In this document, I go over my methodology for the background reading/preparation work I did over the summer, covering the sources I looked at and the practical information I was able to gain from them. This version of the report is the section of the full report which only concerns the academic literature I looked at.

Summary of Background Reading – Academic Literature

This is the summary of my background reading (but it’s only the part concerning academic literature)

Project: **Hypertext Game Project**

Student Name: **Richard Lowe**

Registration Number: **1804170**

Supervisor: **Dr. Richard Bartle**

Second Assessor: **Dr. John O'Hara**

Degree Course: **Computer Games BSc**

# Researching literature on the topic of hypertext games

At the start of September, I realized that I had forgotten to look at any academic literature on the subject of hypertext games, or to properly play/take notes on some hypertext games. Dr. Bartle sent me .pdf copies of a couple of articles he had on the topic (*H. Koenitz, "What Game Narrative Are We Talking About? An Ontological Mapping of the Foundational Canon of Interactive Narrative Forms,"* [1] and *H. K. Rustad, "A Four-Sided Model for Reading Hypertext Fiction,"* [2]), and suggested that I read *E. J. Aarseth, Cybertext: Perspectives on Ergodic Literature* [3]. I found several other articles myself via Google Scholar, after searching up works on the topic of ‘Hypertext Games’.

## Notes from *H. Koenitz, "What Game Narrative Are We Talking About? An Ontological Mapping of the Foundational Canon of Interactive Narrative Forms,”*

This article was more of a piece of analysis about existing articles on the subject of interactive narrative, specifically on what the authors of these articles treat as ‘narrative’ (due to a lack of a consistent definition for it across academia). Koenitz identifies two main definitions of narrative by mapping these articles on scales of how they consider the narrative to be affected by ‘Media Specificity’ and ‘User Agency’; these two definitions, coming from the two clusters on this mapping, are “high specificity and user agency” (coming from a cluster ‘at the maximum value of both dimensions’), with the other being ‘low on media specificity and high on user agency’ [1]. When I looked at this article, I wasn’t sure if there was any information from this article I could apply to my project, however, in hindsight, I probably should have tried looking at the other pieces of literature which this article was analysing. Unfortunately, I don’t think I have enough time left in the summer break to look at those other articles, so I’ll probably have to just record that as an identified shortcoming with my research.

## Notes from *H. K. Rustad, "A Four-Sided Model for Reading Hypertext Fiction,"*

In this article, Rustad identifies four ‘modes’ of reading works of hypertext fiction, discusses how each of these can be facilitated in a game, and draws comparisons to player archetypes. The first mode, the ‘semantic mode of reading’, is characterised by a ‘quest for meaning’, facilitated by games which invite players to exhaustively search every single node in them, appealing towards ‘achievers’. The second mode, the 'explorative mode of reading’, is characterized by the reader trying ‘to gain experiences through exploring the hypertext games’, facilitated by games which ‘encourages or opens up for random exploration’, appealing to ‘explorers’. The ‘self-reflective’ mode of reading is characterized by the reader becoming ‘aware of his own codes, his own experiences and expectations’ facilitated by giving ‘the reader the opportunity to play a role’, and this role-playing interactive aspect links to the behaviours of ‘socializers’. Finally, ‘absorption’ is characterized by keeping ‘the reader in a state of confusion’, facilitated by overwhelming the reader, such that they have 'no other option than to slip into an in-between position'. The outcome of this mode is ‘similar with the outcome enforced by killers’ [2]. Reading this article has given me some insight into different reading styles for hypertext fiction, who these modes appeal to, and how to invoke these modes through the design of a hypertext game; I will be taking this into account when creating the hypertext game with my system for the final deadline/submission.

## Notes from *E. J. Aarseth, Cybertext: Perspectives on Ergodic Literature*

I will admit that I was unable to fully read this book, because I could only find a preview of it (only containing the introduction) online, I did not have access to a physical copy, and I did not want to resort to legally dubious methods of viewing the full text. However, I still was able to get some information from the introduction. The main concepts Aarseth discusses in this book are those of ‘Cybertext’ and ‘Ergodic Literature’. Cybertext, in short, considers 'the intricacies of the medium as an integral part of the literary exchange' and treats the 'consumer, or user, of the text, as a more integrated figure', and 'must contain some kind of textual feedback loop'. This definition doesn’t restrict itself to electronic texts, as non-computerized texts can have cybertextual features as well. Ergodic Literature is the concept of literature where ‘nontrivial effort is required to allow the reader to traverse the text’; for example, requiring a ‘specialized ritual of perusal’, incorporating choices, and basically requiring the reader to actively take part in it. The reader of a cybertext is to be considered a player, not a mere spectator, and has a somewhat interventionist role in the narrative [3]. This has given me a few more ideas for what the game I’ll need to produce should involve to properly be a hypertext ‘game’, namely making the reader into a ‘player’, with the game having a ‘textual feedback loop’, and ensuring that there are consequences for the reader’s choices.

## Notes from *D. E. Millard, "Games/Hypertext,"*

This article is mostly about the relationship between narrative games and literary hypertext, and Millard attempts to analyse this relationship. His conclusion was that 'literary hypertexts appear to be a sub-type of narrative games', but 'narrative games are fundamentally hypertextual', and that it is worth 'linking the worlds of hypertext and game design... apply known hypertext theory to new and modern contexts, and build a better theoretical understanding of electronic literature and games' [4]. In hindsight, this article probably isn’t entirely relevant to the task at hand (being about the value of linking hypertext theory and game design), however, it does still point out that it might be worth applying some game design methodology to hypertext games, so I will try to bear that in mind when creating the hypertext game itself.

## Notes from *S. Kitromili, J. Jordan and D. E. Millard, "What Authors Think about Hypertext Authoring,"*

This article is about the opinions of authors towards hypertext authoring tools, identifying the steps involved in the authoring process, identifying problems which authors encounter during this process, and suggests some solutions for these problems. The steps, in order, are ‘ideation’ (coming up with ideas), ‘training/support’ (where authors learn how to use the tool), ‘planning’, ‘visualising/structuring’ (working out the structure of the game), ‘writing’, ‘editing’, ‘compiling/testing’, and ‘publishing’. The problems fall into three umbrella categories; ‘pre-production’, ‘production’, and ‘post-production’. ‘Pre-production’ problems stem from ‘misalignment’ between the user and the tool (mismatch between user intent and tool functionality), and poor documentation (mainly from when a user doesn’t know how to do something that is possible, or doesn’t know whether or not something is possible). ‘Production’ problems stem from ‘complexity’ (difficulties in using the tool as the game increases in scale), and from the ‘programming environment’ itself (poorly implemented/missing usability features). Finally, ‘post-production’ problems relate to the lifecycle of a game after it’s been completed, considering ‘distribution’, ‘profitability’, ‘platform support’, ‘curation’, and ‘maintenance’ issues [5].

I will be taking these identified problems into account when creating my tool, and, even though I know I won’t be able to conclusively address all of the issues, I shall attempt to address as many as possible. I shall attempt to avoid most of the ‘pre-production’ issues by making the documentation as clear as possible for my tool; stating what functionality it has, what functionality it doesn’t have, and, for the functionality it has, stating exactly how to utilize that functionality. ‘Production’ will be a bit more difficult; I’m not sure how to best address the ‘complexity’ problems, however, I suppose the problems involving keeping track of variables could be avoided by requiring variables to be explicitly declared in advance (which, in turn, could lend itself towards some automated error detection with variables, addressing that ‘programming environment’ issue), and some means for allowing authors to take notes will probably be appreciated as well. Finally, for the ‘post-production’ issues, I know I don’t have the resources needed to address ‘distribution’ and ‘profitability’. I can somewhat address ‘curation’ by complying with the Treaty of Babel, ‘maintenance’ might be facilitated by the intermediate language format, and ‘platform compatibility’ should hopefully be facilitated by having the games be simple client-side JavaScript games, playable on browser. This should hopefully make the tool somewhat appealing to use from an author’s perspective.

## Notes from *M.-L. Ryan, "From Narrative Games to Playable Stories: Toward a Poetics of Interactive Narrative,"*

In this article, Ryan defines a ‘narrative game’ as being a game where a ‘story is meant to enhance gameplay’, where ‘narrative meaning is subordinated to the player’s actions’, and ‘the player plays to win, to beat the game, and the story is a lure to the game world’. Ryan also defines a ‘playable story’ as having ‘gameplay… meant to enhance story’, where the ‘player’s actions are subordinated to narrative meaning’, and having ‘no winning or losing: the purpose of the player is not to beat the game, but to observe the evolution of the storyworld’. She also identifies two approaches to designing these interactive narratives; a ‘bottom-up’ approach and a ‘top-down’ approach. The ‘bottom-up’ approach relies on 'emergent systems that create stories during the run of the program', stemming from interactions within a 'world full of things and characters', but this approach tends to have a ‘lack of closure’, and is most suitable for playable stories. The ‘top-down’ approach relies ‘on pre-scripted content’, and ‘is a journey along a path which has already been traced and leads to a fixed destination, or to several’, which can be started ‘from the design of gameplay’, or ‘from a specific storyworld’, and is ‘typical of narrative games’. Finally, she identifies four types of immersion which interactive narratives can provide for the reader, being ‘spatial immersion’ (providing a ‘sense of place’), ‘epistemic immersion’ (giving the reader a ‘desire to know’), ‘temporal immersion’ (consisting of ‘curiosity, surprise, and suspense’), and ‘emotional immersion’ (which ‘involves interpersonal relations between the player and computer-operated characters’). Ryan concludes that there still is plenty of work which needs to be done in the field of developing interactive narratives, but it’s still worth pursuing further [6]. The practical implications from this paper for my project mainly affect the ‘game’ portion of it. It appears that my hypertext game, due to the structure of hypertext games, will probably fall into the category of a ‘narrative game’, due to it necessitating a ‘top-down’ design approach. But the main points of interest are the various types of immersion which Ryan identifies. I will attempt to incorporate those into my game, because those might be rather useful for player engagement purposes.

## Notes from *M. Bernstein, "On hypertext narrative,"*

In this article, Bernstein proposes that hypertext games have more potential when used to change the ‘plot’ (being 'the sequence in which events are presented in a specific reading') of a narrative rather than the ‘story’ (being ‘the sequence of events that the narrative describes’) of a narrative. This could be in the form of ‘different points of view’, a ‘shift in time’, a ‘shift in place’, or just ‘vary pacing, providing more or less detail’. Additionally, Bernstein proposes that ‘hypertextuality is perceived through re-reading and reflection’, and that ‘the cycle… is the central hypertext structure’ (and even acyclic hypertexts can only be appreciated as such ‘only by returning to the start and reading it again’). This is because, when the reader is offered a choice between links, ‘the selection of links must be significant and consequential’ for a work to truly be a hypertext, and we can only confirm if this is the case by ‘making new choices’ whilst ‘rereading’ [7]. This article has more of a bearing on the ‘game’ component of my project than on the ‘tool’ component. I might attempt to incorporate some form of narrative manipulation into my game, as well as try to take the cyclic nature of all hypertexts into account. In fact, Bernstein’s discussion about cycles has made me consider some sort of ‘time loop’ story for my game, because what better way is there to take advantage of cycles in a narrative than having the cycles be a key plot device? Sure, I probably would need to implement variables/guard conditions first, in order to make this actually feasible, however, it seems like a good idea.

## Notes from *J. Pope, "A Future for Hypertext Fiction,"*

In this article, Pope discusses how to make hypertext fiction accessible to casual users, looking at how casual readers approach hypertexts, what features help/hinder engagement, and how to make it more appealing towards ‘ordinary’ users. From Pope’s studies of ‘ordinary’ readers attempting to engage with works of hypertext fiction, he identified several key considerations. Firstly, ‘writers must accept they must conform, in some aspect of the story structure or interface design, to familiar conventions’, otherwise readers are guaranteed to get frustrated with the hypertext. Whilst abandoning these conventions appears to be a common thread amongst some of the hypertext games Pope got readers to read, in most cases, this did not appeal to the ‘ordinary’ readers. Pope identifies the interface as ‘a crucial and central element in the likely success or otherwise of interactive narratives’, because ‘writers need to 'help' readers to travel the 'book' space and the narrative’. Several interface considerations Pope identified included ‘'Page' marking devices’, navigation tools which ‘allow as much control as possible’ (but they ‘must not be obscure... or hidden’), and that all ‘visual material must be part of the story being told, not simply decoration’. ‘Disorientation’ should also be avoided; readers liked it when ‘it is clear what the 'conventional' order would be, and it is clear where the story resolves into an ending’, hypertexts should not give the impression that ‘the plot had seemingly been replaced by abstraction’, and readers ‘wanted their sense of completion to be designed by the author’. Finally, readers preferred it when a link ‘takes the reader to a place that has a meaningful connection to the jumping-off point’, instead of appearing ‘baffling, pointless, or just random’ [8]. This has implications both for my tool and for my game. The games produced by my tool should have a clean interface, omitting any unnecessary bloat which may baffle the reader. I’m not sure if I will be able to implement full navigation tools (as using these may cause some games produced with my tool to not behave as expected), however, I shall consider it. Additionally, I will aim to stick to some design conventions with the interface and follow literary conventions when writing the game (as well as ensuring that the links make sense), for purposes of preventing reader frustration.

# Bibliography

|  |  |
| --- | --- |
| [1] | H. Koenitz, "What Game Narrative Are We Talking About? An Ontological Mapping of the Foundational Canon of Interactive Narrative Forms," *Arts,* vol. 7, no. 4, p. 51, 2018. |
| [2] | H. K. Rustad, "A Four-Sided Model for Reading Hypertext Fiction," *Hyperrhiz: New Media Cultures,* vol. 6, 2009. |
| [3] | E. J. Aarseth, Cybertext: Perspectives on Ergodic Literature, Baltimore, MD: Johns Hopkins University Press, 1997. |
| [4] | D. E. Millard, "Games/Hypertext," in *Proceedings of the 31st ACM Conference on Hypertext and Social Media*, Virtual Event, 2020. |
| [5] | S. Kitromili, J. Jordan and D. E. Millard, "What Authors Think about Hypertext Authoring," in *HT '20: Proceedings of the 31st ACM Conference on Hypertext and Social Media*, Virtual Event, 2020. |
| [6] | M.-L. Ryan, "From Narrative Games to Playable Stories: Toward a Poetics of Interactive Narrative," *Storyworlds: A Journal of Narrative Studies,* vol. 1, pp. 43-59, 2009. |
| [7] | M. Bernstein, "On hypertext narrative," in *HT '09: Proceedings of the 20th ACM conference on Hypertext and hypermedia*, Torino, 2009. |
| [8] | J. Pope, "A Future for Hypertext Fiction," *Converg. Int. J. Res. New Media Technol.,* vol. 12, no. 4, pp. 447-465, 2006. |
| [9] | T. Rothamel, "The Ren'Py Visual Novel Engine," [Online]. Available: https://www.renpy.org/. [Accessed 6 August 2020]. |
| [10] | Choice of Games LLC, "Introduction to ChoiceScript - Choice of Games LLC," Choice of Games LLC, 2020. [Online]. Available: https://www.choiceofgames.com/make-your-own-games/choicescript-intro/. [Accessed 11 August 2020]. |
| [11] | G. Nelson, "Inform 7 | Inform is a natural-language-based programming language for writers of interactive fiction.," 2015. [Online]. Available: http://inform7.com/. [Accessed 10 August 2020]. |
| [12] | textadventures.co.uk, "Squiffy - A simple way to write interactive fiction," 2020. [Online]. Available: https://textadventures.co.uk/squiffy. [Accessed 13 August 2020]. |
| [13] | textadventures.co.uk, "Quest - Write text adventure games and interactive stories," 2020. [Online]. Available: https://textadventures.co.uk/quest/. [Accessed 11 August 2020]. |
| [14] | Eastgate Systems, Inc., "Storyspace: Storyspace," 2020. [Online]. Available: http://www.eastgate.com/storyspace/. [Accessed 3 August 2020]. |
| [15] | B. Barnet, "Machine enhanced (re)minding: the development of storyspace," *Digital Humanities Quaterly,* vol. 6, no. 2, 2012. |
| [16] | C. Keep, T. McLaughlin and R. Parmar., "The Electronic Labyrinth," 1993-2001. [Online]. Available: http://www2.iath.virginia.edu/elab/elab.html. [Accessed 3 August 2020]. |
| [17] | M. Bernstein, "Storyspace 3," in *HT '16: Proceedings of the 27th ACM Conference on Hypertext and Social Media*, Halifax, 2016. |
| [18] | H. Oakley, "Getting started with Storyspace 3 - The Eclectic Light Company," 8 December 2015. [Online]. Available: https://eclecticlight.co/2015/12/08/getting-started-with-storyspace-3/. [Accessed 3 August 2020]. |
| [19] | Interactive Fiction Technology Foundation, "Twine / An open-source tool for telling interactive, nonlinear stories," [Online]. Available: https://twinery.org/. [Accessed 5 August 2020]. |
| [20] | T. M. Edwards, "SugarCube," 2020. [Online]. Available: https://www.motoslave.net/sugarcube/2/. [Accessed 5 August 2020]. |
| [21] | D. Cox and C. Klimas, "Snowman 2.0 Documentation," September 2019. [Online]. Available: https://videlais.github.io/snowman/2/. [Accessed 5 August 2020]. |
| [22] | Interactive Fiction Technology Foundation, "The Treaty of Babel," 24 October 2014. [Online]. Available: http://babel.ifarchive.org/. [Accessed 10 August 2020]. |
| [23] | I. Millington, A. Yakovlev, A. Plotkin, B. Dias, D. Fabulich, D. Eyk, D. Eliseev, I. Narozhny, J. Grams, J. Leinonen, M. N. Tenuis, Selene and Zonnah, "Undum – A client side framework for hypertext interactive fiction games," 2010-2018. [Online]. Available: https://idmillington.github.io/undum/. [Accessed 14 August 2020]. |
| [24] | L. Arnott, "Harlowe 3.1.0 Manual," 24 September 2019. [Online]. Available: https://twine2.neocities.org/. [Accessed 5 August 2020]. |
| [25] | R. Bartle, "Demo 1," February 2011. [Online]. Available: https://www.youhaventlived.com/cbdemo/. [Accessed 4 August 2020]. |
| [26] | D. Q, "Twee2 | Interactive Fiction for Power Users," 2015. [Online]. Available: https://dan-q.github.io/twee2/. [Accessed 17 August 2020]. |
| [27] | Z. Quinn, P. Lindsey and I. Shankler, "Depression quest: An interactive (non)fiction about living with depression," 14 February 2013. [Online]. Available: http://www.depressionquest.com/. [Accessed 17 September 2020]. |
| [28] | M. Pavić and S. Sofrenovic, "The Glass Snail," Word Circuits, August 2003. [Online]. Available: http://www.wordcircuits.com/gallery/glasssnail/. [Accessed 17 September 2020]. |
| [29] | M. Heyward, "of Day, of Night," Eastgate Systems, Watertown, MA, 2004. |
| [30] | M. Heyward, "Live traversal of ‘of day, of night’ Nov 8, 2019 at WSUV, USA | spaces in between time," 23 December 2019. [Online]. Available: https://www.creativecultural.com/meganheyward/?p=1750. [Accessed 17 September 2020]. |
| [31] | M. Lutz, "the uncle who works for nintendo by ztul," itch.io, 6 December 2014. [Online]. Available: https://ztul.itch.io/the-uncle-who-works-for-nintendo. [Accessed 17 September 2020]. |
| [32] | A. A. Anthropy, "Queers in Love at the End of the World by anna anthropy," itch.io, 12 March 2016. [Online]. Available: https://w.itch.io/end-of-the-world. [Accessed 17 September 2020]. |
| [33] | J. Anderson, "afternoon, a story - Michael Joyce," youtube.com, 26 April 2012. [Online]. Available: https://www.youtube.com/watch?v=djIrHF8S6-Q. [Accessed 17 September 2020]. |
| [34] | T. Memmott, "Lexia to Perplexia," eliterature.org, 2000. [Online]. Available: https://collection.eliterature.org/1/works/memmott\_\_lexia\_to\_perplexia.html. [Accessed 17 September 2020]. |
| [35] | M. Joyce, "afternoon, a story," Eastgate Systems, Watertown, MA, 1987. |
| [36] | N. Gibbins, "Telling Tales - EdShare Southampton," 6 November 2019. [Online]. Available: http://edshare.soton.ac.uk/20145/. [Accessed 21 September 2020]. |
| [37] | M. J. Roberts, "TADS - the Text Adventure Development System, an Interactive Fiction authoring tool," tads.org, 16 May 2013. [Online]. Available: https://www.tads.org/. [Accessed 4 August 2020]. |
| [38] | M. J. Roberts, S. Breslin, E. Eve, M. Nizette and A. Sewe, "TADS 3 Technical Manual," September 2006. [Online]. Available: https://www.tads.org/t3doc/doc/techman/toc.htm. [Accessed 4 August 2020]. |
| [39] | inkle Ltd., "ink - inkle's narrative scripting language," inkle Ltd., [Online]. Available: https://www.inklestudios.com/ink/. [Accessed 11 August 2020]. |
| [40] | inkle Ltd., "inklewriter," inkle Ltd., [Online]. Available: https://www.inklestudios.com/inklewriter/. [Accessed 11 August 2020]. |
| [41] | textadventures.co.uk, "Quest 5 - Documentation," textadventures.co.uk, 31 December 2018. [Online]. Available: http://docs.textadventures.co.uk/quest/. [Accessed 11 August 2020]. |
| [42] | textadventures.co.uk, "Squiffy - Documentation," textadventures.co.uk, [Online]. Available: https://docs.textadventures.co.uk/squiffy/. [Accessed 13 August 2020]. |
| [43] | Beck & Bartle Limited, *eHyperTool Design Specification Version 1.02 (unpublished),* 2011. |
| [44] | M. J. Roberts and E. L. Stauff, "TADS 3 Library Reference Manual," 5 16 2013. [Online]. Available: https://www.tads.org/t3doc/doc/libref/index.html. [Accessed 4 August 2020]. |
| [45] | C. Klimas, "Chapbook, a story format for Twine 2," 6 July 2020. [Online]. Available: klembot.github.io https://klembot.github.io/chapbook/. [Accessed 5 August 2020]. |
| [46] | Interactive Fiction Technology Foundation, "Twine Wiki," Interactive Fiction Technology Foundation, 2019. [Online]. Available: https://twinery.org/wiki/start. [Accessed 5 August 2020]. |
| [47] | Interactive Fiction Technology Foundation, "Twine Specifications," 2019 February 2020. [Online]. Available: https://github.com/iftechfoundation/twine-specs. [Accessed 5 August 2020]. |