Electronics and Computer Science



### **Telling Tales**

Hypertext Writing

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### A Working Definition



By 'hypertext', I mean nonsequential writing - text that branches and allows choices to the reader, best read at an interactive screen. As popularly conceived, this is a series of text chunks connected by links which offer the reader different pathways.

Nelson, T.H. (1981) Literary Machines, Sausalito, CA: Mindful Press.

### The Death of the Author



We know now that a text is not a line of words releasing a single 'theological' meaning (the 'message' of the Author-God) but a multi-dimensional space in which a variety of writings, none of them original, blend and clash.

To give a text an Author is to impose a limit on that text, to furnish it with a final signified, to close the writing.

Barthes, R.G. (1967) The Death of the Author. Aspen, no. 5-6.

### Hypertext and the Death of the Author

"It is tempting to see hypertext as realizing Barthes' utopian dreams of a writing liberated from the Author. The ability for each reader to add to, alter, or simply edit a hypertext opens possibilities of collective authorship that breaks down the idea of writing as originating from a single fixed source.

Similarly, the ability to plot out unique patterns of reading, to move through a text in an aleatory, non-linear fashion, serves to highlight the importance of the reader in the "writing" of a text - each reading, even if it does not physically change the words - writes the text anew simply by rearranging it, by placing different emphases that might subtly inflect its meanings."

Keep,C., McLaughlin, T. and Parmar, R. (1993-2000) *The Electronic Labyrinth*. http://elab.eserver.org/

### **Forking Paths**

"In all fictional works, each time a man is confronted with several alternatives, he chooses one and eliminates the others; in the fiction of Ts'ui Pên, he chooses— simultaneously—all of them. He creates, in this way, diverse futures, diverse times which themselves also proliferate and fork. Here, then, is the explanation of the novel's contradictions.

Fang, let us say, has a secret; a stranger calls at his door; Fang resolves to kill him. Naturally, there are several possible outcomes: Fang can kill the intruder, the intruder can kill Fang, they both can escape, they both can die, and so forth. In the work of Ts'ui Pên, all possible outcomes occur; each one is the point of departure for other forkings."

Borges, J.L. (1941) The Garden of Forking Paths, Translated from Spanish by Yates, D.A.

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### **Ergodic Literature**

http://www.flickr.com/photos/danielygo/5391176827/

### Ergodic Literature

*"Ergodic [...]* derives from the Greek words *ergon* and *hodos*, meaning "work" and "path." In ergodic literature, nontrivial effort is required to allow the reader to traverse the text. If ergodic literature is to make sense as a concept, there must also be nonergodic literature, where the effort to traverse the text is trivial, with no extranoematic responsibilities placed on the reader except (for example) eye movement and the periodic or arbitrary turning of pages. "

Aarseth, E. (1997) *Cybertext: Perspectives on Ergodic Literature*. Baltimore, MD: The John Hopkins University Press.

### Composition No. 1, Roman (1962)

150 loose leaf pages

 Pages are to be shuffled before reading



Saporta, M. (1963) *Composition No. 1, Roman*. Translated from French by Howard, R., New York: Simon and Schuster.

### Hopscotch (1963)

Structured as 155 chapters

- Chapters 57-155 designated as 'expendable'

#### Two readings of the book:

- Chapters 1-56 in order
- All chapters, following the reading order given in the instructions: 73-1-2-116-3-...



Cortázar, J. (1966) *Hopscotch*. Translated from Spanish by Rabassa, G. New York: Pantheon Books.

### Un conte à votre façon (1967)

Numbered double-page spreads

- Story on verso pages
- Explicit choices on recto pages

Queneau, R. (1982) Un conte à votre façon, Paris: Kickshaws.



### The Unfortunates (1969)

27 chapters, bound as pamphlets

- Designated first chapter
- 25 chapters, to be read in any order
- Designated last chapter

Johnson, B.S. (1969) The Unfortunates, London: Secker and Warburg.

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### Story, Narrative and Text

### Story, Narrative and Text

Narrative theory identifies three levels in fiction:

- Story: the content of a tale; the underlying events related in a tale (also referred to as *fabula*)
- Narrative: a recounting of a story; the reorganisation of events by time or point-of-view (also referred to as *plot*)
- Text: the signs (words, images) that are processed by the reader

#### Non-linearity may be introduced at any or all of these levels

Lowe, N.J. (2009) A Cognitive Model, In *Reading Hypertext*, Bernstein, M. and Greco, D. (eds), Watertown, MA: Eastgate Systems



![](_page_14_Picture_2.jpeg)

![](_page_15_Picture_2.jpeg)

![](_page_16_Picture_0.jpeg)

![](_page_16_Picture_2.jpeg)

![](_page_17_Picture_0.jpeg)

### Narrative versus Text: Psycho

### • Psycho (1960)

![](_page_17_Picture_3.jpeg)

![](_page_17_Picture_4.jpeg)

![](_page_17_Picture_5.jpeg)

· Psycho

![](_page_17_Picture_7.jpeg)

![](_page_17_Picture_8.jpeg)

![](_page_17_Picture_9.jpeg)

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### **Hypertext Fiction**

http://www.flickr.com/photos/nealy-j/4579505879/

![](_page_19_Picture_0.jpeg)

### Hypertext Fiction

A selection:

- Michael Joyce (1987) afternoon, a story
- Stuart Moulthrop (1992) Victory Garden
- Geoff Ryman (1996) *253*

![](_page_19_Picture_6.jpeg)

![](_page_19_Picture_7.jpeg)

![](_page_19_Picture_8.jpeg)

![](_page_20_Picture_0.jpeg)

### afternoon, a story (1987)

"I want to say I may have seen my son die this morning."

Non-linear *narrative* with default path

- · Notecard-like lexias
- No explicit anchors; all words are anchors

 Built as demonstration of the hypertext authoring
Joyce, M. (1990) afternoon, a story. Watertown, MA: Eastgate Systems. System StorySpace

![](_page_21_Picture_0.jpeg)

### Victory Garden (1992)

Follows a central character (Emily) and the interactions of those connected with her, set during Gulf War I.

Multiple non-linear *narratives* with default paths

 Anchors indicate branches to other narratives (initially hidden, but can be made explicit)

Moulthrop, S. (1992) *Victory Garden*. Watertown, MA: Eastgate Systems. • Provides a taxonomic

![](_page_22_Picture_0.jpeg)

### 253 (1996)

Descriptions of the 253 occupants (passengers plus driver) of a London Underground train

Extensive cross-referencing and footnotes support a non-linear *narrative* 

 Each description is 253 words long

• Originally published on the Web (1998) 253: the print remix. London: Flamingo.

![](_page_23_Picture_0.jpeg)

### Hypertext Fiction

Academic study concentrates on literary hypertext (c.f. literary fiction)

- Typified by non-linear *narratives*, rather than non-linear *stories* 

What about the hypertext equivalent of genre or popular fiction?

### Lucky Les (1967)

Third person narrative

Coarse-grained, non-linear *story* 

- Multi-page lexias corresponding to episodes in Les' life
- Each episode concludes with an explicit choice for the reader

![](_page_24_Picture_6.jpeg)

Hildick, E.W. (1967) *Lucky Les: the adventures of a cat of five tales*, Leicester: Brockhampton Press.

#### Again, non-linear story DA with laser communication from the cable; the Seeker

Choose Your Own Adventure (1979-)

- Single page lexias

Second person narrative

 Numbered pages with explicit choices

See also interactive fiction (Colossal Cave/ Advent, etc)

Montgomery, R.A. (1979) Journey Under the Sea. New York: Bantam Books.

2

The cable attaching you to the Maray is extended to its limit. You have come to rest on a ledge near the canyon in the ocean floor that ancient myth says leads to the lost city of Atlantis.

You have an experimental diving suit designed to protect you from the intense pressure of the deep. You should be able to leave the Seeker and explore the sea bottom. The new suit contains a number of the latest microprocessors enabling a variety of useful functions. It even has a built-in PDA with laser communicator. You can cut loose from the cable; the Seeker is self-propelled. You are now in another world. Remember, this is a dangerous world, an unknown world.

As agreed, you signal the Maray, "All systems GO. It's awesome down here."

If you decide to explore the ledge where the Seeker has come to rest, turn to page 6.

If you decide to cut loose from the Maray and dive with the Seeker into the canyon in the ocean floor, turn to page 4.

2

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If you decide to explore the ledge where the Seeker has come to rest, turn to page 6. If you decide to our loose from the Margy and due with scene from the comed

### Southampton

#### Choose Your Own Adventure #2: Journey Under the Sea Analysis of paths and outcomes

![](_page_26_Figure_1.jpeg)

![](_page_26_Figure_2.jpeg)

#### PAGE SEQUENCE

![](_page_26_Figure_4.jpeg)

#### PATH DATA

	steps	choices
Shortest path	5	3
Longest path	00	
Longest path without revisitng pages	26	17

#### NUMBER OF ENDINGS

![](_page_26_Figure_8.jpeg)

![](_page_26_Figure_9.jpeg)

#### KEY

- Normal Page
- Ending: favorable
- Ending: neutral
- Ending: unfavorable
- Ending: unfavorable, death
- > Normal path (possible favorable result)
- Favorable path
- Neutral/unfavorable path
  - Unfavorable path
- Unfavorable path, results in death

### Life's Lottery (1999)

Increasing sophistication – not a children's book!

- Lexias vary in size from a paragraph of a few sentences to several pages
- Non-linear story, but with an additional narrative if lexias are read in order, rather than by following the directions in the lexias

Newman, K. (1999) Life's Lottery, London: Simon and Schuster.

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### Ludic Hypertext

http://www.flickr.com/photos/jamesrbowe/4001776922/

![](_page_29_Picture_0.jpeg)

### Ludic Narrative

Game + Story ... but what's in a game?

#### Different forms of play

- Competition (agon)
- Chance (alea)
- Simulation (*mimicry*)
- Disorientation (*ilinx*)

### Different types of play

- Structured, explicit rules (*ludus*)
- Unstructured, spontaneous (paidia)

Caillois, R. (1961) Man, Play and Games. New York: Free Press of Glencoe.

### Fighting Fantasy (1982-)

Combines CYOA-style second person narrative with Dungeons & Dragonsstyle rules

- Non-linear story
- Numbered paragraph (more finely-grained narrative)
- Mixture of explicit and random choices (aleatory reading)

- External state Jackson http://www.linker.com/stephingstoneeh(1982)effer Warlock of Firetop Mountain. Harmondsworth: Puffin.

21–24

If you win, turn to **376**. If the battle is going badly, you may *Escape* through the door. Turn to **291** – but don't forget your *Escaping* penalty.

21

The green blood of the dead Orcs smells foul as it seeps from their bodies. You step around the corpses and investigate the chest. It is a sturdy affair, made of strong oak and iron, and it is firmly locked. You may try to smash the lock with your sword (turn to **339**) or leave it alone and go through the open door (turn to **293**).

22

You poke around looking for signs of secret doors but can find none. You pause to ponder your situation and a small jet of gas hisses from the ceiling. You cough and choke to clear your lungs, but collapse to your knees. Your head spins and you flop to the floor in an unconscious heap. When you come to, you look around in an unfamiliar place. Turn to 4.

23

The passageway ends in a solid doorway and you re surprised to see a leather skirt tacked along the ttom of the door. You listen but hear nothing. Il you enter the room (turn to **326**) or return to the ction (turn to **229**)?

After you have suffered your third wound, you

![](_page_31_Picture_0.jpeg)

### Duel Master (1986-7)

Two-player gamebook (*agon*)

- Non-linear story
- Split across two paired books (even/odd numbered lexia)
- Shared state (keywords) and synchronisation
- Mixture of explicit and random choices (aleatory reading)

Smith, M. & Thomson, J. (1987) Arena of Death. London: Armada Books.

### Being Elizabeth Bennet (2007)

Second person narrative

- Again, non-linear story
- Simple rules
- No aleatory aspects

Mimicry aimed at a different demographic to that of other gamebooks!

Campbell Webster, E. (2007) Being Elizabeth Bennet. London: Atlantic.

### Dark Cults (1983)

#### Storytelling card game

- Story assembled from random selection of text fragments (*alea*)
- Aim is to improvise a *narrative* around the story

# Rules ensure well-formed stories

 Card types limit which cards may be played next
Rahman, K. (1983) *Dark Cults*. Theilman, MN: Dark House Publishing.

### Integral competition (*agon*)

- Play alternates between players (Life and Death)
- Scores assigned to different card types for each player

### Dark Cults (1983)

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### Sculptural Hypertext: Card Shark

- A Card Shark node (or card) contains some text, typically a brief, focused passage
- · Each card may also specify constraints on the context in which it may appear
- Reader receives seven random cards, based on constraints chooses which card to visit next, repeats
- · Social Shark: collaborative, competitive reading
  - Readers take it in turns to play cards
  - Points awarded to readers for the playing of particular cards

Bernstein, M. (2001) *Card Shark and Thespis: exotic tools for hypertext narrative*. Proceedings of the 12th ACM Conference on Hypertext and Hypermedia, pp 41-50..

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### **Hypertext Comics**

http://www.flickr.com/photos/dolmansaxlil/5606944557/

### Hypercomics (1986-)

# Early hypertext comics based on gamebooks

- Dice Man 1-5 (1986)
- You are Maggie Thatcher (1987)

- Typically second person narrative
  - Numbered frames/pages
  - Explicit choices in captions

Talbot, B. et al, (1986) *House of Death*. Dice Man, no. 1, IPC Magazines. Lucic elements

![](_page_37_Picture_9.jpeg)

### Carl (2001)

Implicit choices in alternate frames

- Relies on left-to-right, top-tobottom reading conventions
- Spatial juxtaposition of frames on the printed page permits multiple reading paths

Examined by Scott McCloud in Understanding Comics McL203. (2001) Choose Your Own Carl. http://www.scottmccloud.com/

![](_page_39_Picture_0.jpeg)

### Meanwhile (2010)

#### Visual grammar for linking:

![](_page_39_Figure_3.jpeg)

Shiga, J. (2010) *Meanwhile*. New York: Amulet Books.

![](_page_40_Picture_0.jpeg)

### Jimmy Corrigan (2001)

![](_page_40_Figure_2.jpeg)

Ware, C. (2001) Jimmy Corrigan: The Smartest Kid On Earth, London: Jonathan Cape.

#### Drag picture to placeholder or click icon to add

### Hypertext Poetry

http://www.flickr.com/photos/rossap/4160004956/

### Hypertext Poetry

![](_page_42_Figure_2.jpeg)

Rosenberg, J. (2005) Diagrams Series 6, #1.

#### Drag picture to placeholder or click icon to add

### Hypertext Drama

http://www.flickr.com/photos/slimjim/2169745303/

### Drama vs. Hyperdrama

#### Traditional drama:

- presents the playwright's (and director's) preferred account (narrative) of a story
- distinguishes between on-stage and off-stage

#### Hyperdrama:

- allows the audience to follow different narratives (and to choose when to switch narratives)
- continues action off-stage

Deemer, C. (1999) *The New Hyperdrama: How hypertext scripts are changing the parameters of dramatic storytelling.* 

### Rosencrantz and Guildenstern are Dead (1967)

Additional narrative centred on minor characters in Hamlet

• Non-ergodic, therefore not hyperdrama

![](_page_45_Picture_4.jpeg)

Stoppard, T. (1973) Rosencrantz and Guildenstern are Dead. London: Faber and Faber.

### Night of January 16th (1935)

Courtroom drama by Ayn Rand, centred on a murder trial

- Members of the audience are selected to form a jury
- The jury's verdict determines the ending of the play (ergodic)

![](_page_46_Picture_5.jpeg)

Rand, A. (1936) Night of January 16th: a comedy-drama in three acts. New York: Longmans & Co

![](_page_47_Picture_0.jpeg)

### Kinoautomat (1967)

Czech experimental interactive film

- First shown at Expo 67 in Montreal
- Film is stopped at intervals and audience is asked how they think the film should be continued
- Audience votes on two options (red/green) with
  the majority determining Cincera, R., Kohač, J. and Svitaček, V (1967) Kinoautomat: Člověk a jeho dům. the future path of the film

![](_page_48_Picture_0.jpeg)

### Tamara (1981)

Play takes place in a large house

- Actors perform simultaneously in up to nine different rooms
- Spectators must choose which actor(s) they follow (ergodic)
- Multiple narratives

Krizanc, J. (1989) Tamara: A play. London: Methuen Drama.

![](_page_49_Picture_0.jpeg)

### Timecode (2000)

Film composed of four overlapping narratives

- Filmed simultaneously as four continuous 90-minute takes
- Screen divided into quarters, all four films projected at same time
- Audience 'choose' which sub-film to watch (ergodic)

Figgis, M. (2000) *Timecode*. Screen Gems (distributor).

### Summary

### Summary

Non-linearity is the essence of hypertext

- Hypertext fiction may be non-linear in story, narrative or text
- Non-linearity may equally apply to poetry, comics, film and drama

#### Hypertext is also ergodic

- Non-trivial effort typically manifests itself as choice
- May also involve ludic elements