

OPENING DOORS TO INTERACTIVE PLAY SPACES: FRAGMENTING STORY STRUCTURE INTO GAMES

Lori M. Shyba

Department of New Media, University of Lethbridge
& Digital Media Laboratory, University of Calgary
Alberta, Canada

1 403 669-6537

lori.shyba @ ucalgary.ca

J. R. Parker

Digital Media Laboratory,
Department of Computer Science
University of Calgary, Alberta, Canada

1 403 220-6784

jparker @ ucalgary.ca

ABSTRACT

By definition, postmodernism and its “fragmentation of time into a series of perpetual presents” provides opportunities for the modular and fragmented story structure of postmodern theatre and cinema to be reinvented as non-linear games and interactive play spaces. This potential is magnified when the theatre art and cinema are hybridized into “Integrated Performance Media,” (IPM) — a computer-mediated theatre-art form that effectively enables the transformation of audience members into gameplayers with the power to affect changes in the story narrative. In this paper, we specifically describe how the fragmentary and temporally non-linear story construction of the *Spies in the Oilpatch* IPM script opens doors of opportunity for audience/players to participate in the spatial exploration of interactive play spaces, notably computer games and virtual reality environments.

CATEGORIES AND SUBJECT DESCRIPTORS

J5. Arts and Humanities. Performing Arts.

GENERAL TERMS

Performance, Design, Experimentation, Human Factors, Verification.

KEYWORDS

Art, Performance, Games, Computer-Mediated Theatre Art, Integrated Performance Media, Postmodernism, Postmodern, Spatial Environments, Interactive Play Spaces, Plot Nodules, Interaction, Storytelling, Serious Games, Interactive Storytelling.

1. INTRODUCTION

Following is an excerpt from Scene Six of Spies in the Oilpatch between protagonist Terra Incognita, and “fossil fools” Larry, the security scout and Big Becky, the camp cook. The location is an oil rig in Northern B.C., Canada where a massive console of electronic eavesdropping equipment, including a massive monitor, visually graphs audio signals as they come through the surveillance wires. There is also a projection on the back scrim that shows the silhouette of a drilling rig in action. There is a low, dull thud that runs throughout this scene representing the activity of the drill bit pounding into the earth.

Terra: ... Okay, you earned it. Here’s the disk of computer games I’ve been working on. Knock yourselves out.
(*Terra puts on her hard hat and leaves the shack.*)

Larry: See ya later. (*To Big Becky*) Feel like tryin’ out her games?

Big Becky: Sure. Yeah, here. (*Big Becky hands him the disk case.*) I got time to kill. What’s on the menu?

Larry: (*Reads the case.*) Look, here’s one called Spies in the Oilpatch, hmmm, it says “Navigate the world, discover alternative fuels, save the earth.” We could be arrested for this. (*Laughs*) “Role playing game, play online” ... sounds like a time shark to me. Here’s another one. Sim Drilling Lease. Says. “Buy land. Drill. Gain subsoil power and points. Hire terrorist commune wackos to blow up the competition.”

Big Becky: (*Laughs. Takes the case back.*) Here. I like this one! “The Pipeline Pinball Energy Thrill Game.” Says “Oozing bitumen oil sands exploitation game with many features such as lightning-fast pressurized fluids.”

Larry: Price per barrel point rewards? Cool. Constraints?

Larry: Environmental and aboriginal. Hey. Level Two sounds good. Listen ... “Mid ’70s. OPEC newly created. Oil quadruples in price.” Sounds fun. Hmmm? Test drive?

Big Becky: Nah. Ancient history. What’s the next level up?

Larry: Level Three. “2006 Energy Crisis.” Okay, Let’s see if Terra knows what she’s doing. Boot it up.

The monitor blazes into pinball action. The interface is a map of Western Canada with pipelines criss-crossing vertically and horizontally representing pinball entry chutes. Brightly lit bumpers buzz at sites of hydrocarbon pay dirt and exert pressure to the flow of racing fluids. Flippers attempt to keep the energy fuel in Canada.

Spies in the Oilpatch is a theatrical event where the action takes place in a virtual “screen space,” in the form of cinema and projections, juxtaposed with live performance in a “real space” — a form referred to in this research as Integrated Performance Media (IPM). *Spies in the Oilpatch* is a hero-tale about Terra Incognita, a vivacious alternative energy entrepreneur who steals half-baked alternative energy secrets from fossil fuel oilpatch conformity enforcers in order to save the world. They conspire to kill her so she kills them first. Her guilt-ridden soul is tormented by the burden of their brutal assassinations so she confesses to her beauticians, and is dealt a series of public retributions from global courts. The script delivers a humourously subversive message that as individuals, and as a society, we can’t afford to ignore alternative energy development while we exploit existing world hydrocarbon resources, such as the Alberta oil sands, to their inevitable depletion. Among the larger research goals of *Spies* is to experiment with ways that theatre art and games can activate a clearer understanding of important social, economic, and cultural matters; specifically, this work concerns our world’s energy resources, the economics of energy consumption and politics of production.

Even though it follows classical Aristotelian storytelling principles, the *Spies in the Oilpatch* IPM is as much an audience interactive theme park as it is a theatrical play — a place where the audience gets to play too. In this paper, we will describe how the modular, fragmentary and temporally non-linear story construction of *Spies in the Oilpatch* opens doors of opportunity to the spatial exploration of interactive play spaces, notably computer games and virtual reality gameplay scenarios.

In what ways is the *Spies* IPM script fragmented and modular and how does the chopping up of this story structure suggest the possibility of interactive play spaces? What kind of play spaces emerge from this creative process and how might they amplify our concerns about our world’s energy resources to an audience who are active player/participants? Further to this, how does introducing a serious global issue through the medium of entertainment and games give power to the dissemination of our concerns about our world’s energy resources to an audience who are active player participants.

2. INTERACTIVE PLAY SPACES, SPATIAL ENVIRONMENTS, AND IPM

Before interrogating these questions, it’s important to make a connection between “Interactive Play Spaces,” “Spatial Environments” and “Integrated Performance Media.”

In his paper “Games Design and Narrative Architecture,” MIT scholar Henry Jenkins describes an electronic spatial environment as the place “where the [game] players’ quest will take place ...” and as “spaces ripe with story narrative possibility.” [12] This aptly describes the *Spies* scenographic IPM environment before the scripted story narrative gets embedded — the multi-modal physical, aural, and visual texts, of screens, projections, sound design, and set/property assets, including the characters, where the “story narrative” is only implied. It also aptly describes an Interactive Play Space.

Integrated Performance Media, as we define it, is a computer-mediated, hybrid art form that combines live theatre, complete with story narrative, and screen-delivered imaging and sound design along with audience interaction — another way, really, of describing a Spatial

Environment or Interactive Play Space with the added feature of a complete story narrative. In theory, therefore, *Spies in the Oilpatch*, as an Integrated Performance Media event, is a fully envisioned series of audio-tactile, kinaesthetically experienced spatial environments, not only ripe with story narrative possibilities, but infused with an escalating story line populated with characters who struggle along the journey written by an “author.” Remove this author-initiated narrative causality, in other words the “story,” and one ends up with, as Henry Jenkins suggests, a place “where a player’s quest can take place” — in fact an interactive play space complete with a cast of characters who may function as guides or narrators.

There are also significant intellectual connections between the concept of Interactive Play Spaces and that of Alternate Reality Games which game designer Jane McGonigal describes of as being “SuperGaming ... clusters of massively scaled [game-networks] that are both ludic and public.” [17, 18]

3. SPIES AS A SPAWN OF THE POST-MODERN CONDITION

The central premise of postmodernism, as articulated by Jean-François Lyotard, is that rather than being a historical era, it is a cultural “condition” where an interconnectedness of politics, economics, cultural change, and media representation transforms and fragments the way we experience our world. Further to that, Fredric Jameson, in his famous essay “Postmodernism and Consumer Society” built on this idea of representational transformation to articulate the “fragmentation of time into a series of perpetual presents,” [11] — a strategy that provides plentiful opportunities for the fragmented story structure of postmodern theatre and cinema to be reinvented as non-linear games and interactive play spaces.

Canadian theatre and cinema artists are famously adept at the post-modern structural storytelling practice of subverted order and this is exemplified in the theatre world by Sharon Pollock with her work *Doc* [25], and Robert Lepage with *Polygraphe* [13]; and in cinema by David Cronenberg with *eXistenZ*, [4] and Atom Egoyan with *The Sweet Hereafter* [5] — all brilliant dramatic works that are fragmented into elliptical, non-linear structures but still provide the viewer with complete story experiences. In these works, the audience/viewer gets placed in the unique position of being able to assemble a story meaning from a cut-and-paste timeline of non-sequential action events; a discontinuous temporality that somehow seems to get at greater truths. If re-ordered by a more traditional storyteller into a linear timeline, the sum total of these events might not prove to be as challenging, thought provoking, or personally resonant to individual viewers.

Like these other Canadian dramatic narratives, *Spies in the Oilpatch* IPM script advances a timeline of non-sequential perpetual presents that provide a complete, although challenging, story experience through discontinuous temporality. In a similar vein, *Spies* also juxtaposes the perpetually discontinuous present of the performance-delivered “live space” against memories of the past and dreams of the future as surveyed through its concurrently evolving virtual “screen space.”

In a peripheral vein, use of comedy and parody, techniques poststructuralists might refer to as “Brechtian alienation” and “pastiche,” also exemplify other *Spies* characteristics of irony, challenge to official seriousness, and subversion of earnestness.

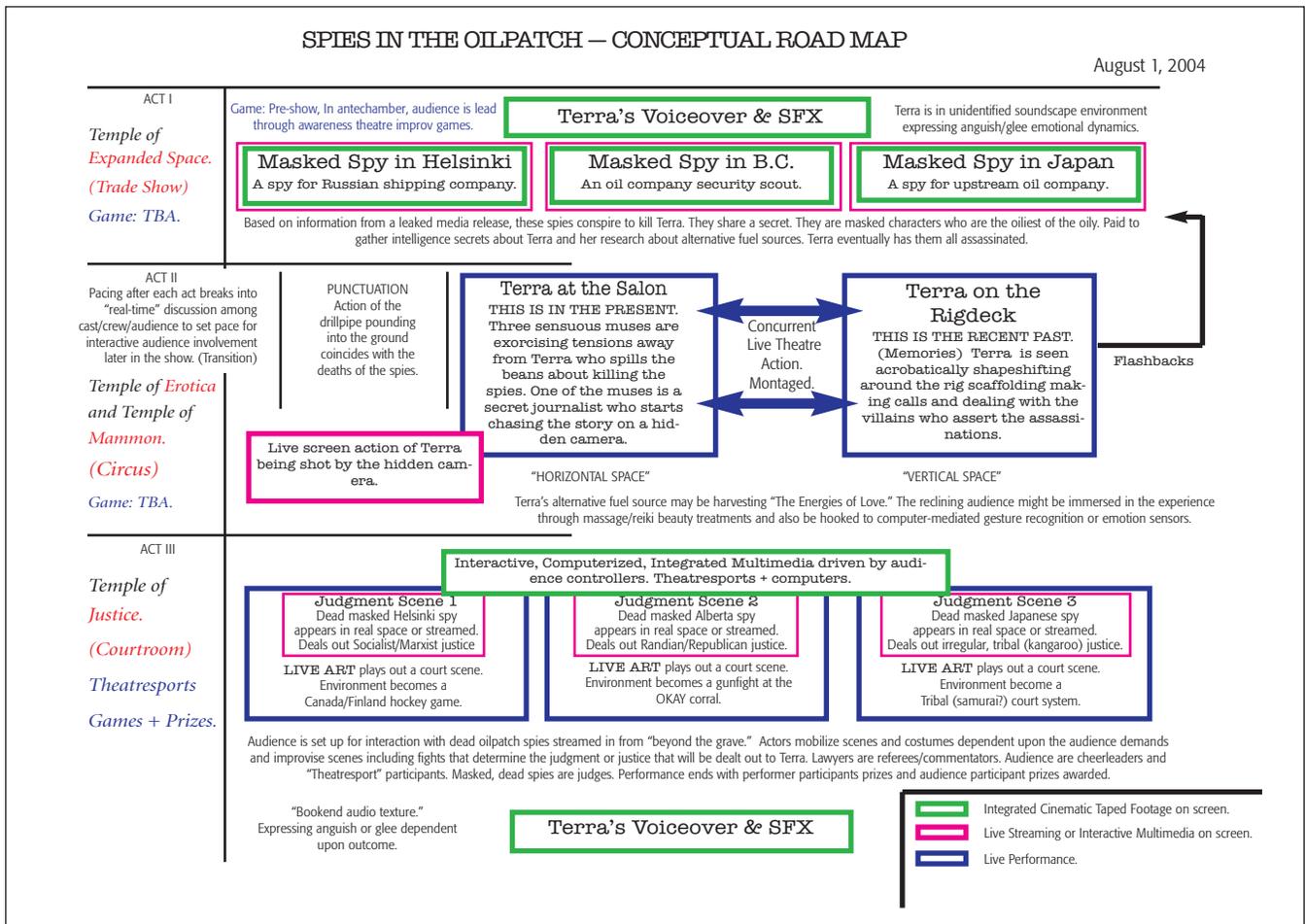


Figure 1: Preliminary *Spies in the Oilpatch* Conceptual Road Map. Created in association with Maureen Thomas at Crucible Studies, Media Laboratory, University of Art and Design, Helsinki, Finland.

4. THE SCHEMATIC DRAWINGS

How does chopping up the story narrative structure into modular units of perpetual presents open doors to narrative interactions in spatial environments? The easiest way to describe the resultant story possibilities of *Spies* as interactive play spaces is in the form of three diagrams; Figure 1 being the "Conceptual Road Map," and Figure 2 being a diagram of "Escalating Action." Figure 3, the rough concept sketch of the Pinball Pipeline Energy Thrill Game, is a resultant creative asset that resulted from the chopping up of Scene Six as seen in the introduction of this paper.

4.1 The Conceptual Road map, Figure 1

Even though this conceptual Road map of *Spies* is an early iteration of the story narrative structure of the IPM script, it effectively demonstrates formative creative thinking that produced modular story constructions that get stacked up or navigated through by audience/players in non-linear variations. This formative creative thinking appears similar to the process Michael Mateus and Andrew Stern used in building the interactive drama *Façade*, where the explicit goal was "to explore new ways to deconstruct the potential events of a dramatic narrative into small grained-size

pieces, annotated to allow the system to dynamically mix and sequence the pieces in response to player interaction." [16]

As seen in Figure 1, there are three scenes in both acts one and three of *Spies* that can be played in any order or played only one at a time in specific shows, for example at a lunchtime performance where time constraints prevent the performance of all three scenes. If the audience/player was to return to the performance another time, another set of possibilities may occur, dependent perhaps on the availability of participating internationally streamed performers, audience players' encrypted game choices, or other factors.

This navigation map was conceptualized in collaboration with Maureen Thomas at the University of Art and Design in Helsinki, Finland [29]. It draws heavily on Thomas' theories of meaningful relationships between real space and screen space as well as her insights, informed by the work of Joseph Campbell, about globally expanded spaces expressed as mythological temples [28].

As an incremental iteration, this conceptual Road Map was influential as a baseline of activity for the more fully developed Schematic Graph (Figure 2) and the subsequent *Spies in the Oilpatch* IPM script. This early version of *Spies* IPM was closer to a visual arts-

SPIES IN THE OILPATCH – ESCALATING ACTION SCHEMATIC

March 2005

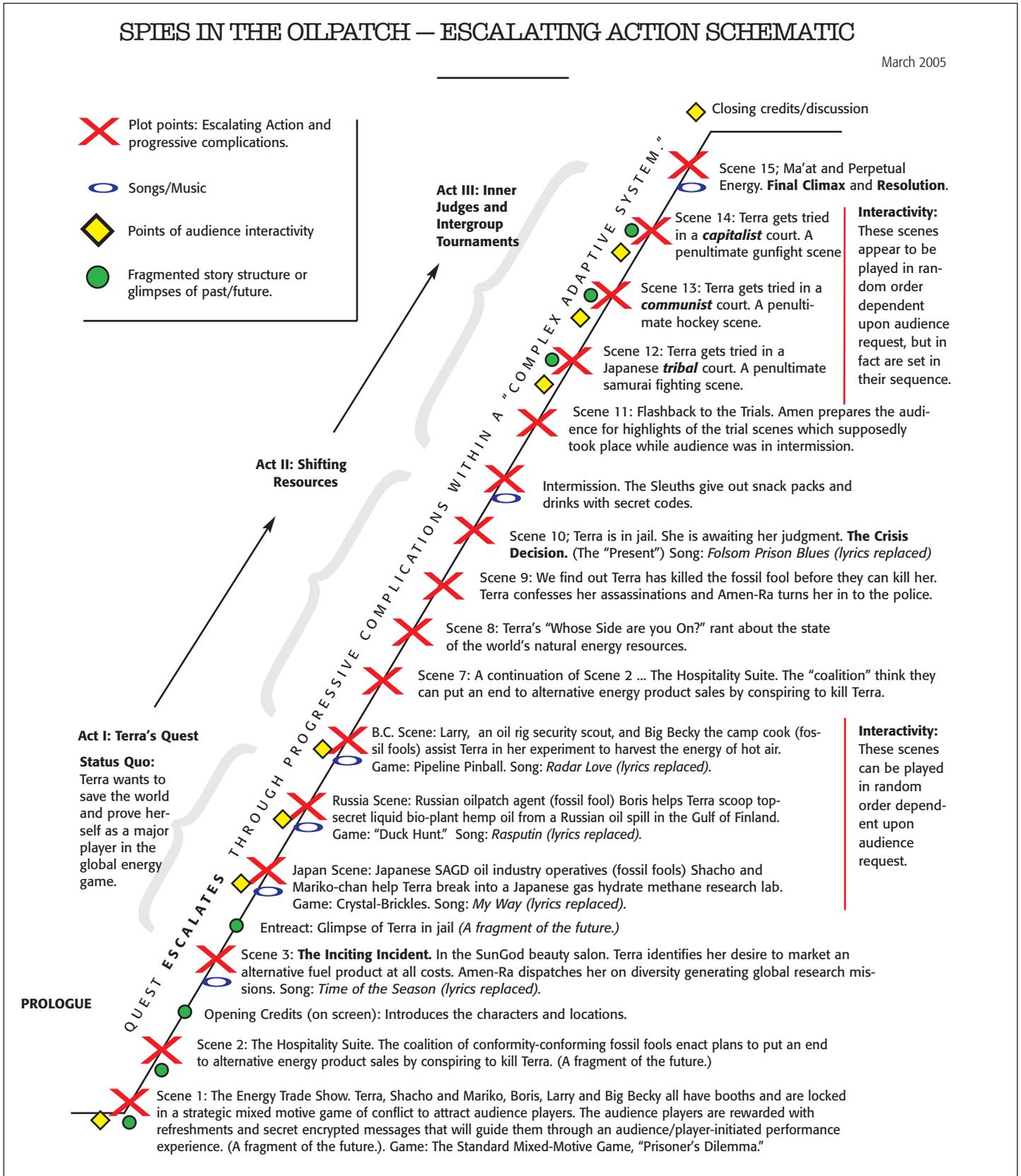


Figure 2: Spies in the Oilpatch Escalating Action Schematic; created under the mentorship of playwright Clem Martini, using Robert McKee's principles of story structure.

aligned installation or “toy,” than with theatre arts-aligned temporal experience or “game.” However, it serves as a spontaneous, first-iteration model of what *Spies* might look like again when the modules are chopped up into games; the bonus being that each module, after the exercise of script writing and other development associated with Figure 2, has been imbued with much richer story narrative and game potential.

4.2 Graph of Escalating Action, Figure 2

This chart came about primarily through collaboration with playwright Clem Martini and a thorough implementation of Robert McKee’s principles of story structure [20]. As seen in this chart the *Spies* IPM story characters progress through a three-act escalation of action utilizing McKee’s recommended benchmarks of an inciting incident, a series of progressive complications, a crisis decision, a climax, and a resolution, albeit in discontinuous, non-sequential order. Despite its denotation as an “IPM Event,” or “theme park” rather than a “play” or a “film,” and its instances of audience-player interaction, the *Spies* script follows the storytelling advice of McKee that culminates in a complete and ultimately satisfying hero-tale of courage and adventure.

As already mentioned, a long-term research intention is to use IPM and play spaces as aesthetic tools to better understand our world’s natural resources through interactive participation and it is a continuing goal to keep many of the individual scenes in *Spies* independent and self-contained units. The chart is explicitly marked up with symbols of the creative process including big Xs at points of major plot turning points, ovals at songs, brackets to denote beginnings and endings of acts, diamonds at places of audience interaction, and small circles where time gets sequentially disrupted. Each of these symbols indicate places where the script might be deconstructed, pulled apart, expanded, segmented, lifted out, sliced and diced, or in other ways transformed through fragmentation.

5. WHAT KIND OF PLAY SPACE/SPATIAL ENVIRONMENTS HAVE EMERGED?

As seen in the diagrams, doors to *Spies* interactive play spaces can be opened in many ways. The IPM script, an interactive engagement in itself because of its audience/player participation, is also a reliable starting point for exploration of distinct interactive play spaces. Among the criterion for these interactive play spaces are that they:

- Have the possibility of a self-contained “story” in them — a player-initiated narrative that builds to a climax in the form of a game.
- Allow a player to put their own “stamp” on the experience [2].
- Provide a dynamic symmetry of experience between audience/players and the “author”; imparting a cyclical process of intertextual hermeneutic interpretation for both [29].
- Embed a serious message of depletion/replacement of our world’s natural energy resources – a support structure for eco-activism.
- Provide a model for qualitative research data collection, verification, and validation through discussion and interpretive discourse.

5.1 Opening Door Number One: A Role-Playing Computer Game (RPG)

Figure 2, the Schematic of Escalating Action, relates to this gameplay variation.

This is the most direct game interpretation of the *Spies* IPM where a player, on either a computer or a video-game setup, proceeds through a computerized revision of each scene of the *Spies* IPM script much the same way the IPM audience/players experience the story — in a primarily linear fashion with occasional gameplay options. As is the usual case with the RPG game genre, the player identifies with a character avatar who undergoes a journey or quest to retrieve desired objects, builds experience points, slays enemies, and advances through the levels. This game behind the RPG door most closely resembles the complete author-initiated narrative intentions of the IPM script as written where there is a beginning that escalates to a middle that escalates to an ending that signals the successful victory condition.

In many ways, Adventure or Role-Playing Games follow a reliable dramatic path and this genre of computer/video game most closely resembles the narrative causality of risks related to objectives, progressive complications and turning points, and dramatic arch of a well-made play or film script. Even though there are alternative routes available to reach milestones along the story’s path, the leveling up process is much the same as the general pattern of progress in place for the characters of the *Spies* IPM script — set a goal, encounter the dangers/risks, procure the objects of desire, slay the enemy, and proceed to the next level. This variation of the interactive play space does not need additional story assets as it represents the script pretty much as-is.

The benefits of this RPG game is it ramps up through the general dramatic arch of the IPM story narrative, even though the player might ascend through the various levels of rising action in different order. The constraints of the development and implementation of a *Spies* RPG game is the difficulty of programming and graphics development, even if using an existing game engine. Major RPGs that have been successful entertainment properties include Cyan World’s *Myst* [22] Square Enix’s *Final Fantasy* [7] series, and Lionhead Studio’s *Fable* [6].

5.2 Opening Door Number Two: Gameplays in Virtual Reality

Fragmentation of the linear IPM story plot into gameplay scenarios occurs at locations of the X’s in Figure 2.

The *Spies* IPM script functions as an incubator of gameplay scenarios that can be thought of as interconnected sequences of “plot nodules.” Install these gameplays into a virtual reality (VR) facility, and the individual plot nodules containing character, sound, set/property, as well as narrative assets, weave together to create an environment in which audience/players can put their own “stamp” on the experience. [26]

The plot nodule concept is a design paradigm, and should naturally be invisible to the audience/player. A nodule is a small portion of a narrative that, alone, is self consistent but is not a story in itself. It

has a set of assumed pre-conditions: the location in which the action takes place, the emotional state of the characters, the current goals of the characters, as examples. The story narrative is relayed as the specific sequence of nodules visited, and the pre-conditions are satisfied by the set of plot nodules that have been visited prior to entering the current one. By a cunning decomposition of the *Spies* IPM story into plot nodules, the various threads can be tied together into a single conclusion, or at least a small number of possibilities.

This gives the audience/player the perception that there are vastly more choices than there really are. While apparently giving the player free will, they are guided inexorably through a collection of predefined story lines based on a small set of choices that they make implicitly. The computer mediates this process seamlessly, and the player reaches one of the preordained conclusions to the story feeling that they had complete control of the situation, and that the consequences were logically based on their choices. This is like the design of a narrative for a computer game, which also has the property that the players feel that they have much more choice than they actually do. It also resembles the way film or stage actors subdivide scenes into turning point beat units, or interstices, to help them ascend through a journey of subtextual desires that give their character motivational believability within a set of authorial preconditions.

Scene Six, the example shown in the introduction of this paper might be deconstructed into a scenario of sequential plot nodules in the following way: a) a virtual, electronic version of *Terra Incognita* as game guide or narrator welcomes the audience/players and introduces the rules, b) Larry, the oilpatch security scout, and Big Becky, the camp cook, guide them through decisions about what games to play to kill time at the rig, c) a stereoscopic version of the “Pinball Pipeline Energy Thrill Game” (*Figure 3*) boots up, d) the audience/players navigate through the game which are comprised of non-linear sequences of plot nodules until they, e) reach one of the preordained conclusions to the story. In this way, they are guided to feel that they had complete control of the situation, and that the serious messages of depletion/replacement of our world’s natural energy resources were logically based on their own choices.

This virtual reality plot nodule variation is an exciting prospect for *Spies* as a gameplay space. A benefit is that when gameplay scenarios, complete with their designated stereoscopic games, are produced for a specific VR facility they can be bundled and sent around the world as a *Spies* International tour — new venues for a new form of performance game experience. VR experiments offering visual arts-aligned installation or “toys” are plentiful but those that interactively unravel stories in a time-based temporality or “game” are not as common. Examples of successful interactive VR gameplay productions over the years are Brenda Laurel and Rachel Strickland’s *Placeholder* at the Banff Centre, Canada [14]; and Mark Palmer’s *Alice in Wonderland* VR production at the University of Teeside, U.K. [23].

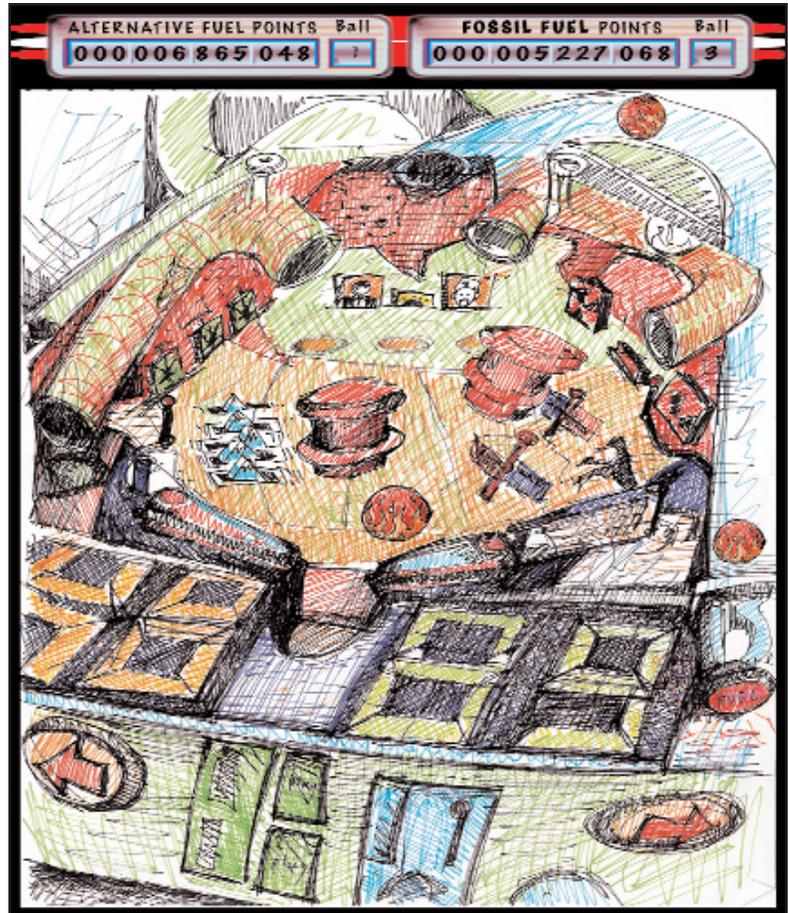


Figure 3: Rough concept draft of The Pipeline Pinball Energy Thrill Game. Illustration by Rich Theroux and Lori Shyba.

5.3 Opening Door Number Three: Stand-Alone Computer and Video Games

Several of the computer games that play out in the *Spies* IPM script scenes are being developed with the idea of augmenting the event with integrated electronic games for computer or video game dissemination. In the *Spies* IPM script these games occur at transition points between the scenes and, for that reason, are easily fragmented and lifted out of the dramatic action. Like the IPM event and the plot nodules, the stand-alone games also have potential to present valuable social commentary about energy issues that are facing our world today. Some of the choices that have already been written into the *Spies* IPM script to serve this purpose are:

- The “Pipeline Pinball Energy Thrill Game,” talked about by the Scene Six characters in the introduction of this paper. Figure 3 is a rough concept sketch that depicts the dynamics, if not the details, of the gameplay.
- A gas hydrate methane crystal game, modeled after a PacMan computer game meets Karaoke. The concept for this game is extracted from the action of Level Two, “The Japanese SAGD research lab.”
- A Global Positioning game, modeled after a Duck Shoot computer game. This game is extracted from the action of

Level Three, “The Russian Oil Tanker Spill.”

- A Simulated Drilling Lease game modeled after a Sim City or Sim Theme Park concept.

The idea behind all these computer games listed above, whether they appear in the IPM script as part of the story narrative or as a stand-alone computer-game implementation, is to deliver an entertaining message about alternative energy choices. This genre of games is known as “serious games.” They could take place as corporeal “body-operated” games, ie where the player would initiate gameplay through the use of giant ball-thrusting plungers or giant flipper buttons. They could also be deliverable on the web in a simple version as a flash animation, or in a complex MMORG (Massively multiple-player online games) – a venue particularly well-suited to the theme of the Drilling Lease Game, especially if taken to global proportions. Examples of existing web based serious games are *September 12* [8], *Tibet* [24], and *Madrid* [9].

5.4 Behind Bonus Doors: Other Possibilities

Another characteristic of the postmodern condition that inspires game ideas for *Spies in the Oilpatch* is what Marshall McLuhan calls an “electric dilation of the senses — an inherent phenomena of circa third millennial media and information systems that allow a quantum projection of the collective mind ... a global village ... a simultaneous happening” [19]. One spatial environment suggested by this characteristic of postmodernism is a theatre event enabled by global communications technology, for example a dynamic interaction between a “spy” character who is streamed into the virtual “screen space” from a globally distanced location, and a character/actor or audience/ player in the real performance space. Using a transmission system of advanced videoconference technology, a theatrical game scenario could be facilitated where the character/actors and audience/players in the “real space” interact with oilpatch spy characters who show up in virtual “screen space” from a globally distanced location — Finland, Russia, or Japan, according to the story. An interactive story narrative develops where character/actors and audience/players in one location interact with their counterparts in the other location developing, in effect, a technologically expanded global interactive theatre game. This performance game uses converging media technologies to allow the development of cross-cultural dialogue around socio/political and environmental issues that interconnect us on a global level. This global communications event might be suited as a sequence of plot nodule add-ons to a VR gameplay scenario.

An Alternate Reality Game (ARG), would also be a McLuhanesque “electric dilation” of the *Spies* IPM. As mentioned earlier in this paper, SuperGaming, or ARGs, are clusters of massively scaled game networks. [17, 18] *Wikipedia* further describes ARGs as “cross-media games that deliberately blur the line between the in-game and out-of-game experiences” [20]. In the case of a *Spies in the Oilpatch* ARG, “pods” of players would be dispatched to discover mysteries and glean secrets about world energy subcultures through a combination of web clues, chats and text messages, snailmail, live events, peer to peer internet, email, and so on. If enforced within an artistically metaphorical model of Howard Bloom’s complex adaptive system, as described in *Global Brain* [1], the *Spies* ARG gameplayers might emerge from the slumber of their alternative energy imaginings to activate fresh realities within a global village of simultaneous happenings.

6. CONCLUSION

Doors from postmodern story structure to interactive play spaces can be opened in many ways, as exemplified by the case study, *Spies in the Oilpatch*. These play spaces all have stories embedded in them, ready to be unleashed by audience/player initiatives, building from an inciting incident through a series of progressive complications toward a climax and then a resolution — all in the form of a game. They also provide a dynamic symmetry of experience between audience/players and the author, and allow audience/players to assert their own aesthetic value through interaction and participation; a process that creativity expert Margaret Boden calls putting their own stamp on a unique experience [2]. Janet Murray, renowned author of *Hamlet on the Holodeck*, calls this mode of aesthetic pleasure player agency.

From an perspective of social consciousness, we feel it’s important to develop stories and games that challenge social structures and assumptions; in this case a pressing issue on both a local and global scale — our world’s diminishing hydrocarbon resources. We feel that as arts practitioners, we can take technology and science into contexts that might not otherwise be visited. We’ll let Terra Incognita describe what we mean in a script excerpt from *Spies in the Oilpatch*:

Terra: (*Talking to the audience from under the hairdrier in Amen-Ra’s Temple of the SunGod salon*). It doesn’t take smarts to tell that we’re running out of oil and gas in this world. Look at China and India buying up everything they can. It’s like the 50s over there – booming like the Cleavers. There’s 1.5 billion people in China and everybody wants a car. Did you know Beijing alone is adding 30,000 cars to its streets every single month? ¹ Where’s that fuel going to come from? Or God, don’t mention the Yanks. America demands 25 percent of the world’s oil supply but only has two percent of the reserves. ²

It’s like Amen-Ra says (*in exaggerated Egyptian accent*) “Terra, we have a crisis on our hands. ³ We’re hydrocarbon addicts. Pretty soon you’ll be filling your tank and the attendant will say “That’ll be 500 bucks, madame. Global demand of hydrocarbons will jump 69 percent in the next twenty years to 142 million barrels a day!” ³

The screen, as if projecting Amen-Ra’s mind, types out in big letters “By 2025, 69% increase in demand

(*Back to her own voice*) 142 million barrels a day! Fuck! 69 percent! Bottom line? We have to find alternative fuels and we all know the much-hyped “Hydrogen” is more expensive than the natural gas that goes into making it. ⁴ Hydrogen is da bomb — and not in a good way. (*Makes the sound of a big explosion*). Sigh. I know I’m up to the big discovery.

— Lori Shyba, Scene 3, *Spies in the Oilpatch* [27]

By re-inventing the *Spies* IPM script as a series of interactive games, we aim to give power to the dissemination of our concerns about our world’s energy resources. Engaging our audience/players in interaction with the economics and politics of energy consumption and production will hopefully provide them with a purpose and commitment to take on roles that they will continue to play.

7. ACKNOWLEDGEMENTS

We would like to thank The University of Lethbridge, The University of Calgary, and the Alberta Foundation for the Arts for their support.

8. REFERENCES

- [1] Bloom, Howard. 2000. *Global Brain: The Evolution of Mass Mind from the Big Bang to the 21st Century*. New York: Wiley, 223.
- [2] Boden, Margaret. 2005 "Aesthetics as Value in Art." Keynote presentation at "Creativity and Cognition Conference," Goldsmith College, London, U.K. 13 April, 2005.
- [3] Campbell, Joseph. 1949. *The Hero with a Thousand Faces*. Cleveland: Meridian.
- [4] Cronenberg, David, dir. *eXistenz*. Miramax. 1999
- [5] Egoyan, Atom, dir. *The Sweet Hereafter*. Fine Line. 1997.
- [6] *Fable*. 2004. (video game) Lionhead Studios.
- [7] *Final Fantasy*. 1987. Square Enix.
- [8] Frasca, Gonzalo. *September 12* (online game), <http://www.newsgaming.com/games/index12.htm>
- [9] Frasca, Gonzalo. *Madrid* (online game), <http://www.newsgaming.com/games/madrid/>
- [10] Graham, Catherine. "Editorial" in *Canadian Theatre Review* Number 117, "Activist Theatre" 10 – 13. Winter, 2004.
- [11] Jameson, Fredric. 1988. "Postmodernism and Consumer Society." *Studies in Culture: An Introductory Reader*, ed. Ann Gray and Jim McGuigan. London: Arnold, 29.
- [12] Jenkins, Henry. "Game Design and Narrative Architecture." Accessed April 1, 2005. <http://web.mit.edu/21fms/www/faculty/henry3/games&narrative.html>
- [13] Lepage, Robert and Marie Brassard. 1993. "Polygraphe" Tran. Gyllian Raby. *CTR: Fifteen Plays from Canadian Theatre Review*. Ed. Alan Filewod. Toronto: Uof T.
- [14] Laurel, Brenda, and Rachel Strickland. 1995. "Placeholder" Virtual Reality Performance. Banff Centre, Canada.
- [15] Lyotard, Jean-François. 1979. *The Postmodern Condition* (1979) Manchester: Manchester University Press.
- [16] Mateas, Michael, and Andrew Stern. (2005) "Build It to Understand It: Ludology Meets Narratology in Game Design Space." DiGRA Conference, Vancouver, B.C., June 16 - 20, 2005.
- [17] McGonigal, Jane. "Experimental Gameplay: I Love Bees," Game Developer's Conference, San Francisco, March 7-11, 2005.
- [18] McGonigal, Jane. "SuperGaming! Distributed Design for Massively Collaboratively Play." DIGRA, Digital Games Research Association Conference, Vancouver, B.C., June, 2005.
- [19] McLuhan, Marshall. 1962. *The Gutenberg Galaxy: Post Typographic Man*. Toronto: U of T. 44.
- [20] McKee, Robert. 2000. *Story: Substance, Structure, Style, and the Principles of Screenwriting*. New York: Reganbooks.
- [21] Murray, Janet H. 1997. *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. New York: Free Press.
- [22] *Myst*. 1991. Cyan Worlds.
- [23] Palmer, Mark. "ALTERNE, Alternative Realities in Networked Environments" Gyre and Gimbal Experimentation. University of Teeside, U.K. Accessed on May 24, 2005. <http://www.alterne.info/node/46>.
- [24] Parker, J.R., Tibet (online game), <http://pages.cpsc.ucalgary.ca/~parker/new/Tibet/tibethome.html>
- [25] Pollock, Sharon. 1984. *Doc*. Revised 2003 ed. Calgary: Broadview.
- [26] Shepherd, Simon, and Mick Wallis. *Drama/Theatre/Performance*. 2004. London: Routledge.
- [27] Shyba, Lori M. 2005. *Spies in the Oilpatch*. IPM script. <http://www.sundialmedia.com>
- [28] Thomas, Maureen. 2004. "Framing surprise: Story space, patterns and performance." Poster Presentation. Media Centre Lume, University of Art and Design, Helsinki, Finland. 15 March, 2004.
- [29] Thomas, Maureen. 2004. "Logics, Grammars and Rhetorics" Production Development Workshop. Media Centre Lume, University of Art and Design, Helsinki, Finland. March, 2004.
- [30] Wikipedia: Online Encyclopedia. <http://www.wikipedia.org>. Accessed on June 25, 2005.

Endnotes

- 1 "Rise of an energy colossus," Article by David Kilgour and Shingirai Kanhukamwe. *National Post*, June 15, 2005.
- 2 U.S Energy Department statistics cited in the *National Post*, March 22, 2005 in an article by Joe Carrol, *Bloomberg News*.
- 3 "Left or Right, this energy crisis is real," Article by Victor Davis Hanson, Stanford University. *National Post*, May 4, 2005
- 4 "Why It Won't Work," Article by Jon Hykawy, director of technology research, Fraser Mackenzie Ltd. *National Post*, March 24, 2005.