'It's Too Late,' potential solutions include: the oppressed demands to be given her rights, the oppressed tries to make friends with the clerks and convince them to give her what she wants, and the oppressed tries to use money to bribe one of the clerks.

The aim is not to produce a well-formed piece of theatre or even a

solution to a problem.¹⁰ The aim is to produce a good debate through active, critical thinking, exploration and enactment, and to empower the spect-actors through this enacted debate. The key is to realise that Theatre of the Oppressed is not simply a form of interactive drama. The drama provides a place of fiction in which spect-actors train themselves for action in the real world. As Boal puts it, the aim is "to transform the spectator into the protagonist of the theatrical action and, by this transformation, to try to change society rather than contenting ourselves with interpreting it" [3, p.224].

This approach immediately seems more suitable for the computer-based interactive narrative medium. Aristotle and Brecht's approaches are non-interactive theatre, and as such may not present the most useful models for an interactive medium. Player agency has to be 'incorporated' into the model or 'dealt with' in some way. Boal's is a fundamentally interactive form of theatre, inspired by Brecht's approach, but attempting to go one step further.

In the Aristotelian approach, the fictional character both acts and thinks for the spectator. The effect of a successful Aristotelian experience is to subdue the spectators' desire for agency.¹¹ In the Brechtian approach the character acts for the spectator, but the spectator thinks for herself, and may "think in opposition to the character" [2, p.122]. A Brechtian experience encourages the spectators' desire for agency: the aim is to produce critical discussion among spectators about the actions and decisions taken or not taken by the characters. Boal's theatre "focuses on the action itself: the spectator delegates no power to the character (or actor) to act or think in his place; on the contrary, he himself assumes the protagonic role, changes the dramatic action, tries out solutions, discusses plans for change" [2, p.122]. In a Theatre of the Oppressed the spectators' desire for agency is not only encouraged but actually *exercised* as spectators act within the safe, fictional environment of the drama. This fictional exercise of agency leaves behind the desire in the spectator to exercise that same agency in real life.

In Forum Theatre, a spect-actor can replace and act in place of any oppressed character¹² at any point in the play, dropping in and out of the characters as she pleases. A spect-actor is not restricted to acting from the perspective of one character, or acting within the role of one character. The role of a spect-actor in Forum Theatre is greater, in terms of agency, than the traditional role of an actor playing a single character.

Each spect-actor is constrained in two ways: by the reactions of the actors and other spect-actors to her actions on stage, and by the facilitator of the forum (the 'joker').

The spect-actors considered as a whole reshape the entire drama over several iterations. They act on the drama from an outside perspective, similar to the way in which a traditional author shapes a drama. But even the spect-actors as a group are limited by the framework set out for them. So it is not accurate to say that the spect-actors have authorship over the narrative. Rather, they have a form of

¹⁰ This does not mean that a Forum Theatre should not be well-formed, Boal says "The most important thing, over and above anything else, is that Forum Theatre should be good theatre; that the model in itself offers a source of aesthetic pleasure. Before the 'forum' part begins, the show itself must be watchable and well constructed" [3, p.277].

¹¹ Think of watching a good Hollywood movie in the cinema. If you're enjoying the film and are fully immersed in the characters and action, then you don't want it to end. When the film does end and the lights come back on, you have to consciously 'drag' yourself back into reality.

¹² The example used earlier has one oppressed character and three oppressors. But many forum theatres have multiple oppressed characters, and may have characters who are both oppressor and oppressed, and who mutually oppress each other. Usually spect-actors cannot replace purely oppressive characters, as this breaks the game and results in nonconstructive solutions.

agency which has more in common with the agency experienced by a critical author than it does with the agency experienced by a passive spectator.¹³

6.1 A Boalian Approach to Interactive Narrative?

In his thesis *Videogames of the Oppressed: videogames as a means of critical thinking and debate* [5] Frasca envisions a new approach to interactive computer games: “a powerful representational form that encourages critical thinking, empowerment and social change” [5, p.114]. Frasca makes an analogy between Boal’s Forum Theatre and simulation in computer games:¹⁴

“Literally, what happens in a [Forum Theatre] session is a simulation. It is not the representation of something, but the simulation of how some situation would happen, depending on many factors. It analyses the world “as it is and as it could be” (Boal, 1992)” [5, p.67].

Frasca further explains that Forum Theatre is “a meta-simulation, an environment where spect-actors can create and question the rules of a simulation” [5, p.73]. Frasca proposes a new approach to interactive computer games in which the players have access to the rules of the simulation, and can alter them. He explains that “Since simulations are representations of the world, they cannot model it without conveying the [designer]’s idea about how the world works” [5, p.79]. Frasca proposes that like the spect-actors in a Forum Theatre construct different ideas about a problem and its solutions in successive iterations of the play, players could discuss a situation by constructing successive simulations that model the situation as a game.¹⁵

Combining Frasca’s analogy between simulation and Forum Theatre with the review of interactive narrative presented in this paper, a Boalian approach to computer-based interactive narrative can be proposed. A Boalian approach to computer-based interactive narrative would give the player(s) access to the underlying story model to interact with directly and deliberately, to *play* with. It should blur the traditional interactive narrative roles of player and author into one. The player could jump seamlessly and at will between acting within the interactive narrative, in the role of the protagonist (or the oppressed) in the story, and acting on the interactive narrative from outside of it, manipulating the story model underlying the narrative, in the role of author. The player-authors *construct* and *experience* the interactive story at once.

Figure 6 describes the key conclusion: the role that player agency might play if the Boalian approach can be applied to interactive narrative. The player both *acts* and *reflects* on the narrative from a perspective similar to that of an author, from *outside* of the narrative construct, acting and reflecting on the structures and processes that make up the narrative as an artificial representation. Boal writes of turning passive spectators into actors. Here he is referring to the creative, critical, improvisational actors of his theatre of the oppressed. He does not consider passive actors who merely act out a role as written by an

¹³ In practice it is sometimes the spect-actors who devise a Forum Theatre for themselves to take part in, so that they have both authorship and agency over the Forum Theatre.

¹⁴ Frasca presents a four-part semiotic model of simulation, which focuses on the process of an observer interpreting a simulation, with which he relates Forum Theatre to simulation [5, p.79].

¹⁵ Specifically, Frasca describes a game derived from the popular series *The Sims* in which players would have access not only to surface characteristics of the game characters, but to the rules that govern character behaviours. Players would use these rules to construct models of problematic social situations and their solutions.



Figure 6. The role of player agency in the Boalian approach to interactive narrative.

author. Applied to interactive narrative, Boal’s passive spectator corresponds to the role of player as passive actor as in the Aristotelian approach to interactive narrative. Boal’s spect-actor (spectator elevated to actor) corresponds to the player elevated to co-author of the narrative with the designer of the interactive environment.

A story-model based on a nodal or modulated plot structure (section 3) seems the most obvious candidate for this approach. When in the role of actor, the player controls a character within the narrative, and may make fixed decisions at fixed points within the plot structure that drives the interactive narrative. When in the role of author the underlying plot structure is presented to the player directly, through an interface which allows the player to manipulate the structure itself. The player iteratively constructs or modifies a story by switching at will between these two roles, changing the story model, experiencing the result, changing the story model some more, and so on.¹⁶

This approach is non-immersive, emphasises the artificial, constructed nature of the interactive narrative, and focuses player agency on the structures and processes underlying the experience. Of the three approaches presented, the Boalian approach seems most appropriate to the constructivist motivation. Because learners are actively involved in constructing an interactive story, the form of learning is the most active and critical, least passive and receptive, of the three approaches. Learners construct their own understanding through exploring and interacting with the system. Not only are they active participants in the narrative, but the learners are fully aware of why they are participating. The Boalian approach is dialectical, not didactic as the Aristotelian approach is. It does not present a solution or model to be followed, instead it presents an anti-model to be debated. Some structure is inherent in the interaction with the envisioned system. The player-author is given a particular plot model and character roles to use as the building blocks of an interactive story, and can only construct what these building blocks, created by the designer of the environment, will allow. Yet by focusing player action *on* the underlying story model, rather than having the player act *within* this structure, player agency is maximised. The inherent conflict between narrative and player agency dissolves.

Such an interactive story player-authoring environment could be used in a *constructionist* [17] approach to learning. Players learn about the models, structures and processes, and modes of authoring that underlie interactive stories through constructing interactive stories. The constructed stories can then be *played* (with the authoring interface disabled) by peers as part of a peer review process.

The application of Boal’s techniques could be fundamental to using this story construction process as a means to collaboratively discuss social issues. This aspect is most clear if you imagine the players

¹⁶ Propp’s *Morphology of the folktale* [19] may provide an ideal basis for constructing a story model for this approach. His description of the plot structure of folktales lends itself well to forming the building blocks of nodal or modulated plots, and he also provides clear descriptions of character roles and their actions with respect to the plot. Kashani [8] provides an excellent example of Propp’s morphology applied to an interactive story environment using a nodal plot structure.

given an interactive story that presents a problem, an oppression of the player/protagonist character of the story. Players then discuss solutions to the problem through a series of modifications to the model underlying the interactive story. The process might be conducted as a workshop, with a person facilitating an interaction between several player-authors and a single interactive story environment.

The intention is not to claim that an interactive story authoring environment which attempts to combine the roles of game player and game designer will be a Boalian Forum Theatre applied to the digital medium. There are many ways in which this learning process will differ from Forum Theatre, and understanding these differences may be more useful than understanding the similarities. The question of how the virtual environment is used in the real world, how the learning experience goes on *around* the artifact, is crucial. The claim here is that computer-based interactive narrative is at the intersection between Boal's Forum Theatre and Papert's constructionism. Applied to interactive narrative, the two provide a promising approach.

7 CONCLUSION

When an Aristotelian approach is applied to interactive narrative the aim is for the system to deliver a well-formed narrative experience to the player. A conflict with player agency that necessitates putting the player in a passive role is inherent in this aim. The player *acts* from the perspective of a constrained actor within the narrative. But the player is encouraged to *reflect* on the narrative from the perspective of a passive spectator. This disparity between the perspectives of player agency in terms of action and reflection necessitates an attempt to maintain the player's 'suspension of disbelief' and to manipulate player perception and action, keeping them within the designed range of possibilities.

A Brechtian approach breaks 'suspension of disbelief' intentionally, aiming to highlight the artificiality of the experience. The player still acts from the perspective of a constrained actor within the narrative, but reflects on the narrative from a perspective outside of it, reflecting on the narrative as an artificial representation of reality.

A Boalian approach builds on the Brechtian approach by changing the perspective of player action to match that of player reflection. The player both acts and reflects on the narrative from an outside perspective, acting and reflecting on the story model from which the narrative is constructed. The aim is no longer to maintain a good narrative experience in spite of player agency, but to provide the player with the narrative construction kit most productive of player agency.

This review argues that the form of player agency in interactive narrative improves, with respect to the motivation of constructivist learning, as we move from an Aristotelian, to a Brechtian, to a Boalian approach.

The traditional question driving research in interactive narrative is: how can an interactive narrative environment deal with a high-degree of player agency, while maintaining a coherent and well-formed narrative? This question expresses the approach categorised here as Aristotelian interactive narrative. If the approach categorised as Boalian interactive narrative is taken, the question becomes quite different: how can an interactive narrative environment provide a story model that supports creative and critical expression through constructing interactive stories? This question motivates further research into four more specific questions: what kind of story model best supports creative and critical expression through constructing interactive stories? How can we design an interface and interface metaphors that allow intuitive interaction with this story model? How can we seamlessly combine the role of actor and author into one role

for the player? How can a learning experience be structured within and around this virtual environment?

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