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The Bramble Bush of Forking Paths: Digital Narrative, Procedural Rhetoric, and the Law

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**THE BRAMBLE BUSH OF FORKING PATHS¹: DIGITAL NARRATIVE,
PROCEDURAL RHETORIC, AND THE LAW**

Lucille A. Jewel²

14 YALE J.L. & TECH. 66 (2011)

ABSTRACT

This Article explores ways to harness the persuasive and narrative power of computer games for practical legal purposes. The mental experiences we have when we play computer games relate to what attorneys do every day. Playing computer games and practicing law both require engagement with interactive plots where the outcomes depend on a series of choices in a complex system.

The analogues between computer games and the practice of law are one reason that lawyers should take a deeper look at this emerging narrative theory. The other reason has to do with the fact that millions of people play computer games and thus engage with digital narratives every day. Digital narrative, if it can be implemented in the context of a legal argument, might provide attorneys with a new way to persuade. Indeed, there are already quite a few examples of computer games that have been built with persuasive purposes in mind.

The similarities between legal thinking and digital narrative as well as digital narrative's unique power to engage are two compelling reasons why legal practitioners should consider employing digital narrative approaches for advocacy purposes. This Article seeks to show, with examples and hypotheticals, how advocates might use digital narrative's interactivity and systemic procedures to persuade in a revolutionary way.

This Article looks to the past, by looking at how the practice of law in its analog text-based form retains many interactive aspects; the present, by reviewing the current persuasive ends that online games are being used for; and the future, by thinking about where computer games might fit into the practice of law in the coming years. Part I of this Article provides a general introduction to digital narrative theory, which holds that

¹ The title of this Article references the Jorge Luis Borges short story, *The Garden of Forking Paths*, a pre-digital exposition of interactive narrative theory, as well as Karl Llewellyn's classic book, *The Bramble Bush*, which describes the twisting and messy nature of common law legal analysis. Jorge Luis Borges, *The Garden of Forking Paths*, in *THE NEW MEDIA READER* 30 (Noah Wardrip-Fruin & Nick Montfort eds., 2003); KARL LLEWELLYN, *THE BRAMBLE BUSH* (11th prtg. 2008) (1930).

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computer games are a platform for sharing and experiencing stories. Building upon the narrative theory expositied in Part I, Part II explores the emerging genre of the persuasive game and how procedural rhetoric works. Part III then addresses the parallels and applications that computer games have to legal analysis and authorship.

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INTRODUCTION

This Article explores ways to harness the persuasive and narrative power of computer games for practical legal purposes. Because computer games have intensely permeated the world's popular culture, the time is ripe to study the mechanics of how computer games captivate and understand their legal applications. Computer games routinely outsell movies.³ Worldwide, over 500 million people are active gamers, and there are predictions that this figure will reach 1.5 billion in the next ten years.⁴ The *World of Warcraft* community, with over 12 million subscribers, exceeds the population of New York City.⁵ Ninety-seven percent of children in the United States play computer or video games.⁶ We have now reached the point where the interpersonal skills necessary to succeed in a massively multiplayer online role-playing game (such as *World of Warcraft*) can lead to a job offer in real life.⁷

Besides the sheer number of people who devote themselves to gaming activity, computer games have led to a concomitant shift in how we think about and experience narrative. Many cultural theorists argue that a computer game is essentially an interactive narrative that allows the user/player to exercise control over the outcome of the story.⁸ Thus, scholars are now studying “digital

³ Espen Aarseth, *Genre Trouble: Narrativism and the Art of Simulation*, in *FIRST PERSON: NEW MEDIA AS STORY, PERFORMANCE, AND GAME* 45, 52 (Noah Wardrip-Fruin & Pat Harrigan eds., 2004).

⁴ John Robb, *Online Games, Superempowerment, and a Better World*, *GLOBAL GUERRILLAS* (Mar. 10, 2010), <http://globalguerrillas.typepad.com/globalguerrillas/2010/03/online-games-superempowerment-and-reality.html> (summarizing a TED presentation by game theorist Jane McGonigal).

⁵ *World of Warcraft Subscriber Base Reaches 12 Million Worldwide*, *BLIZZARD ENTERTAINMENT* (Oct. 7, 2010), <http://us.blizzard.com/en-us/company/press/pressreleases.html?id=2847881>.

⁶ AMANDA LENHART, SR. ET AL., PEW INTERNET & AMERICAN LIFE PROJECT, *TEENS, VIDEO GAMES, AND CIVICS 2* (2008), http://www.pewinternet.org/~media/Files/Reports/2008/PIP_Teens_Games_and_Civics_Report_FINAL.pdf.

⁷ John Seely Brown & Douglas Thomas, *You Play World of Warcraft? You're Hired!*, *WIRED* (Apr. 2006), <http://www.wired.com/wired/archive/14.04/learn.html> (explaining how senior engineering management position at Yahoo was filled by someone with experience as a World of Warcraft guild master). The interviewee explained how he thought of his job as a “quest” and that, in the same way he was able to marshal resources in his guild, he found people at Yahoo to complete necessary tasks. *See id.*

⁸ *See* LEV MANOVICH, *THE LANGUAGE OF NEW MEDIA* 225 (2001) (explaining the similarity between text-based narratives and computer games); Janet Murray, *From Game-Story to Cyberdrama*, in *FIRST PERSON*, *supra* note 3, at 2, 3.

narrative,” which looks at the computer game experience through the lens of narrative theory.⁹

What, if anything, do the narratives inherent in computer games have to do with legal authorship? This Article argues that a strong analogy can be drawn between the mental experiences of playing a computer game and the practice of law. Engaging with interactive plots where the outcomes depend on a series of choices in a complex system accurately describes both the experience of playing a computer game and the non-linear aspects of law practice.

Legal forecasting, which can be narrative, analytical, or strategic in form, is a type of non-linear thinking that attorneys frequently engage in. For instance, criminal defense attorneys routinely engage in *narrative* forecasting by working with multi-variant narrative structures to plant a seed of reasonable doubt. In a criminal case, the prosecutor must prove guilt beyond a reasonable doubt; the prosecutor’s theory must generally be the only plausible theory to account for the facts. From a defense perspective, reasonable doubt exists when there is at least one other plausible explanation for the facts than the one that supports a guilty verdict. Thus, defense lawyers mount an attack on the prosecution’s case by envisioning alternate, but equally plausible, narratives to explain the facts.¹⁰

With *analytic* forecasting, an attorney breaks the client’s story down into its constituent legal elements and then, for each element, questions, researches, and massages the facts, testing the theory of the case to understand where it is weakest and where it is strongest. For example, take the situation of a defendant accused of stealing a necklace from an acquaintance’s home. In analyzing the intent element and a possible claim of right defense to larceny, there are two possible paths here. If the defendant reasonably believed that the necklace was hers and there is some factual basis to support that belief, then the criminal intent element is not present.¹¹ If, however, there was no reason for the defendant to

⁹ See e.g., JANET MURRAY, *HAMLET ON THE HOLODECK: THE FUTURE OF NARRATIVE IN CYBERSPACE* (1997); MARIE-LAURE RYAN, *AVATARS OF STORY* (2006); Henry Jenkins, *Game Design as Narrative Architecture*, in *FIRST PERSON*, *supra* note 3, at 118; Marie-Laure Ryan, *Beyond Myth and Metaphor—The Case of Narrative in Digital Media*, *GAME STUDIES* (July 2001), <http://www.gamestudies.org/0101/ryan/>.

¹⁰ See RICHARD ZITRIN & CAROL M. LANGFORD, *THE MORAL COMPASS OF THE AMERICAN LAWYER* 38 (1999) (explaining the common technique of creating a counter-narrative that “point[s] the finger at someone, anyone, other than the defendant, even a person or persons unknown”).

¹¹ See generally 50 AM. JUR. 2D *Larceny* § 102 (2011) (discussing the claim of right defense to larceny).

claim a right to the necklace, she would satisfy the requisite criminal intent for larceny.¹²

Finally, lawyers engage in *strategic* forecasting when considering various choices and outcomes in litigation. For instance, consider the situation of an imprecise discovery request that, if read narrowly, does not specifically encompass a document harmful to the client's case.¹³ A broader reading of the request, however, would encompass the harmful document. An attorney in this situation must consider whether or not to produce the document by considering all possible outcomes of the decision. Not producing the document would keep this harmful information outside of opposing counsel's hands, which could benefit the client's case. However, this strategy could also eventually harm the client. For instance, if the other side discovers the evidence by other means or subsequent discovery requests, it could then argue to the court that there has been discovery misconduct. Even though not required, producing the harmful document could benefit the client because it shows confidence in the case's strength, despite the negative evidence. Or, disclosure could help the client by generating a cooperative rapport with opposing counsel, which might be helpful in negotiating a positive settlement.

Thus, for many legal issues, there are a number of different paths that lawyers must consider to resolve the problem. In this way, lawyers and computer gamers often think similarly, both considering what facts and choices will lead to the most positive results. One point of this Article is to develop the analogy between legal thinking and the computer game experience. The other point of this Article is to explore how non-linear digital narrative approaches might be appropriated for advocacy purposes.

Digital narrative theory has the potential to expand legal advocacy and forge new legal approaches that utilize interactivity and systemic procedures to persuade in a groundbreaking way. Because we understand how the deep cultural power of a story can be used to persuade for legal purposes, lawyers often use narrative theory to become better advocates.¹⁴ It is worth considering

¹² *Id.*

¹³ I have borrowed this example from a hypothetical problem in a Professional Responsibility textbook. MORTIMER D. SCHWARTZ ET AL., PROBLEMS IN LEGAL ETHICS 197 (4th ed. 2010).

¹⁴ For an overview of how narrative and storytelling figures into a court's jurisprudence, see ANTHONY G. AMSTERDAM & JEROME BRUNER, MINDING THE LAW (2000). For two excellent articles that explain how storytelling and narrative approaches can be used to structure a persuasive brief, see Kenneth D. Chestek, *The Plot Thickens: The Appellate Brief as Story*, 14 LEGAL WRITING 127 (2008) and Brian J. Foley & Ruth Anne Robbins, *Fiction 101: A Primer for Lawyers on How To Use Fiction Writing Techniques To Write Persuasive Facts Sections*, 32 RUTGERS L.J. 459 (2001).

whether digital narrative power can be harnessed for legal purposes. We have recent examples of computer games employing procedural rhetoric, an argument built out of a computer program's rules and routines, for advocacy purposes; indeed, some of these persuasive computer games are setting out *legal* arguments. Moreover, at this point in time, courts routinely allow attorneys to use multimedia to augment their jury arguments¹⁵ and admit computer generated simulations and animations into evidence to help explain expert testimony.¹⁶ There is also a compelling argument that juries should be allowed to experience immersive virtual reality, a digitized form of demonstrative evidence that would enhance jurors' "understanding of disputed events in computer-based simulated environments."¹⁷ Thus, we are actually not too far away from a point where an interactive computer game could be used to make illustrative and persuasive points in a trial setting. As an example, Part III of this Article explains how a computer game might be set up and admitted as demonstrative evidence to help illustrate an expert witness's testimony.

¹⁵ See e.g., Lucille A. Jewel, *Through a Glass Darkly: Using Brain Science and Visual Rhetoric to Gain a Professional Perspective on Visual Advocacy*, 19 S. CAL. INTERDISC. L.J. 237, 288 (2010) (explaining how prosecutors seamlessly weaved slide projection of photographic evidence together with auditory evidence to create a highly persuasive closing argument in the highly publicized Michael Skakel murder trial); see also Evelyn Marcus, *The New Razzle Dazzle: Questioning the Propriety of High-Tech Audiovisual Displays in Closing Argument*, 30 VT. L. REV. 361, 361 (2006).

¹⁶ See Katherine A. Godden, *Cartoon Criminals: The Unclear Future of Computer Animation in the Minnesota Criminal Courtroom—State v. Stewart*, 30 WM. MITCHELL L. REV. 355, 367-77 (2003) (discussing *State v. Stewart*, 643 N.W.2d 281 (Minn. 2002), which held portions of a computer animation were properly admitted to illustrate expert testimony on how a crime likely occurred); Steven C. Marks, *The Admissibility and Use of Demonstrative Aids*, 32 THE BRIEF 24, 25 (2003), available at http://www.americanbar.org/newsletter/publications/gp_solo_magazine_home/gp_solo_magazine_index/demonstrativeaides.html (explaining that computer generated animations may be admissible as demonstrative evidence); Carolyn Smart, *The Computer Must Be Right: Computer Generated Animations, Unfair Prejudice and Commonwealth v. Serge*, 26 TEMP. ENVTL. L. & TECH. J. 387 (2007) (discussing *Commonwealth v. Serge*, 896 A.2d 1170 (Pa. 2006), which upheld admission of a computer animation into evidence to illustrate expert testimony as to how a crime likely occurred).

¹⁷ See Carrie Leonetti & Jeremy Bailenson, *High Tech View: The Use of Immersive Virtual Environments in Jury Trials*, 93 MARQ. L. REV. 1073 (2010). Professors Leonetti and Bailenson focus on the ways in which immersive virtual environments (IVE) can aid the jury in understanding the evidence and expert testimony. But the IVE technology they describe appears to be fairly static, "an improved, but functional equivalent, of a jury scene viewing." *Id.* at 1079. This Article suggests that we take the technology one step further and impose a narrative structure on the technology so that legal audiences actively participate in the illustration of the theory.

This Article looks to the past, by looking at how the practice of law in its analog text-based form retains many interactive aspects; the present, by reviewing the current persuasive ends that online games are being used for; and the future, by thinking about where games might fit into the practice of law in the coming years. Part I of this Article provides a general introduction to Digital Narrative Theory, which holds that computer games are a platform for sharing and experiencing stories. Building upon the narrative theory explicated in Part I, Part II will explore the emerging genre of the persuasive game and the way that procedural rhetoric works. Part III will then address the parallels and possible applications that computer games have to legal analysis and authorship.

I. WHAT IS DIGITAL NARRATIVE?

In this section, we will explore interactivity and procedural authorship and understand how these two concepts give rise to a player's agency, the exercise of control over the game's plot. Interactivity, procedural authorship, and the player's agency are the hallmarks of a compelling digital narrative. We will then look at some proto-interactive texts—examples from film and literature that imagine multiple narrative possibilities. These texts provide a foundation for understanding how stories work in a digital format. Finally, we will specifically consider how stories operate in computer games.

A. *Interactivity*

Digital narrative combines “participating with immersion, agency with story, and [requires the] perceiving of patterns in a kaleidoscopic fictional world.”¹⁸ In a traditional text-based or “hard-wired” narrative, the author creates the setting, the characters, and the action.¹⁹ In a digital narrative, the game designer creates the characters and the setting, but the player/user is in the driver's seat controlling the action and the plot.²⁰ Giving the user choice over the action and the plot is what it means to have an interactive narrative.²¹ The data structure that supports interactivity is known as the “branching tree.”²² The branching tree structure allows a user, upon reaching a point in the narrative, to

¹⁸ MURRAY, *supra* note 9, at 275.

¹⁹ MANOVICH, *supra* note 8, at 38; *see also* Ryan, *supra* note 9.

²⁰ Ryan, *supra* note 9; Murray, *supra* note 8, at 4.

²¹ Ryan, *supra* note 9.

²² MANOVICH, *supra* note 8, at 38.

choose from a menu of options.²³ Depending on the choice, the user then proceeds down a specific branch of the tree.²⁴

Interactivity is best achieved when the user has meaningful choices.²⁵ The choices must be “sufficiently broad to give the user a sense of freedom” and cannot be too limited, or the simulation will not work.²⁶ An interactive plot also fosters, in popular Internet slang, the “do-over,” the fun that comes from getting to redo the plot over and over again by changing minor details.²⁷ The do-over generates aphorisms that “reflect our sense of the multiple possibilities of a single moment.”²⁸

Digital narrative’s interactive elements reflect the culture of post-industrial society. In industrial society, conformity was valued because identical mass-produced products were to be enjoyed by all. In today’s world,

every citizen can construct her own lifestyle and ‘select’ her ideology from a large (but not infinite) number of choices. Rather than publishing the same objects/information to a mass audience, marketing now tries to target each individual separately. The logic of new media technology reflects this new social logic.²⁹

Paradoxically, however, interactivity does not allow people to construct a completely unique identity, but only to adopt one of several pre-established identities.³⁰ Applying the cultural logic of interactivity to legal communication suggests that audiences may be more responsive to arguments that they can construct for themselves rather than arguments with a single structure dictated from the top down.

B. Procedural Authorship

Procedural authorship refers to the computer programming necessary to create a game, the set of operating rules (or procedures) that control the game’s world.³¹ In a game, the characters operate under a given set of rules and procedures that

²³ *Id.*

²⁴ *Id.*

²⁵ Ryan, *supra* note 9 (defining interactivity as “changes in conditions [that] are determined by the user’s input.”).

²⁶ RYAN, *supra* note 9, at 99.

²⁷ Murray, *supra* note 8, at 6.

²⁸ *Id.*

²⁹ MANOVICH, *supra* note 8, at 41.

³⁰ *Id.* at 129.

³¹ Murray, *supra* note 8, at 2.

simulate intelligence.³² Computer programming allows a game designer to “create characters by modeling their behaviors, . . . create plots by establishing the rules by which things should happen, and . . . structure the participation of the interactor into a repertoire of expressive gestures.”³³ However, the intelligence and skills of any given computer character is severely limited by the programming that controls their operations.³⁴ In the same way that metric poetry is constrained by structural requirements, so too are computer games, which are bound to follow encoded algorithms and routines.³⁵ In other words, computers give us intelligent characters “only by tricking us into using a very small part of who we are when we communicate with them.”³⁶

In addition to the characters, computer game designers also create the texts of the game, the “conditions under which things will happen in response to the participant’s actions.”³⁷ The game designer also structures the player’s choices and dictates what consequences those choices will have in the game.³⁸ Computer game designers must establish the properties of all of the objects in the computer’s world and create formulas for how these objects relate to each other.³⁹ Thus, a game designer is not just creating a set of scenes as in a play, but a “world of narrative possibilities.”⁴⁰ The lack of classic Aristotelean linearity (a beginning, middle, and end, dictated by the author) in digital narratives does not destroy them because the user is the one who fills in the gaps and provides the narrative structure.⁴¹

C. Agency

The combination of interactivity with procedural authorship creates agency for the player. When the digital world “responds expressively and coherently with our engagement with it, we experience agency.”⁴² To some, the agency that computer games afford its players is why computer games are so popular. Author and blogger John Robb explains:

³² MANOVICH, *supra* note 8, at 33-34.

³³ MURRAY, *supra* note 9, at 274.

³⁴ MANOVICH, *supra* note 8, at 33-34.

³⁵ Ian Bogost & Gonzalo Frasca, *Videogames Go To Washington: The Story Behind the Howard Dean for Iowa Game*, ELECTRONIC BOOK REVIEW (April 9, 2008), <http://www.electronicbookreview.com/thread/firstperson/elective>.

³⁶ MANOVICH, *supra* note 8, at 33-34.

³⁷ MURRAY, *supra* note 9, at 152-53.

³⁸ RYAN, *supra* note 9, at 99.

³⁹ MURRAY, *supra* note 9, at 152-53.

⁴⁰ MURRAY, *supra* note 9, at 153.

⁴¹ Ryan, *supra* note 9.

⁴² Murray, *supra* note 8, at 10.

For active online gamers real life is broken. It doesn't make any sense. Effort isn't connected to reward. The path forward is confused, convoluted, and contradictory. Worse, there's a growing sense that the entire game is being corrupted to ensure failure. So, why play it?

They don't. They retreat to online games. Why? Online games provide an environment that connects what you do (work, problem solving, effort, motivation level, merit) in the game to rewards (status, capabilities, etc.).⁴³

Thus, as many continue to struggle in a stagnant economy, where hard work often fails to produce concrete rewards, computer games offer up a compelling alternate universe where effort and merit do connect up with rewards, even if those rewards are only virtual. Computer worlds give us agency to direct our affairs when we do not have this level of control in our real lives.

D. Analog⁴⁴ Progenitors to Digital Narratives

Before we look at how stories work within computer games, let's consider interactive narratives that occur without the help of computers. Luis Borges's story, *The Garden of Forking Paths*, is the preeminent description of a non-digital interactive narrative.⁴⁵ In that story, a Chinese scholar explains that an alleged labyrinth and novel created by an ancient Chinese ruler are one and the same.⁴⁶ The scholar imagines the novel, the Garden of Forking Paths, as circular, a book where the last page is identical to the first and constantly evolving as younger authors add on to the work of the elders.⁴⁷ Discounting his first impression, which was that the novel's manuscripts were an "indeterminate heap of contradictory drafts," Borges' sinologist explains his realization that the ancient novelist "did not believe in a uniform, absolute time."⁴⁸ Rather, the novel, as it stood, created "diverse futures," an "infinite series of times, in a growing, dizzying net of divergent, convergent, and parallel times."⁴⁹

⁴³ Robb, *supra* note 4.

⁴⁴ I use the term "analog" to refer to narratives such as films and books that do not require a computer to propel the action.

⁴⁵ Nick Montfort, *Introduction to Jorge Luis Borges's The Garden of Forking Paths*, in *THE NEW MEDIA READER*, *supra* note 1, at 29, 29.

⁴⁶ Borges, *supra* note 1, at 33.

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ *Id.*

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Choose Your Own Adventure books represent another example of a non-linear narrative presented in analog format. These books became highly popular with children during the 1980s and 1990s and continue to be so, having sold over 250 million copies worldwide.⁵⁰ These books enable the reader to “choose” the plot of the book by making narrative choices that lead to alternate outcomes laid out on different pages of the book.⁵¹ One can read and re-read the book, making different decisions each time to see how a different choice alters the story’s outcome.

The seminal Kurosawa film *Rashomon*⁵² is an example of an analog narrative that supports multiple versions of reality. In that film, the same set of facts, the rape and murder of a woman, are recounted from the perspective of four witnesses: a bandit, the victim, the victim’s Samurai husband, and a woodcutter. Each character’s version of the story differs wildly. *Groundhog Day*,⁵³ a more recent (and lighter) film, is another portrayal of multiple narrative possibilities that proceed from the same general set of characters and events.⁵⁴ In this movie, misanthropic weatherman Phil Connors (played by Bill Murray) gets caught in a time loop and must live the same day (Groundhog Day in Punxsutawney, Pennsylvania) over and over again. We see multiple versions of the same day, over and over again, as Connors interacts with the day’s events in different ways.⁵⁵ Ultimately, Connors decides to use his foreknowledge of events to help as many people as possible, saving a choking man and preventing a child from falling out of a tree.⁵⁶ The movie ends with Connors successfully romancing his producer Rita and extracting himself from the time loop.⁵⁷ *Groundhog Day* is considered an exemplar of the “do-over” mentality of computer games, the joy of replaying a game over again, tweaking details with the plot or characters to see how those

⁵⁰ See CHOOSE YOUR OWN ADVENTURE, <http://www.cyoa.com/pages/about-us> (last visited November 2, 2011). Although a number of different publishers adopted the format, “Choose Your Own Adventure” is the trademarked name of the original books, written by R.A. Montgomery, and reissued by the Chooseco Company. See WIKIPEDIA, *Choose Your Own Adventure*, http://en.wikipedia.org/wiki/Choose_Your_Own_Adventure (last visited Nov. 2, 2011); Sally Lodge, *Chooseco Embarks On Its Own Adventure*, PUBLISHER’S WEEKLY (Jan. 18, 2007), <http://web.archive.org/web/20071009094529/http://www.publishersweekly.com/article/CA6408126.html>.

⁵¹ *Id.*

⁵² RASHOMON (Daiei Motion Picture Company 1950).

⁵³ GROUNDHOG DAY (Columbia Pictures 1993).

⁵⁴ See Murray, *supra* note 8, at 4.

⁵⁵ Synopsis of Groundhog Day, INTERNET MOVIE DATABASE, <http://www.imdb.com/title/tt0107048/synopsis> (last visited Nov. 2, 2011).

⁵⁶ *Id.*

⁵⁷ *Id.*

changes affect the game's outcome.⁵⁸ Thus, without the help of computers, *The Garden of Forking Paths*, *Choose Your Own Adventure* books, *Rashomon*, and *Groundhog Day* present stories that imagine multiple plot possibilities that do not exist on a straight path. Nonetheless, what distinguishes video games from these texts and films is that the computer's capacity for immersion and interaction gives it a power to engage that analog mediums cannot achieve. We now turn to see how stories work in computer games.

E. The Inherent Stories in Computer Games

The experience of playing a computer game is highly analogous to that of reading a story. Game players and readers of novels share a similar experience of uncovering the underlying logic of the story and moving through it.⁵⁹ The contest and puzzle frames that computer games rely on also support the analogy of the computer game to a story. With a contest frame, game opponents pursue mutually exclusive goals.⁶⁰ With a puzzle frame, the player competes against the game designer to figure out the solution to the game.⁶¹ Digital narrative theorist Janet Murray argues that “[m]ost stories and most games, electronic or otherwise, include some contest elements and some puzzle elements.”⁶²

The trope of the hero on a quest has been a feature of most computer games since the early text-based games came out in the 1970s. *Adventure*⁶³ and *Zork*⁶⁴ were two early computer games that featured hero-type characters on a quest.⁶⁵ In these early computer games, the player would be pursuing an underlying goal and then be confronted with choices as to how to best achieve those goals. Each choice carried the player to a different place in the game's narrative.⁶⁶ Today's popular computer games, like *World of Warcraft*⁶⁷ and *Dragon Age*,⁶⁸ also feature hero/quest storylines. The storyline of a game can be experienced from two vantage points. With external directed action, the player is god-like figure

⁵⁸ See Murray, *supra* note 8, at 6-7.

⁵⁹ MANOVICH, *supra* note 8, at 225.

⁶⁰ Murray, *supra* note 8, at 2.

⁶¹ *Id.*

⁶² *Id.* at 3.

⁶³ ADVENTURE (CRL 1976).

⁶⁴ ZORK I: THE GREAT UNDERGROUND EMPIRE (Infocom 1980).

⁶⁵ See Aarseth, *supra* note 3, at 51; Jenkins, *supra* note 9, at 121-22; Ryan, *supra* note 9 (discussing game storylines as hero/quest narratives generally).

⁶⁶ Jenkins, *supra* note 9, at 121-22.

⁶⁷ WORLD OF WARCRAFT (Blizzard Entertainment 2004).

⁶⁸ DRAGON AGE: ORIGINS (2009)

who controls the world from above.⁶⁹ Games such as *Starcraft II*,⁷⁰ *Civilization*,⁷¹ and *The Sims*⁷² use external directed action. Internal directed action puts the player on the ground level, directly interacting with the characters and events in the game world.⁷³ Games such as *World of Warcraft* and *Zelda*⁷⁴ are internal directed action games.

Experiencing a game as a contest, puzzle, and quest is only the tip of the iceberg when it comes to seeing how computer games function as narratives. A deeper look reveals a trove of sophisticated strategies that game designers employ to infuse a game with a story. MIT professor Henry Jenkins identifies four types of game stories: evoked narratives, enacted narratives, emergent narratives, and embedded narratives. These structures are not exclusive; many computer games consist of a combination of these four narrative strategies. With an evoked narrative, the core story involves “the struggle to explore, map, and master contested spaces.”⁷⁵ Thus, with evoked narrative, the way the space looks and feels is just as important as the story.⁷⁶ Evoked narrative approaches are used to create “themable” games.⁷⁷ For instance, in an analog context, a chess game can have a traditional “royal” theme or a different theme, such as one based on the animated television show, *The Simpsons*.⁷⁸ Similar to the way in which a film-inspired theme park ride uses a set to evoke narrative associations with the movie’s plot events, game designers evoke narrative in a game world by including props and objects to evoke narrative associations or provide a staging ground for subsequent events in the plot.⁷⁹ For instance, the dystopian game *BioShock*⁸⁰ uses 1920s art-deco motifs and medical imagery to propel its Ayn Rand-influenced narrative of a scientist gone mad.

An enacted narrative has the player working through obstacles in a space to reach a destination.⁸¹ Enacted narratives often use “micronarratives” to move the story along.⁸² A micro-narrative can come through a “cut scene,” a temporary halt in game

⁶⁹ Ryan, *supra* note 9.

⁷⁰ STARCRAFT II: WINGS OF LIBERTY (2010).

⁷¹ CIVILIZATION (MicroProse 1991).

⁷² THE SIMS (Electronic Arts 2000).

⁷³ Ryan, *supra* note 9.

⁷⁴ THE LEGEND OF ZELDA, TWILIGHT PRINCESS (Nintendo 2006).

⁷⁵ Jenkins, *supra* note 9, at 122.

⁷⁶ *Id.* at 121-22.

⁷⁷ Aarseth, *supra* note 3, at 48.

⁷⁸ *Id.*

⁷⁹ Jenkins, *supra* note 9, at 122-23.

⁸⁰ BIOSHOCK (2K Games 2007).

⁸¹ Jenkins, *supra* note 9, at 124-25.

⁸² *Id.* at 125.

play where the game designer unfolds a story of what the player should do next (e.g., rescue Princess Toadstool).⁸³ Other micronarratives involve “memorable [visual] moments” such as an expanse of sky or a sense of speed, which piques the game player’s interest in what will happen next.⁸⁴

An emergent narrative is one where the players use the game’s characters to “write” the game’s plot.⁸⁵ The players choose the characters and set them up in the game’s world.⁸⁶ The player’s choices then lead to consequences in the game’s plot.⁸⁷ A game such as *The Sims* allows players to create their own unique narratives through fairly complex characters that the player imbues with desires, urges, and needs; those characters then react in the game’s universe to create “dramatically compelling encounters.”⁸⁸

Embedded narratives utilize two storylines, much like a detective story.⁸⁹ An embedded narrative includes the plot, or *suyzhet*, and the story, or *fabula*.⁹⁰ In a detective story, the factual events giving rise to the actual crime is the plot.⁹¹ The plot is the immutable trajectory of events that contain the characteristics of a classic Aristotelian narrative – an authored beginning, middle, and end.⁹² The story, on the other hand, is the way the crime gets solved or, more abstractly, the mental picture that the reader puts together as to how the crime happened.⁹³ In a game, the plot is the non-interactive part of the narrative and the story, the way the problem gets solved, is the interactive part.⁹⁴ In reading a text, the reader comes to an internal understanding of what happened; in computer games, the

players are forced to act upon those mental maps, to literally test them against the game world itself. If you are wrong about whether the bad guys lurk behind the next door, you will find out soon enough – perhaps by being blown away and having to start the game over.⁹⁵

⁸³ See, e.g., *id.* at 122; RYAN, *supra* note 9, at 119.

⁸⁴ Jenkins, *supra* note 9, at 125.

⁸⁵ *Id.* at 128.

⁸⁶ *Id.*

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ *Id.* at 126; RYAN, *supra* note 9, at 113.

⁹⁰ Jenkins, *supra* note 9, at 126.

⁹¹ *Id.*; RYAN, *supra* note 9, at 113.

⁹² RYAN, *supra* note 9, at 113; Jenkins, *supra* note 9, at 126.

⁹³ RYAN, *supra* note 9, at 113; Jenkins, *supra* note 9, at 126.

⁹⁴ Jenkins, *supra* note 9, at 126.

⁹⁵ *Id.*

A classic example of an embedded narrative in a computer game is *Myst*⁹⁶, the popular CD-ROM game from the 1990s.⁹⁷ The immutable plot or *syuzhet* of *Myst* is the story of Atrus, a man who has discovered how to travel to different worlds using special magic books but has imprisoned his two sons in two of these books.⁹⁸ The story or *fabula* emerges as the player slowly uncovers the plot or *syuzhet* by solving the game's many puzzles.⁹⁹ Solving the different puzzles of the game opens up new books, which in turn enable the game's characters to tell more parts of the story.¹⁰⁰ At later points, the game player can make choices about what books to retrieve and open, which can lead to different outcomes in the game.¹⁰¹ The basic narrative structure of the game, the back-story involving Atrus and his sons, does not change, but the player experiences a variable narrative as she uncovers the plot and makes choices that impact the future.

In computer games, conflicts can arise between a game's narrative structure and its interactivity. This has to do with the different narrative strategies involved with respect to the game designer and the player. "Narrative meaning . . . is the top-down planning of a storyteller or designer, while interactivity requires a bottom-up input from the user."¹⁰² In order to impose a narrative structure on the game, the game designer will often use cut scenes and procedural rules that constrain the plot, both of which draw agency away from the player.¹⁰³ For instance, during a cut scene in a game, the action stops so that the player can view a vignette between the characters that advances the plot. Moreover, while game designers create choices for the player, those choices are not infinite. The range of choices must be limited so that the character's "overall destiny will not deviate from the general line of the master plot."¹⁰⁴ Too much narrative control over the story and not enough choice for the player harm the game's verisimilitude.¹⁰⁵ However, providing the player with too many choices creates a too-confusing plot that fails to captivate.¹⁰⁶ There has to be some narrative linearity in the game, otherwise it will fail to satisfy.¹⁰⁷

⁹⁶ MYST (Cyan Games 1993).

⁹⁷ Jenkins, *supra* note 9, at 126.

⁹⁸ MYST, *supra* note 96.

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² RYAN, *supra* note 9, at 99.

¹⁰³ *Id.* at 113, 119; Ryan, *supra* note 9.

¹⁰⁴ Ryan, *supra* note 9.

¹⁰⁵ RYAN, *supra* note 9, at 99.

¹⁰⁶ RYAN, *supra* note 9, at 123.

¹⁰⁷ *Id.* at 123-124.

Computer games are narratives...or are they? There are some key differences between analog narratives and computer games. The pleasure of reading a novel flows from the character development and the unfolding of the plot.¹⁰⁸ And the satisfaction that comes from reading a book is usually a one-time thing.¹⁰⁹ On the other hand, computer games are all about playing and re-playing—character development is not that important¹¹⁰—although some newer games, such as *Dragon Age*, have in-depth (and satisfying) character development.¹¹¹ Novels look backwards to what happened in the past; computer games look to the present and future, to what could happen.¹¹² Some even argue that the computer game surpasses the novel as a narrative platform because novels fail to “represent the simultaneity of processing that goes on in the brain – the mixture of language and image, the intimation of diverging possibilities that we experience as free will.”¹¹³

Looking to the future, proponents of digital narrative imagine a Rashomon-type genre of drama, which would “allow us to change positions at any moment in order to see the same event from the viewpoint of another character” or “enter a particular town over and over again in the guise of many different individuals, enabling us to see how differently the same people present themselves to us.”¹¹⁴ The cyberdrama of the future might also show us “the processes by which large historic events emerge as the sum of many much smaller causes.”¹¹⁵ The promise of future digital narratives is that they might allow us to enact the “contemporary human struggle to both affirm and transcend our limited point of view.”¹¹⁶

In the academic world of digital media, there is a competing view to the claim that computer games are narratives. Ludologists¹¹⁷ argue that people play computer games to solve problems, defeat opponents, and enjoy a simulation, not to experience a narrative.¹¹⁸ Thus, ludologists argue that narrative

¹⁰⁸ Aarseth, *supra* note 3, at 50.

¹⁰⁹ *Id.* at 48.

¹¹⁰ *Id.* at 48, 50.

¹¹¹ Kevin Van Ord, *Dragon Age Origins Review*, GAMESPOT (November 23, 2009), <http://www.gamespot.com/pc/rpg/dragonage/review.html> (praising the game’s memorable characters and character development).

¹¹² Gonzalo Frasca, *Videogames of the Oppressed: Critical Thinking, Education, Tolerance, and Other Trivial Issues*, in *FIRST PERSON*, *supra* note 3, at 85, 86.

¹¹³ MURRAY, *supra* note 9, at 281.

¹¹⁴ MURRAY, *supra* note 9, at 283.

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ The term is derived from the Latin word (*ludus*) for game or sport. Ludologists focus their analysis on the experience of *playing* games, rather than its narrative aspects.

¹¹⁸ Aarseth, *supra* note 3, at 48, 51; Ryan, *supra* note 9.

theorists are expending too much energy trying to analyze computer games as stories and that scholars should instead focus on computer games as their own distinct genre, a genre that shares attributes but exists separately from traditional forms of narratives.¹¹⁹ To support their argument, ludologists point out the lack of character development within computer games and the non-narrative plots of puzzle games like Tetris.¹²⁰ The narratologists respond that computer games should be viewed as narratives and that even Tetris is “a perfect enactment of the overtasked lives of Americans . . . of the constant bombardment of tasks that . . . we must somehow fit into our overcrowded schedules and clear off our desks in order to make room for the next onslaught.”¹²¹ Resolving the debate between the ludologists and narratologists is outside the scope of this Article, but this Article does accept a premise that both sides can agree upon, which is that computer games contain strong narrative elements within them. These narrative elements have the capacity to persuade and have given rise to a new type of rhetoric: procedural rhetoric. As the type of game that has the most practical promise for legal advocacy, we will now look at procedural rhetoric and persuasive computer games.

II. PROCEDURAL RHETORIC: PERSUASIVE COMPUTER GAMES

In this section, we will look at the attributes of a persuasive game and the unique way that its interactive rhetoric works, by actively involving the player in filling in the pieces of the argument. We will then examine *Take Back Illinois!* And *Point of Entry*, two persuasive computer games that make a legal argument, and see how these computer games illustrate an ironic quandary for computer game rhetoric: while computer games are adept at making deep systemic arguments that are difficult to make in a text-based form, they also suffer from narrow limitations, necessary to create internal logic in the game’s world. Finally, we will consider the failure of persuasive computer games to take off in the political arena, identifying potential reasons why computer games have not become as ubiquitous in American public discourse as some scholars predicted.

A. *What Is a Persuasive Game?*

¹¹⁹ Noah Wardrip-Fruin and Pat Harrigan, *Ludology Introduction*, in FIRST PERSON, *supra* note 3, at 35, 35.

¹²⁰ Markku Eskelinen, *Towards Computer Game Studies*, in FIRST PERSON, *supra* note 3, at 36, 37; Ryan, *supra* note 9.

¹²¹ MURRAY, *supra* note 9, at 143-44.

In 1975, a rudimentary computer game was released called *Tenure*.¹²² This game replicated the realities facing high school teachers, demonstrating that educational practices are not always the sole product of pedagogical strategies designed to benefit student learning.¹²³ Instead, teacher decisions are deeply affected by personal and professional politics.¹²⁴ How did the game do this? This game utilized a branching tree structure that linked specific consequences to the player's answers to a series of multiple-choice questions.¹²⁵ For instance, a teacher might decide to spend more time preparing for class.¹²⁶ This choice would lead to better student-teacher relationships but might also lead to poorer relations between the teacher and her peers, as other teachers might not want to spend more time preparing for class.¹²⁷ In his book, *Persuasive Games*, Ian Bogost presents *Tenure* as an early example of a persuasive game.¹²⁸ The game persuades by creating a feeling of discomfort¹²⁹ with the public educational system and questioning the premise that all teachers have their pupils' best interests at heart.¹³⁰

*The McDonald's Videogame*¹³¹ is a more recent example of a persuasive video game.¹³² In this game, the player controls four separate aspects of McDonalds's production line: the pasture in a developing country where the object is to raise livestock as cheaply as possible; the slaughterhouse where the goal is to efficiently fatten cattle prior to slaughter; the restaurants where the object is to sell as many hamburgers as possible; and the corporate offices where the goal is to positively manage public relations, marketing, and lobbying.¹³³

¹²² IAN BOGOST, PERSUASIVE GAMES, THE EXPRESSIVE POWER OF VIDEOGAMES 1 (2007).

¹²³ *Id.* at 1-2.

¹²⁴ *Id.*

¹²⁵ *Id.* at 1.

¹²⁶ *Id.* at 1-2.

¹²⁷ *Id.* at 1.

¹²⁸ *Id.* at 1-3.

¹²⁹ John Locke wrote that instilling a sense of discomfort in one's audience carries persuasive power because it creates a desire to act. See JOHN LOCKE, AN ESSAY CONCERNING HUMAN UNDERSTANDING 304-07 (Dover Publications 1959) (1690), cited in Kristen K. Robbins-Tiscione, *A Call to Combine Rhetorical Theory and Practice in the Legal Writing Classroom*, 50 WASHBURN L.J. 319, 332 n.101 (2011).

¹³⁰ BOGOST, *supra* note 122, at 2.

¹³¹ *McDonald's Video Game*, MOLLEINDUSTRIA, <http://www.mcvideogame.com/index-eng.html> (last visited November 2, 2011).

¹³² BOGOST, *supra* note 122, at 29.

¹³³ *Id.*

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The McDonalds Videogame

In each sector of the game's externally directed universe, the player is confronted with a series of moral dilemmas. For instance, in the pasture, the player needs enough grazing land and soybean fields to support the most cattle, to produce the most amount of hamburger meat. However, only a limited number of soybean fields and grazing land is available in this developing country.¹³⁴ Thus, the only way to "win" this part of the game is to bribe the local governor to convert the people's crops into corporate ones.¹³⁵ In this game, the developers programmed a system that represents the alleged harmful and immoral business practices that they want to critique, raising the question of where our cheap fast food comes from.¹³⁶ *The McDonalds Videogame* makes many of the same arguments that Eric Slosser made in his book, *Fast Food Nation*.¹³⁷

Bogost creates the term "procedural rhetoric" to describe the way that computer games like *Tenure* and *The McDonalds Videogame* are able to persuade.¹³⁸ With procedural rhetoric, the game designer uses computational processes to mimic a complex organizational system.¹³⁹ A computer game can effectively critique a system because "computers run processes that invoke interpretations of processes in the material world."¹⁴⁰ Thus, computers can simulate a complex system and through that

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ *Id.* at 29-31.

¹³⁷ *Id.*; ERIC SLOSSER, *FAST FOOD NATION: THE DARK SIDE OF ALL-AMERICAN MEAT* 133-92 (2001).

¹³⁸ BOGOST, *supra* note 122, at 3.

¹³⁹ *Id.* at 5.

¹⁴⁰ *Id.*

simulation, critique it.¹⁴¹ The unique power of a persuasive computer game is that it has the ability to make a deep, structural critique of a cultural system, deconstructing and uncovering the unspoken logic that motivate its human actors.¹⁴²

A persuasive game critiques a system by presenting a series of unpalatable moral dilemmas, as with *Tenure* and *The McDonald's Videogame*. Another form of critique is a “tragic” game structure, a game that cannot be won.¹⁴³ For instance, in *Kabul Kaboom*, the player must catch air-dropped food while avoiding bombs at the same time.¹⁴⁴ Eventually, the player is unable to escape the bombs, and the game ends with the player’s dismemberment.¹⁴⁵ Because the game cannot be won, the game argues that the Afghan war’s putative humanitarian goals are futile.¹⁴⁶

In addition to critique, persuasive computer games can also be used to support existing institutions. Bogost identifies *America’s Army* as an example of a game that argues that an existing system is a good one.¹⁴⁷ In this game, violations of the uniform code of military justice, rules of engagement, or chain of command send the player to Leavenworth prison.¹⁴⁸ On the other hand, playing the game and advancing through its levels leads to “honor” points.¹⁴⁹ The dialectic of honor for following the rules (versus prison) for non-compliance teaches and enforces the Army’s combat rules and value system.¹⁵⁰

A game might also have a persuasive micronarrative¹⁵¹ within it. For instance, in *Grand Theft Auto: San Andreas*,¹⁵² a player must feed himself in order to keep playing well.¹⁵³ The only food available is from fast food restaurants where salads cost more than hamburgers.¹⁵⁴ However, too much cheap food causes the

¹⁴¹ See *id.* at 29-31 (providing an example of a game, *The McDonald's Videogame*, that critiques the agro-industrial system that undergirds the fast-food business).

¹⁴² See *id.* at 8, 29-31. Computer games often ask the question “how does this work?” [which] requires taking a set of cultural systems apart to see what logics motivate their actors.” *Id.* at 8.

¹⁴³ *Id.* at 85 (citing Shuen-shing Lee, *I Lose, Therefore I Think: A Search for Contemplation Amid Wars of Push-Button Glare*, 2 GAME STUDIES 3 (2003)).

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ *Id.* at 75.

¹⁴⁸ *Id.* at 76.

¹⁴⁹ *Id.* at 77, 79.

¹⁵⁰ *Id.* at 76.

¹⁵¹ See *supra* notes 82-84 and accompanying text.

¹⁵² GRAND THEFT AUTO SAN ANDREAS (Rockstar Games 2004).

¹⁵³ BOGOST, *supra* note 122, at 113.

¹⁵⁴ *Id.* at 114.

player to become fat and lethargic, thus rendering him unable to play effectively.¹⁵⁵ This micronarrative within the game exposes “the social forces that drive the poor and working-class residents of the inner city to consume fast food habitually.”¹⁵⁶

B. The Rhetoric of Persuasive Computer Games

Computer games persuade most effectively by structuring an argument as a “procedural enthymeme,” a partially constructed syllogism that the game player fills in.¹⁵⁷ For instance, the *Freaky Flakes!*¹⁵⁸ game implicitly raises the argument that:

- Questionable marketing practices popularize unhealthy eating habits.
- Sugary cereals are deliberately marketed to children with cartoon images, bright colors, and energetic words.
- Unhealthy sugary cereals become popular through unsavory marketing practices.

The game makes this argument with its procedural structure. The object of the game is to create a box for a popular cereal product by using bright colors, superhero characters, and energetic words on the box.¹⁵⁹ Thus, in this game, the player interacts with the application, which asks the question: how are sugary cereals marketed to children?¹⁶⁰ This game, though it points to the manipulative way that cereals are marketed to children, fails to set up an effective enthymeme because every box yields the same outcome.¹⁶¹ If the game’s results depended on how well the player used the available marketing tools, this would have been more effective because it would have allowed the player to fill in the missing syllogism and “hone in on the logic that drives the advertisers.”¹⁶²

Thus, in order for procedural enthymemes to work, there must be a tight relationship between the user input and the logic of the game. The game does not have to feel “real,” but the user

¹⁵⁵ *Id.* at 115.

¹⁵⁶ *Id.*

¹⁵⁷ *Id.* at 18, 33-34.

¹⁵⁸ *Id.* (discussing *Freaky Flakes!*). *Freaky Flakes!*, KCTS, http://pbskids.org/dontbuyit/advertisingtricks/cerealbox_flash.html (last visited Dec. 8, 2011). The game *Create Your Own Ad* makes a similar argument. *Create Your Own Ad*, KCTS, http://pbskids.org/dontbuyit/advertisingtricks/createyourownad_flash.html (last visited Nov. 2, 2011).

¹⁵⁹ BOGOST, *supra* note 122, at 34.

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² *Id.*

inputs decide whether he or she achieves the goals of the game. And finally, the game should have decent graphics.¹⁶³ Effective procedural rhetoric uses visual imagery to make its argument more “vivid” than what a text-based argument is able to achieve.¹⁶⁴ Bogost identifies *Tax Invaders*, a 2004 Republican National Committee game modeled after the 1980s Atari game *Space Invaders*, as a game that fell short on account of its rudimentary 1980s graphics, even though there was a connection between the game’s goals and message (that the public should avoid John Kerry’s harmful tax plan).¹⁶⁵

Games are different from text-based or purely visual arguments in that they make claims and support them through the experience of interaction.¹⁶⁶ A participant is able to experience, firsthand, how the system that is being critiqued (or supported) operates. The interactive experience provided through game play makes the process of completing the enthymeme a deep internal experience.¹⁶⁷ The untapped knowledge and advocacy uses for computer games have propelled the Woodrow Wilson International Center for Scholars to create and fund the Serious Games Initiative, with the mission of finding ways for computer games to serve institutions such as government, business, educational institutions, and the military.¹⁶⁸

C. Persuasive Legal Computer Games

We are now seeing persuasive computer games make legal arguments. *Take Back Illinois!*¹⁶⁹ and *Point of Entry*¹⁷⁰ are two law-related persuasive computer games that argue a specific legal policy issue. *Take Back Illinois!* operates with external user directed action (the player manipulates the game world from above) and emergent narrative (the player controls story of what happens to the game’s characters). This game, produced on behalf of the Illinois House Republicans for the 2004 Illinois legislative

¹⁶³ See *id.* at 49 (“Just as a poor or ‘generic’ package design can turn consumers away from a quality product, so the skin of a procedural rhetoric might influence player enticement.”).

¹⁶⁴ *Id.* at 34.

¹⁶⁵ *Id.* at 48-49, 103-05.

¹⁶⁶ *Id.* at 40.

¹⁶⁷ *Id.* at 44.

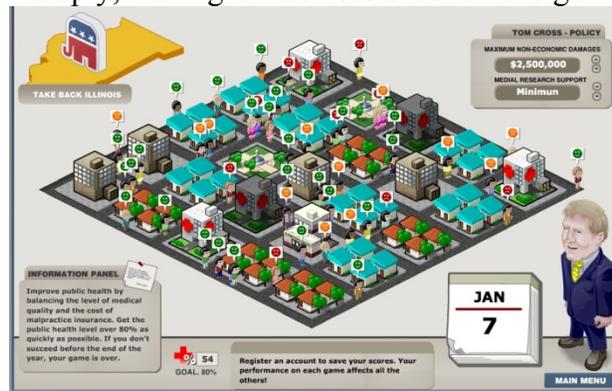
¹⁶⁸ *Id.* at 55-56.

¹⁶⁹ TAKE BACK ILLINOIS! (Persuasive Games 2004-2005), available at <http://www.persuasivegames.com/games/game.aspx?game=takebackillinois> (last visited July 15, 2011). Unfortunately, this game can no longer be played online.

¹⁷⁰ POINT OF ENTRY (Persuasive Games 2007), available at http://select.nytimes.com/ref/opinion/20070621_IMMIGRATION_GRAPHIC.html?_r=1 (last visited December 23, 2011).

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election, presents positions on several policy issues, including medical malpractice reform, education policy, and local economic development.¹⁷¹ In the Medical Malpractice Tort Reform component of the game, the player must direct sick citizens, portrayed as green frown-faced figures, to the nearest doctor's office.¹⁷² However, the number of doctor's offices decreases (making the game difficult to win) if the player increases the cap for a plaintiff's non-economic tort damages and decreases funding for medical research.¹⁷³ If the player lowers the cap for non-economic damages (all the way down to \$50,000) and increases funding for medical research, the number of doctor's offices multiply, making it much easier to win the game.¹⁷⁴



Take Back Illinois!

Point of Entry illustrates the implications of a standardized merit system for immigration visas, a system debated in Congress in 2007.¹⁷⁵ This game employs external user directed action by having the player compete against the computer to produce the most visas under the proposed system.¹⁷⁶ The player plays the game by increasing the chances for the virtual visa seeker to get a visa by changing their characteristics.¹⁷⁷ For instance, changing a person's occupation from maid to engineer increases their merit points and makes it more likely that the person would receive a visa.¹⁷⁸ Family relationships carry minimal relevance in terms of points.¹⁷⁹ The game highlights the arbitrary and bureaucratic nature

¹⁷¹ BOGOST, *supra* note 122, at 139-40.

¹⁷² TAKE BACK ILLINOIS!, *supra* note 169.

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ This system was included in Senate Bill 1639, debated in 2007, but not passed. S. 1639, 110th Cong. (2007).

¹⁷⁶ POINT OF ENTRY, *supra* note 170.

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*

¹⁷⁹ *Id.*

of the proposed merit system.¹⁸⁰ It also persuades with a strong visual rhetoric; the people applying for the visas are represented as people, no matter what their occupation or educational credentials.¹⁸¹



Point of Entry

These two games illustrate a great irony in the persuasive power of this genre. Procedural rhetoric allows one to make a deep *structural*¹⁸² critique of a system, which is otherwise difficult to do because of the many silent and unquestioned premises that support institutional systems.¹⁸³ Generally speaking, while liberal humanism¹⁸⁴ holds that social outcomes are a product of an individual's merit and free choice in the market, some would argue that these narratives are constrained and leave no room to discuss how differential social outcomes might also result from preexisting

¹⁸⁰ *Id.*

¹⁸¹ *Id.*

¹⁸² Professor Susan Carle uses the term structural to refer to how social structures determine inequalities of power and resources that can in turn affect how lawyers approach advocacy for their clients. Susan Carle, *Structure and Integrity*, 93 CORNELL L. REV. 101, 114-116 (2008).

¹⁸³ See Lucille A. Jewel, *I Can Has Lawyer? The Conflict Between the Participatory Culture of the Internet and the Legal Profession*, 33 HASTINGS COMM. ENT. L. J. 101, 126 (2011) (explaining the challenges in making deep structural critiques of systems).

¹⁸⁴ A critical view of liberal humanism argues that it uses themes of equality and objectivity to foster the idea that social outcomes are the fair result of neutral processes rather than the result of pre-existing inequalities. For a critique of liberal humanism (sometimes referred to as liberal individualism) in the legal context, see ELIZABETH MERTZ, *THE LANGUAGE OF LAW SCHOOL* 4-6, 212-14 (2007) (explaining the process by which the law employs abstract and formalistic legal reasoning, which emphasizes procedure and precedent, at the expense of social context and moral issues).

differences in capital holdings.¹⁸⁵ To truly question an institutional system, an advocate must do more unpacking than a mother-in-law who has come to stay at one's home for a month. Thus, the power of a game to engage in structural critique is quite a valuable one. There would be great benefit, for instance, in a game that critiques our badly broken criminal justice system.¹⁸⁶ Such a game could, for instance, highlight the emphasis on efficiency and docket movement at the expense of a vigorous defense, an unspoken institutional force that undergirds the criminal justice system in the United States.¹⁸⁷

Despite the computer game's special capacity to make structural critiques, procedural rhetoric, by its very nature, requires the advocate to structure the argument very narrowly, leaving out a tremendous amount of information in order to create a logically consistent world.¹⁸⁸ For instance, in the game *Take Back Illinois!*, the player never finds out that non-economic damages are designed to compensate a victim for pain and suffering, disfigurement, and loss of consortium. There is no space available for a counterargument that these types of damages, for some tort victims, are necessary to compensate them for the grievous harm that has been done to them. In this way, procedural rhetoric operates very similarly to legal formalism, where legal rules operate to exclude a great deal of information.¹⁸⁹

Sometimes a limited world helps, rather than hurts, our legal theory. Being able to exclude messy facts can make our client's story more emotionally compelling and logically consistent. In the same way that a lawyer files a motion in limine to exclude evidence from a trial setting, a computer game designer

¹⁸⁵ Lucille A. Jewel, *Bourdieu and American Legal Education: How Law Schools Reproduce Social Stratification and Class Hierarchy*, 56 *BUFF. L. REV.* 1155, 1163-64. The concept of individual merit is another example of a systemic idea that leaves little room for a deeper critique. The traditional idea is that an individual's merit (in the form of school prestige, test scores, grades, etc.) determines where he/she ends up in society. But the merit narrative leaves no space for the empirical reality (at least within the legal profession) that one's place in society is highly influenced by the amount of social, cultural and economic capital one holds prior to entering the education/career system. *See id.* at 1173-75.

¹⁸⁶ *See, e.g.*, Jonathan Rapping, *You Can't Build on Shaky Ground: Laying the Foundation for Indigent Defense Reform Through Values-Based Recruitment, Training and Mentoring*, 3 *HARV. L. & POL'Y REV.* 161, 162-63 (2009) (describing the United States criminal defense system as severely dysfunctional and containing deep structural defects).

¹⁸⁷ *See id.*

¹⁸⁸ Ryan, *supra* note 9.

¹⁸⁹ *See e.g.*, MERTZ, *supra* note 184, at 131-32 (discussing how legal formalism strips context away from legal problems, focusing instead on narrowly defined legal categories).

excludes facts from the world she is creating to maintain control over the relationships between the user's choices and the game's plot.¹⁹⁰ Nonetheless, the legal system and a persuasive computer game create the same kind of responsive challenge. In order to raise an objection to an argument made by the computer program, the user must go outside of the game's world and respond with an independent argument, bringing in extrinsic material. As lawyers, we have to make arguments within the rules of the game, and if we try to argue outside of the lines, our advocacy loses its legitimacy.

D. The Limits of Persuasive Games: Political Games

In 2004, Ian Bogost predicted that every 2008 presidential candidate would have his or her own political videogame.¹⁹¹ Bogost made his prediction after he successfully created a computer game for Howard Dean's campaign in which players won by engaging in grassroots political action to help Dean.¹⁹² Bogost's prediction did not come true. John McCain did sponsor *Pork Invaders*, a game that utilized the tried and true *Space Invaders* trope and portrayed a McCain "ship" firing vetoes at pig "aliens" as a demonstration of how McCain "would exercise the veto pen to restore fiscal responsibility to our federal government."¹⁹³ There were also a number of unofficial Sarah Palin games in 2008, such as *Hunting With Palin* and *Polar Palin*, both of which offered sardonic takes on Palin's personal characteristics.¹⁹⁴ The Obama campaign did not create a game, but did purchase in-game advertising so that Obama billboards appeared in the game *Burnout Paradise*.¹⁹⁵ Bogost observed that the political computer games of 2008 were mere novelties, used for politicking, not politics.¹⁹⁶ Looking back to his own 2004 Howard Dean game, Bogost recognized that his game failed to move beyond the energy of grassroots outreach and put "coherent political rhetoric in the hands of [Dean's] army of supporters."¹⁹⁷

¹⁹⁰ See Ryan, *supra* note 9.

¹⁹¹ Ian Bogost, *Persuasive Games: The Birth and Death of the Election Game*, GAMESUTRA (Oct. 30, 2008), http://www.gamasutra.com/view/feature/3834/persuasive_games_the_birth_and_php.

¹⁹² See BOGOST, *supra* note 122, at 135-37; Ian Bogost & Gonzalo Frasca, *Videogames Go To Washington: The Story Behind The Howard Dean for Iowa Game*, ELECTRONIC BOOK REVIEW (Apr. 9, 2008), <http://www.electronicbookreview.com/thread/firstperson/elective>.

¹⁹³ Bogost, *supra* note 191.

¹⁹⁴ *Id.*

¹⁹⁵ *Id.*

¹⁹⁶ *Id.*

¹⁹⁷ BOGOST, *supra* note 122, at 139.

The fact that political computer games did not take off as predicted might lie in the fact that these games are effective for making deep systemic arguments,¹⁹⁸ but they are not effective for short sound-bite arguments, which is what United States politics has devolved into.¹⁹⁹ With respect to legal arguments, we have seen how persuasive computer games can be when harnessed to critique a whole legal system, but it remains to be seen how useful games are for making discrete arguments regarding a single issue. Nonetheless, we can draw several interesting parallels between digital narrative and legal problem solving. It is to this subject that we now turn.

III. LEGAL PARALLELS AND APPLICATIONS

In this Part, we will examine the parallels between interactive game worlds and narrative approaches to legal advocacy. These parallels are important because as greater and greater percentages of the world's population engage in computer gaming, harnessing this new kind of narrative power can help us become better advocates. Indeed, we may not be far away from seeing computer games admissible in a trial setting. Currently, computer animations are admissible as demonstrative evidence at trial to help explain an expert witness's testimony.²⁰⁰ Because a computer game goes just one step further by imposing an interactive structure on the material, there is a reasonable argument that computer games, if helpful to explain a complex issue, should be admitted at trial. Thus, it does not hurt to visualize a future where computer games play a larger role in our legal system.

To begin, let's examine the deep interactivity that already exists within our legal system. In reviewing M. Ethan Katsch's 1995 book of future predictions, *Law in a Digital World*²⁰¹, Eugene Volokh points out that legal reference books, such as digests and treatises, are not usually read in a linear fashion.²⁰² Professor Volokh explains that:

Lawyers have always read books [in a non-linear fashion]. Lawyers don't read treatises cover to cover. They find the chapter they need, maybe read

¹⁹⁸ Bogost, *supra* note 191.

¹⁹⁹ See e.g., *SOUNDBITE CULTURE: THE DEATH OF DISCOURSE IN A WIRED WORLD* (David Slayden & Rita Kirk Whillock eds., 1998).

²⁰⁰ See *supra* notes 16-17 and accompanying text.

²⁰¹ M. ETHAN KATSCH, *LAW IN A DIGITAL WORLD* (1995).

²⁰² Eugene Volokh, *Technology and the Future of Law*, 47 *STANFORD LAW REVIEW* 1375, 1392-93 (1994) (reviewing M. ETHAN KATSCH, *LAW IN A DIGITAL WORLD* (1995)).

some material at the beginning of the chapter, and then go to the subsection that's relevant to them. Even when reading cases, they often skip over some issues and go directly to others.²⁰³

In fact, we can go all the way back to 1628 and look at the first modern legal treatise by Edward Coke, the *Institutes of the Laws of England*,²⁰⁴ and see how the copious cross-references, footnotes, and citations invite the reader to forge their own path through a complex information structure.²⁰⁵ Fast forward to today, and anyone familiar with legal research on Westlaw or Lexis will understand how these legal research systems use a branching tree structure to organize information.

Legal arguments, even in a non-digital form, are also interactive in the sense that we ask our audience to fill in the missing gaps or ellipses. Good lawyers know that effective advocacy subtly “shows” the reader what the conclusion should be rather than “telling” readers what to do with strident exhortations. This goal of inducing audience participation in the argument requires the audience member to exercise some agency, which is what makes it interactive.²⁰⁶ Showing rather than telling also parallels the conflict, in game design, between narrative and interactivity.²⁰⁷ In a game, the narrative interludes take away the player's ability to make their own way through the story, but too little narrative makes the story indeterminate and unsatisfying.²⁰⁸ In a similar way, legal authors must exercise enough authorial control over the text so that readers are guided to the conclusion that most favors their client while also giving readers sufficient agency to come to that conclusion on their own.

Perhaps the ultimate example of interactivity in a legal argument is the appellate oral argument, where the advocate develops the structure of his or her argument but the justices on the bench are in the driver's seat, directing the advocate where to go.

²⁰³ *Id.* at 1392.

²⁰⁴ Coke's *Institutes of the Laws of England* are reproduced in SIR EDWARD COKE, *SELECTED WRITINGS OF SIR EDWARD COKE* 573-1184 (Steve Sheppard ed., Liberty Fund 2005) (1628).

²⁰⁵ Douglas Galbi, *Technology in the Courtroom*, PURPLE MOTES (Aug. 3, 2008), <http://purplemotes.net/2008/08/03/technology-in-the-courtroom> (citing Paul Douglas Callister, *Books Above the Throne: Geopolitical and Technological Factors Exalting Textual Authority in Seventeenth-Century England* 41, 48 (Jan. 2008) (unpublished manuscript), *available at* http://works.bepress.com/cgi/viewcontent.cgi?article=1006&context=paul_callister).

²⁰⁶ See MANOVICH, *supra* note 8, at 56 (arguing that when authors of novels ask their readers to fill in an ellipses, the text becomes interactive).

²⁰⁷ See *supra* notes 102-107 and accompanying text.

²⁰⁸ See *supra* notes 105-106 and accompanying text.

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Justice Roberts explained that when he would make an argument to the Supreme Court as a practicing attorney, he used a set of index cards, each containing a key point, which could be reshuffled in any order, depending on the questions he received.²⁰⁹ Roberts's index card method resembles early visions of hypertext,²¹⁰ which is a computerized system for shuffling information dependent on input from the user.²¹¹ Hypertext is now a reality; we now enjoy a type of narrative organization that allows us to access data quickly in an associative way through many possible sequences. This ability to present information in many possible sequences, depending on user input, is also helpful for effective appellate advocacy, as demonstrated by Chief Justice Roberts's card method. Thus, both appellate advocates and new media designers must create a base narrative structure that produces many compelling possibilities from different chronologies and vantage points.

Legal thinking and analysis are analogous to the non-linear narratives within computer games because both require concurrent consideration of competing possibilities. As Richard Michael Fischl and Jeremy Paul so cogently explain in *Getting to Maybe*, legal analysis does not take one on a straight path.²¹² As described at the beginning of this Article, within the law, there are forks in the law and forks in the facts; narrative, analytic, and strategic forecasting requires lawyers to recognize and chart out all possible paths.²¹³ If

²⁰⁹ Bryan A. Garner, *Interviews with United States Supreme Court Justices*, 13 SCRIBES J. LEG. WRITING 1, 23-24 (2010).

²¹⁰ Hypertext consists of "static links that allow the user to jump from page to page." The Internet is a hypertext driven system. Noah Wardrip-Fruin, *Introduction to A File Structure for the Complex, the Changing, and the Indeterminate*, in THE NEW MEDIA READER, *supra* note 1, at 133, 133.

²¹¹ See Theodor H. Nelson, *A File Structure for the Complex, the Changing, and the Indeterminate*, in THE NEW MEDIA READER, *supra* note 1, at 134, 134. In this 1965 essay, Nelson visualized a computerized system that could organize information with "the capacity for intricate and idiosyncratic arrangements, total modifiability, undecided alternatives, and thorough internal documentation." *Id.* Nelson invented the term "hypertext," which he described as "a body of written or pictorial material interconnected in such a complex way that it could not conveniently be presented or represented on paper." *Id.* at 144. We now understand hypertext as the way in which information on the Internet is organized, with links on a webpage enabling us to move from one website to another. *Id.* at 133. In envisioning hypertext, Nelson was influenced by Vannevar Bush's descriptions of a yet to be invented "Memex" machine, which would allow one to store all his or her "books, records, and communications in a mechanized way so that it may be consulted with exceeding speed and flexibility. Vannevar Bush, *As We May Think*, in THE NEW MEDIA READER, *supra* note 1, at 37, 45. At the time he wrote *As We May Think* in 1945, Bush was hopeful that future computers might be able to retrieve material by association. See *id.* at 44.

²¹² RICHARD MICHAEL FISCHL & JEREMY PAUL, *GETTING TO MAYBE: HOW TO EXCEL ON LAW SCHOOL EXAMS* (1999).

²¹³ See *supra* notes 10-13 and accompanying text.

one ignores a fork, the analysis is incomplete. In this way, legal analysis is non-linear in form. The Flowers paradigm for legal writing,²¹⁴ which holds that a writer should begin writing in a creative “madman” stage, is an optimal time to explore the multiple narratives and counter-narratives within a given legal problem. At this stage in the analytical process, we should embrace the do-over mentality within computer games, thinking and re-thinking what the outcome would be if we change certain premises and facts.

Moreover, in much the same way that *Rashomon* presents competing pictures of reality depending on who is telling the story, lawyers should look at facts from multiple perspectives.²¹⁵ The lesson from *Rashomon* is that facts can be indeterminate; one person’s perception of a fact could be another person’s untruth.²¹⁶ For a practical explanation of this concept, let’s return to the example of the criminal defense lawyer who works to create alternative explanations for a set of facts in order to challenge the prosecutor’s theory of guilt. Locating and then presenting different perspectives for the same chain of events supports the plausibility of alternate theories for what happened in the case, which then establishes reasonable doubt for the prosecution’s theory.

The process of considering the multiple ways that a story can be told is also an effective trial preparation strategy. In order to effectively persuade, the legal communicator should evaluate all possibilities, but then clear the brush and present the argument as a clear straight path.²¹⁷ However, jury trials do not often support a straight linear structure. The story emerges in bits and pieces through direct examination testimony, cross-examination testimony, and trial exhibits. The disjointed way that a story gets

²¹⁴ BRYAN A. GARNER, *THE WINNING BRIEF* 4-7 (2nd ed. 2004) (describing the Flowers paradigm).

²¹⁵ For an exploration of the ways in which Kurosawa’s *Rashomon* applies to legal analysis, see, for instance, Ann Althouse, *Invoking Rashomon*, 2000 WIS. L. REV. 503; Orit Kamir, *Judgment by Film: Socio-Legal Functions of Rashomon*, 12 YALE J. L. & HUMAN. 39 (2000); David Simon Sokolow, *From Kurosawa to (Duncan) Kennedy: The Lessons of Rashomon for Current Legal Education*, 1991 WIS. L. REV. 969.

²¹⁶ Professor Sokolow writes that *Rashomon* teaches us that “[o]ne’s ability to perceive, perceptions at the time of an event, capacity to remember, and point of view all influence one’s notion of what ‘really’ happened.” Sokolow, *supra* note 215, at 975. Professor Althouse’s take is that *Rashomon* stands not for the proposition that there is factual indeterminacy, but for the proposition that human beings have a difficult time being honest. See Althouse, *supra* note 215, at 514.

²¹⁷ STEPHEN V. ARMSTRONG & TIMOTHY P. TERRELL, *THINKING LIKE A WRITER* 4 (2009) (analogizing the lawyer’s task of distilling complex information into a clear straight path as akin to making the wild terrain of Western Colorado seem like the flat plains of Kansas).

told at trial is not similar to the polished narrative we experience in a movie or novel. Thus, the job of the trial advocate is to evaluate the many ways to present the story at trial and select the most persuasive one.

Professors Stephan Krieger and Reza Rezvani at Hofstra University School of Law have developed a “storyboarding” approach to trial preparation, a deeply immersive and non-linear method for crafting a trial story.²¹⁸ Professors Krieger and Rezvani had their clinic students put different “scenes” (derived from specific evidence such as a witness’s testimony or document) on an index card.²¹⁹ The students then ordered and re-ordered the cards on a large bulletin board, testing various ways of presenting the facts.²²⁰ As professor Krieger and Rezvani explained, the storyboarding approach allowed the advocates to experiment with complex sets of materials to create narrative coherence at the micro-level, within each “act” of the story (a witness’s testimony, for example), and at the macro-level by creating an overarching coherence to the case.²²¹ By using this method, the advocates eventually identified the most persuasive and resonant trial theory.²²² The storyboarding approach, which embraces multiple narrative possibilities, differs from traditional trial advocacy approaches, which tend to view each piece of evidence in an atomistic way.²²³ Professors Krieger and Rezvani’s innovative approach demonstrates a practical legal application for immersive, interactive thinking that closely parallels digital narrative experiences.

The four narrative structures that Henry Jenkins identifies within computer games are also relevant to legal authors. With an evoked narrative, the game designer “design[s] worlds and sculpt[s] spaces” by placing visual cues into the game world that evoke emotional responses.²²⁴ Legal authors, though we are constrained to use text, are similar to game designers in that we create persuasive settings for our stories by using carefully chosen words to stir up a vivid emotional response, or pathos, in our

²¹⁸ Stefan H. Krieger & Reza Rezvani, Hofstra University School of Law, One 8 x 4 Foam Board, 2000 Index Cards, and Total Immersion: Storyboarding as an Approach to Legal Storymaking, Plenary Presentation, Applied Storytelling Conference, Denver University School of Law (July 15, 2011) (presentation notes on file with the author).

²¹⁹ *Id.*

²²⁰ *Id.*

²²¹ *Id.*

²²² *Id.*

²²³ *Id.*

²²⁴ Jenkins, *supra* note 9, at 121-22; *see also supra* text accompanying notes 75-80.

audience.²²⁵ For instance, Professor Kathryn Stanchi explains how effective appellate advocates select vivid word choices for a brief's questions presented, which "prime" the case for the reader and indelibly impact the reader's reaction to the case.²²⁶ These kinds of legal writing strategies resemble Jenkins' evoked narrative approach to game design.

If we view effective legal advocacy as when legal authors are able to lead their audience down a straight path toward the conclusion that favors their client, then an enacted narrative, which has the player explore the game world, overcome obstacles, and solve puzzles to reach a destination,²²⁷ does not have a direct practical application in legal advocacy. However, in some instances, enacted narrative could be a useful approach. Here, let's consider a hypothetical criminal defense attorney, referred to earlier in this Article, who seeks to convince the jury that there are multiple plausible paths to explain a single outcome. Let us also suspend our current legal rules for a moment²²⁸ and imagine, during closing argument in a criminal case, that the court allows members of the jury to play a computer game presented by the defense. The object of the game might be to achieve the outcome linked to the crime. For instance, in a theft case, one might win the game by taking the item. The game could be won in several different ways by several different characters. One outcome might support the prosecution's theory, but others would support alternate theories, that someone else took the item or the defendant had permission to take the item. In this way, having a legal audience immerse themselves in the story and explore different paths and outcomes could support the argument that there is reasonable doubt as to the prosecution's theory.

²²⁵ MICHAEL D. MURRAY & CHRISTY H. DESANCTIS, *ADVANCED LEGAL WRITING AND ORAL ADVOCACY: TRIALS, APPEALS, AND MOOT COURT* (2009) ("‘Coming into contact’ with something does not paint much of a mental picture; ‘smashing into it,’ however, paints a picture with sound effects."); RICHARD K. NEUMANN, JR. & SHEILA SIMON, *LEGAL WRITING 203* (2008) ("Word choice is critical. The right words help the judge see the image."); See KRISTEN KONRAD ROBBINS-TISCIONE, *RHETORIC FOR LEGAL WRITERS* 190 (West 2009) ("Make effective word choices that suggest the image you want to project [in order to generate pathos in your reader].").

²²⁶ Kathryn Stanchi, *The Power of Priming in Legal Advocacy: Using the Science of First Impressions to Persuade the Reader*, 89 OR. L. REV. 305, 310 (2010).

²²⁷ Jenkins, *supra* note 9, at 124-25; see also *supra* text accompanying notes 81-84.

²²⁸ Attorneys are able to augment their closing argument by playing recordings and displaying visual media as long as those items have been previously admitted into evidence. See e.g., *supra* note 15. Our evidentiary rules do not currently countenance a situation where a game could be used solely for argumentative purposes.

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Moreover, as explained above, the exploratory features of enacted narrative are also analogous to how attorneys should approach the fact gathering, legal research, and brainstorming necessary to engage in legal forecasting. At certain points in legal analysis, lawyers should embrace non-linear approaches to thinking and explore the information world in full to locate the best solution to the legal problem.

Emergent narrative, where the player directs their own narratives within the game using a given set of characters,²²⁹ is similar to the way in which lawyers present a case through witnesses at trial. In a game like *The Sims*, the player directs the action by having the game's characters interact and act in a certain way.²³⁰ However, the game designer imbues the characters with traits such that they do not always submit to a player's control.²³¹ In this way, the game is unpredictable. This will sound familiar to any lawyer who has ever been surprised by what a witness has said on the stand. We want our witnesses to play a certain role within the story we are presenting at trial, but ultimately what the witness says is not entirely within our control. Thinking about trial presentations as emergent narratives is one way to visualize the consequences for our trial story choices.

The digital narrative technique with the strongest nexus to legal communication is the embedded narrative structure. As explained earlier, this structure contains two related narratives—the plot or *suyzhet*, which consists of the underlying immutable facts of what happened, and the story or *fabula*, which is the player's interaction with those facts to uncover the full chronology.²³² In legal analysis, we might think of the plot as the undisputed facts and binding legal rules. The story would then be the interactive part of the analysis. What do the facts mean? How should the rules be applied? What policy considerations should apply to interpret this information? Thus, the story or *fabula* is where legal authors have the agency to craft independent meanings out of fairly immutable information.

To illustrate this concept, let's take a hypothetical that involves the appropriate remedy for breach of a real estate contract. Assume that plaintiff, a real estate developer, and defendant, an elderly and infirm homeowner, enter into a contract for the sale of defendant's home at its appraised value. One month

²²⁹ Jenkins, *supra* note 9, at 128-29; *see also supra* notes 85-88 and accompanying text.

²³⁰ Jenkins, *supra* note 9, at 128-29; *see also supra* note 88 and accompanying text.

²³¹ *Id.*

²³² Jenkins, *supra* note 9, at 126-128; *see also supra* notes 89-95 and accompanying text.

after the parties sign the contract, defendant's home appreciates considerably, due to a planned commercial development in the neighborhood. Defendant reneges on the contract with plaintiff. Let's also assume that it is undisputed that the contract is valid and enforceable and that defendant breached the contract.

For this hypothetical, the plot or *suyzhet* is that, as a matter of law, a valid and enforceable contract has been breached. The story or *fabula* then turns on what these facts mean. What is the appropriate remedy for defendant's breach of contract? Plaintiff will argue the well-settled law that the appropriate remedy in a real estate contract is specific performance.²³³ Defendant will rely on policy and equity to argue that specific performance is not the appropriate remedy because it would not be fair²³⁴ and that contract damages, measured at the time she entered into the contract, would be the best remedy.²³⁵ This simple contract remedy dispute illustrates how competing legal theories function as the story within the story in an embedded narrative, presenting two alternate outcomes.

One final parallel between digital narrative and the law has to do with the procedural rules that constrain all computer games. We have already discussed how procedural rhetoric, by its very nature, limits the game world and the range of choices available to the player.²³⁶ In a game, a player cannot make a choice unless the game designer has pre-programmed that choice into a game. For instance, at the beginning of a classic scroll game such as Super Mario Brothers, the player cannot choose to move backwards. He or she can only move forward. This limiting aspect of game design is similar to how formal legal rules sometimes limit what lawyers can do in a judicial setting. There are some choices closed off to us when we construct a legal story. For instance, if a fact derives from hearsay or is improper character evidence, a lawyer cannot refer to it in her argument. The way we work within these rules to achieve positive outcomes for our clients represents the interactive role we play in the system every day.

Because law and technology issues so often involve theoretical predictions that are difficult to place in a practical

²³³ See, e.g., RESTATEMENT (FIRST) OF CONTRACTS § 360 (1932) (stating that damages are generally considered an inadequate remedy for the breach of a promise to sell land and, accordingly, specific performance is usually the appropriate remedy).

²³⁴ See, e.g., RESTATEMENT (SECOND) OF CONTRACTS § 364(1) (1981) (stating that specific performance will be refused if the relief would be unfair).

²³⁵ See, e.g., *Quigley v. Jones*, 334 S.E.2d 664, 665 (Ga. 1985) ("It has long been the rule that the measure of damages for breach of a contract to sell land is the difference between the contract price and the fair market value of the land at the time of the breach.").

²³⁶ See *supra* notes 188-190.

setting, let us consider an example of how a computer game might be used in a trial setting. This example will focus on a topic that has received a great amount of recent attention—the unreliability of eyewitness identifications. In order to admit an illustrative computer game on a topic like this, two threshold requirements must be met. First, the court must allow expert testimony on the social-science principles that explain why eyewitness identifications are not always reliable. And second, the game itself must meet the evidentiary standards to qualify as a demonstrative aid for the jury.

Some background information on the topic of eyewitness testimony will help explain the foundational arguments for why a computer game could be admitted on the issue. The fallibility of eyewitness testimony raises deep concerns about wrongful convictions and the possibility of wrongful executions.²³⁷ The clear trend from courts is to allow experts to testify, on a case-by-case basis, to explain the psychological factors that can negatively impact the accuracy of eyewitness testimony.²³⁸ However, a number of other courts refuse to permit this kind of expert testimony, on the grounds that it invades the province of the jury.²³⁹

If a court were to allow an expert to testify on the reliability of eyewitness testimony, he or she would likely explain that over many years, research has consistently found that mistaken identifications are the leading cause of wrongful convictions.²⁴⁰ For instance, the most expansive study on identifications in police lineups concluded that there is a 24% rate of error on identifications.²⁴¹ Eyewitness expert Steven Penrod then took the data from this study, linked it to other assumptions, and concluded that 14% of the time, witnesses mistakenly identified an innocent person as the perpetrator.²⁴²

An eyewitness expert would also explain the accepted bio-psycho-social factors that affect a witness's perception and

²³⁷ See generally Kenneth Jost, *Eyewitness Testimony*, 21 CQ RESEARCHER 854 (October 2011); Laura Wexler, *Eyewitness Testimony Often Lies*, CNN (Sept. 21, 2011, 5:25AM), <http://www.cnn.com/2011/09/20/opinion/wexler-witness-memory-davis/index.html>.

²³⁸ See Jost, *supra* note 237 at 860-61.

²³⁹ 31A AM. JUR. 2D *Expert and Opinion Evidence* § 337 (2011).

²⁴⁰ Henry F. Fradella, *Why Judges Should Admit Expert Testimony on the Unreliability of Eyewitness Testimony*, 2006 FED. CTS. L. REV. 3, 4.

²⁴¹ Steven Penrod, *Eyewitness Identification Evidence: How Well Are Witnesses and Police Performing?*, 18 CRIM. JUST. 36, 38 (2003). Although disturbing, some of these errors did not raise issues of identifying innocent suspects because witnesses identified so-called foils, persons known to law enforcement to be innocent. *Id.* at 41.

²⁴² *Id.* at 44.

memory, as this information is not within the common knowledge of the average juror.²⁴³ This research holds that the following psychological factors can diminish the accuracy and reliability of a witness's testimony:

- the retention interval (the lapse of time in between the event and the witness's recall of the event);
- the assimilation factor (the tendency of witnesses to incorporate external information into their memory of an event);
- confidence bias (the tendency of a witness to display an unwarranted confidence in their recollections);
- the stress and/or violence of the situation (the stress of the situation decreases a witness's accuracy); and
- cross-racial aspects of the identification (witnesses are less accurate in identifying persons of a different race).²⁴⁴

If a court allows expert testimony on the issue of the reliability of eyewitness identifications, then an argument can be made that an interactive game might help a jury understand the fallible nature of eyewitness testimony. What would such a game look like? An eyewitness testimony game might begin with the scene of the crime appearing with crystal clarity. Then, as factors are introduced—for instance, a retention interval of several months and a stressful and violent situation—the scene becomes more and more blurred. The resulting blurred screen would make it difficult for the player to win the game by correctly identifying the perpetrator in a line-up. The game designer might also program the game so that the player is never correct more than 76% of the time, which would align with the scientific research on rates of correct identifications.²⁴⁵ Finally, this game might also include a confidence indicator at the top left-hand corner of the screen. No matter how poorly the player is doing with respect to making correct choices, the confidence indicator is always at a high level,

²⁴³ See Fradella, *supra* note 240, at 23.

²⁴⁴ See *supra* note 239; see also Elizabeth Loftus, *The Eyewitness: How Unreliable Can You Get?*, 3 STUDENT LAWYER 38, 38-40, 51 (1974) (summarizing assimilation factor studies where witnesses exposed to subtly suggestive questions incorporated incorrect external information into their recollections of an event); Brooke W. Patterson, *The Tyranny of the Eyewitness*, 28 LAW & PSYCHOL. REV. 195 (2003) (explaining the retention interval, assimilation factor, and confidence biases).

²⁴⁵ See Penrod, *supra* note 241, at 38-41.

indicating that a witness's confidence in her identification does not always correlate with the correct answers.²⁴⁶

To move this game into evidence, we would have to draw an analogy to current evidentiary standards for admitting computer animations into evidence as demonstrative aids that help explain expert testimony.²⁴⁷ These evidentiary standards hold that the game would have to be authenticated under Federal Rules of Evidence 901 (establish that the matter in question is what its proponent claims).²⁴⁸ It would then have to meet the general relevance standards under Federal Rules of Evidence 401 and 402.²⁴⁹ Finally, the game would have to meet the fairness standard of Federal Rule of Evidence 403.²⁵⁰ The Rule 403 analysis would generally focus on whether or not the game represents a fair and accurate depiction of the testimony it seeks to illustrate.²⁵¹

One argument against admitting our eyewitness testimony game into evidence is that it contains an advocacy slant. However, admissible computer animations that illustrate a theory presented by one side's expert witness are by their very nature persuasive. For instance, in *Serge v. Commonwealth* and *State v. Stewart*, both of the admitted animations showed the defendant shooting a gun, the path of the bullet, and the victim.²⁵² These animations illustrated one side's theory "of how an event occurred, even

²⁴⁶ See Patterson, *supra* note 244, at 197-98, 200-01 (explaining how a self-confidence bias can cause a witness to erroneously inflate their testimony's accuracy).

²⁴⁷ See *supra* note 16 and accompanying text.

²⁴⁸ See Marks, *supra* note 16, at 26.

²⁴⁹ See *id.*

²⁵⁰ *Id.*

²⁵¹ See Leonetti & Bailenson, *supra* note 17, at 1084. Because our game would be proffered as demonstrative, rather than substantive evidence, it would not be subject to the heightened *Daubert* evidentiary standard, which asks if the game is based on reliable scientific principles. Steven A. Breaux, *Forensic Animation: Admissibility and Applications*, 31 THE BRIEF 26, 28 (2002). In a simulation, data is entered into a computer, which then relies on the scientific principles embedded in its programming to recreate an event. See Godden, *supra* note 16, at 357. But the underlying expert testimony would, of course, have to meet the *Daubert* threshold. Although the example in this Article is centered on the possible use of a game as demonstrative evidence, it would not be difficult to envision a game being offered as a simulation, with a narrative game structure imposed on it, that would re-create a specific eyewitness identification process, with a likelihood that the player would "lose" the game by making a misidentification.

²⁵² See Godden, *supra* note 16, at 370-71 (analyzing *State v. Stewart*, 643 N.W.2d 281 (Minn. 2002)); Smart, *supra* note 16, at 390 (analyzing *Commonwealth v. Serge*, 896 A.2d 1170 (Pa. 2006)). In *Stewart*, the animation depicted the gun pointing toward the victim, the shot, and a red beam indicating the path of the bullet into the victim. In *Serge*, the animation showed the defendant shooting his wife in the lower back and then through her heart as she knelt on the floor. 896 A.2d at 1175.

though the circumstances of those events are some of the very things being disputed.”²⁵³ To resolve the potential for prejudice with these types of animations, jurors are instructed to consider demonstrative evidence for illustrative purposes only and not as probative evidence.²⁵⁴ If we apply this approach to a computer game, the argument is that the game’s persuasive frame should not, in and of itself, be a reason to exclude it. This hypothetical example shows that while evidentiary hurdles exist for using computer games in a trial setting, these obstacles may not be insurmountable.

CONCLUSION

Where do we go from here? What is the likely role that computer games will play in our legal system in the future? We are already at the point where computer generated animations are routinely used for demonstrative purposes at trial²⁵⁵ and we already have computer games that persuade on legal policy issues.²⁵⁶ We may not be too far from a time when jurors are invited to play a computer game that demonstrates the logic of one side’s case theory. But let us not go too far and predict large-scale shifts in how we create legal meaning. After all, with respect to technology, the law moves at a snail’s pace. My modest prediction is that we will continue to see persuasive computer games make systemic arguments about legal policy. However, given the difficulty in using procedural rhetoric to argue small-scale issues,²⁵⁷ it is unlikely that computer games will be used much to advocate in individual cases. Nevertheless, a persuasive computer game employed in a persuasive capacity to illustrate expert testimony encompassing complex factors, such as the theory that eyewitness testimony often lacks reliability, may be admissible.²⁵⁸

The value of digital narrative and procedural rhetoric lies mostly in understanding their power to engage. Culturally, computer games have trained us to imagine stories unfolding through a variety of perspectives and trajectories. And in many ways, digital narrative and procedural rhetoric track the way effective lawyers approach narrative and advocacy. Appreciating how these new narratives and arguments work will foster more

²⁵³ Breaux, *supra* note 251, at 28 (citing *Hinkle v. Clarksburg*, 81 F.3d 416, 425 (4th Cir. 1996)).

²⁵⁴ *Id.*

²⁵⁵ See *supra* note 200.

²⁵⁶ See *supra* notes 169-189 and accompanying text.

²⁵⁷ See *supra* text accompanying note 198.

²⁵⁸ See *supra* notes 237-254 and accompanying text.

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