

THOUGHTS ABOUT WRITING AN EXCITING HYPERTEXT

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ABSTRACT

Decline And Fall is a Storyspace-style hypertext novel, a school story based loosely on *The Trojan Women*. Its goal was not to be good, but rather to be exciting – to make an argument that hypertext can be coherent, consistent, and possibly fun. These are some notes of what I learned from the effort.

Keywords

Storyspace, hypertext, hypermedia, literature, fiction, education, design, implementation, support, history of computing, maps, links.

1. “NO MAN BUT A BLOCKHEAD EVER WROTE, EXCEPT FOR MONEY.”

A number of critics have conjectured that hypertext is inherently lyrical [31] or postmodern [24] [17], that it resists the familiar narrative pleasures that attend print [6] [7]. I disagree [3]. My argument would, admittedly, be more convincing if we could point to a wider range of dramatic and exciting hypertexts. The pursuit of the hypertext potboiler is unlikely to generate either literary prestige or great sums of money; its neglect is not surprising.

One familiar approach to making hypertext stories exciting is to make them into games, asking the reader to participate as (or on behalf of) one of the characters [26]. Games have proved successful. At times, though, the player’s concerns overshadow the characters, and the position of the story¹ in the game has of course been famously controversial. The arguments I have termed “My Friend, Hamlet,” moreover, cast doubt on whether games make sense when the story is inflexible: let a sensible person like you or me into a tragedy, and everything is likely to collapse.

In *Decline and Fall*, I set out to tell an exciting story in a full-throated hypertext, and to do so without offering any likelihood that the reader’s choices will change how things turn out. The choices matter – readings may be very different – but Troy always falls.

2. THE TROJAN WOMEN

Decline and Fall is (very roughly) based on *The Trojan Women*, an account of the aftermath of the Trojan War. Troy has fallen,

¹ Following [4], I use “story” to refer to events that occur in the fictive world, and “plot” to describe how an author arranges those events.

and the once-royal women of the doomed city wait to which victor each will be enslaved². Euripides wrote *The Trojan Women* in 415 BCE. Nearly five hundred years later, Seneca revisited the subject in his *Troades* of 54CE, drawing as well on Euripides *Hecuba*, written around 424 BCE. All describe the lamentation of the former royal family of conquered Troy as they face what cannot be faced amid the ruins of their palace.

I laugh, when those who at the Spear are bold
And vent'rous, if that fail them, shrink and fear
What yet they know must follow, to endure
Exile, or ignominy, or bonds, or pain,
The sentence of thir Conquerour:
This is now Our doom. (Paradise Lost II.204-209)

The plays do not conform to modern taste – they have too little drama and too many loose ends – though Berlioz’ *Les Troyens* and Michael Cacoyannis’s film of *The Trojan Women* (with Katharine Hepburn as Hecuba, Vanessa Redgrave as Andromache, and Geneviève Bujold as Cassandra) are notable.

The Trojan Women assumes axiomatically that women have no agency. For Polyxena and Cassandra, this is the dramatic premise: Polyxena cannot be saved and Cassandra cannot be believed. That’s who they are. What might happen, though, if those less afflicted by the gods tried to do something, even if all they can manage is flight?

² Compare Psalm 137:

*By the rivers of Babylon, there we sat down, yea, we wept, when we remembered Zion.
We hanged our harps upon the willows in the midst thereof.
For there they that carried us away captive required of us a song;
and they that wasted us required of us mirth, saying, Sing us one of the songs of Zion.
How shall we sing the LORD’S song in a strange land?
If I forget thee, O Jerusalem, let my right hand forget her cunning.
If I do not remember thee, let my tongue cleave to the roof of my mouth;
if I prefer not Jerusalem above my chief joy.
Remember, O LORD, the children of Edom in the day of Jerusalem;
who said, Rase it, rase it, even to the foundation thereof.
O daughter of Babylon, who art to be destroyed; happy shall he be,
that rewardeth thee as thou hast served us.
Happy shall he be, that taketh and dasheth thy little ones against the stones.*

3. THE SCHOOL STORY

For a decade, we've been talking about hypertext tragedy and we're not much further along. It's time to try something else. Why not melodrama?

Melodrama was always a suspect quality for modernism because it was so readily (and frequently) deployed in the service of bourgeois sentiment and conservative cant. Postmodernism picked up the story again in film; in print, postmodernists grabbed old stories to break them over their knee. [10]. Two conspicuous refuges for plot remain. One is genre fiction, and indeed the shelves of the App Store are filled with adaptations of detective mysteries, dating romances, adventure romances, hero quests, and vengeance tales.

The other sanctuary is Young Adult fiction, a marketing term which has evolved, in contemporary usage, to denote stories with plots³. The School Story lends itself well to *The Trojan Women*: in particular, both are necessarily fixed in place. The School Story necessarily has a large cast, and this naturalizes it if it does not solve the problem that clearly vexed the ancient playwrights: if there are a million tragedies in the naked, ruined city, how do we acknowledge their multiplicity?

We have read lots of school stories. The form was enormously popular in the nineteenth century, when it provided a window for the British working class into a hidden world [27]. If *Tom Brown's School Days* is not universally read today, *Harry Potter* is. A setting flexible enough to accommodate Michael Chabon's *Wonder Boys*, Jo Walton's *Among Others*, Anita Shreve's *Testimony* and Dorothy Sayer's *Gaudy Night* might stretch to accommodate the children of Troy.

Our point is to generate excitement even though we know (approximately) what is going to happen. (The first sentence of *The Hunger Games* begins "When I wake up;" we already know how the story will turn out, though there are 1,193 pages to go.) The nineteenth century school story ends in graduation, the twentieth century school story ends in the dissolution of the school. *Decline and Fall* has one beginning, and essentially one end; what matters is what happens in between.

4. STORYSPACE 3

Decline and Fall is a traditional Storyspace-style hypertext, made up of nodes and links. It runs to about 90,000 words, in about 375 writing spaces.

Storyspace 3 extends Storyspace to include the semantics of sculptural hypertext [23] [5]. As in Storyspace, links may be deactivated by *guard fields*, which are now generalized predicates on the state of the reading. In addition, writing spaces may themselves be guarded by predicates, called *requirements*, and may change the state of the hypertext by performing actions when visited [21] [22]. Storyspace 3 also offers a simple stretchtext facility.

5. ONCE UPON A TIME

We begin with exposition.

Because I am writing in English, I have replaced our traditional titles and forms of address with their rough equivalents in European tradition. My classmate Linnea

³ YA fiction is poorly understood. It's not chiefly about an absence of sex [14] [29] or violence [9] [13].

Senneterre is not here "great battle chief of the fierce bowmen of the Northern Hardwood Forest," as Professor Courvason chooses to render her courtesy title, but Lady Oakton.

To us, The Country was simply where we lived. The forest and the desert, the grand old houses, the beggars, and the colonial gallows were simply the world as it always had been.

We will proceed (in one reading) to a place where we might expect to end: with our protagonist on the dormitory roof, holding a rifle, about to be killed by a SWAT team. Still, before we can climb those ancient gables, we may need to establish the setting or invoke our muse. Even in exposition, we can create tension by playing with and against convention. We have a very English school but this is not England: to make London serve for Troy is very hard work [28]. We have denaturalized a setting which the following lexia will work hard to renaturalize and problematized things which the kids will take for granted. Even prefatory exposition can create tension, provided it does its work and gets out of the way. The audience wants to know what's going to happen [20].

Once that's done, of course, we can generate whatever momentum we require by showing a point-of-view character who wants something urgently. Trish Parker would very much like to live a little longer, though she knows she won't. She shares Polyxena's predicament:

Of course, I have to admit
I'd have liked to live a little longer
I mean there's a lot I don't know yet.
Like: why do guys insist on driving?
And how come they call on Friday to ask you out
for Friday night?
And why do guys hate to get dressed up?
How come they don't like to talk on the phone?
Why do guys drink out of the milk carton?
And how come they like to play air guitar?
Why is a guy who sleeps around a stud
but a girl who does is a slut? [8]

A very sharp reader, seeing this, might sense the tension that Polyxena seems to be appearing out of place, outside the position she holds in the plays. Is this incidental, or purposeful? Is the identification wrong? These implicit interpretive theories must be held in abeyance, and they are likely to remain in suspense until we encounter Polly Xena, either in the full flush of unwonted prosperity or, in other readings, already green in memory.

Other readers (O wicked sons!) won't see the allusion, or seeing will not care. They want to know how Trish Parker is going to get out of this mess, or in any case they want to see what happens to her. They want to know how this happened in a fancy colonial prep school, and what's going to be done about it.

Most of *Decline and Fall* is told in third person, present tense, an energetic mode that also helps finesse time shifts.

6. AND THEN...

Incident is exciting. Desire is exciting. Conflict is exciting. And so is the puzzle of robotic hypertext, a dual reading where we try to understand what's happening and try also to understand what this machine is doing. Are we reading yet?

Some incidents are inherently energetic. Raymond Chandler's famously suggested that, when he found himself stuck in a scene,

he could always arrange to have someone walk in holding a gun. David Mamet suggested that the Hollywood romance is simply the progressive unveiling of the heroine, and that's reliable, too [19].

Even in repose, dialog is exciting [18]. Interrogations are especially exciting [16]. What has not been made sufficiently clear is that dialog offers interesting opportunities for hypertextuality, and interrogation really lets hypertext take over. So, too, does dialogue where the parties are speaking at cross-purposes, especially when incredulity is in the air. Cassandra, who sees the future but whom no one will believe, was born for hypertext.

Foreshadowing is *interesting*. Allusion is interesting as well. I have emphasized here the challenge of excitement, of propelling the reader across the chasm that separates one writing space from the next, but we also need to distract and relieve the reader, giving them something to look at (or think about) beyond the horrors of war. We may be beset by ignorant armies, but once in a while we need to remember that comfortable old land of dreams – so various, so beautiful, so new.

7. BUT THERE WAS ONE THING THEY HAD FORGOTTEN

The reader brings to a school story the memory of other school stories they have read, or heard about, or have seen adapted for film or television. Tom Brown plays rugby, Nicola Marlow plays stickball, Harry Potter plays Quidditch, Ender plays The Game. The school story doesn't require a scene on the playing fields, but when we find ourselves there, we know where we are.

Even outside genre convention, conventional episodes communicate where we appear in the story arc while presenting an opportunity to play with the reader's expectation. When our hero changes clothes, we know they are also shifting identities and commencing a new approach to dealing with the world. When our kids have built a small zone of comfort and refuge in the wilderness – whether smoking pipeweed in the ruins of Isengard, building shelters with Ralph and Piggy in the Pacific, or improvising running water in the jungle of *The Naked And The Dead*, we know that this pastoral pleasure will end, and soon we will again be on the run, our heroes isolated, and we are all the eleven o'clock speech.

Timeshift provides an ample source of episodic hypertextuality. We can begin with Trish and her rifle on the roof, the moment when everything goes to hell. Or, we can begin at the start of the school year, unpacking our bags and telling our chums about our summer vacation. The summer after the revolution, the summer of the Occupation, is bound to be worth talking about. We might begin instead last summer, at a country-house party where political parents worry about the rebels and uninvited guests behave badly. Sequence matters, but different sequences need not disrupt coherence or continuity [11] [15].

Stretchtext also provides plenty of opportunity for local hypertextuality. Passages can expand to explain themselves, or to problematize and question what they appear to assert. In free indirect discourse, the narrator speaks in her own voice from a character's point of view [25]:

It was the abode of noise, disorder, and impropriety. Nobody was in their right place, nothing was done as it ought to be.

Stretchtext can invite yet a second voice into the discussion, perhaps challenging the initial observation. Because stretchtext

links are recorded in the trajectory and can take actions that change the reading state, moreover, stretchtext can be used, as it is in Twine, to offer readers a sense of choice [12].

In part because I've been arguing that recurrence is not an error for so many years [1], *Decline and Fall* largely forgoes strict recurrence and avoids conspicuous cycles. There remains a good deal of implicit recurrence, both through reference to what happened in the story-past and in foreshadowing what will happen in the story-future. Because the account is not chronological, both history and prophecy often serve to recall and recapitulate (and sometimes to reinterpret) what a reader has already seen. (The ancients knew what they were doing when they invented Cassandra, a prophet who nobody believes and who can therefore say whatever needs saying without the least risk to continuity.)

8. UNIT TESTING A STORY

Decline and Fall isn't a large novel, but it's fairly large as a hypertext fiction. Even with one starting point, on ending, and a preference to avoid cycles, the network and underlying state machine is complex. What mechanical assistance can the system lend an author wrestling with the network?

First, it's fairly easy to identify a number of common blunders. Tinderbox agents [2] can identify passages that lack inbound links (and so are unreachable) and those with no outbound links (and so end the reading). The syntax for changing the game state

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$Tags(/me)=$Tags(/me)+”otters”
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is easily confused with the syntax for modifying a note after it has been visited.

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$Tags=$Tags+”otters”
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Again, a simple syntax scan can identify suspicious actions.

More interesting, we can use Markov processes to model reader trajectories through the hypertext. This proved surprisingly useful for tracking down errors that led, for example, to unwanted dead ends. This remains far below the sophistication that Stotts and Furuta implemented back in 1989, but it's not been attempted in many writing tools since [30].

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10. REFERENCES

- [1] Bernstein, M. 1998. “Patterns of Hypertext”. *Hypertext '98*. 21-29.
- [2] Bernstein, M. 2003. “Tinderbox”.
- [3] Bernstein, M. 2010. “Criticism”. *Proceedings of the 21st ACM conference on Hypertext and hypermedia*. 235-244.
- [4] Bernstein, M. 2009. “On Hypertext Narrative”. *ACM Hypertext 2009*.
- [5] Bernstein, M. and Greco, D. 2002 *Card Shark and Thespis: exotic tools for hypertext narrative*. In First Person, N. Wardrip-Fruin and P. Harrigan, eds. MIT Press.
- [6] Birkerts, S. 1994 *The Gutenberg Elegies*. Faber and Faber.
- [7] Carr, N. G. 2010 *The shallows : what the Internet is doing to our brains*. W.W. Norton.

- [8] Mee, C. L. "The Trojan Women: a love story".
- [9] Collins, S. 2008 *The Hunger Games*. Scholastic Press.
- [10] Coover, R. 1969 *The Babysitter*. In *Pricksongs & descants; fictions*, ed. Dutton.
- [11] Egan, J. 2010 *A visit from the Goon Squad*. Alfred A. Knopf.
- [12] Short, E. 2016. "Beyond Branching: Quality-Based, Salience-Based, and Waypoint Narrative Structures".
- [13] Grant, M. 2010 *Feed*. Orbit.
- [14] Hornby, N. 2007 *Slam*. G.P. Putnam's Sons.
- [15] Egan, J. 2012. "Black Box". *The New Yorker*.
- [16] Oates, J. C. 2015. "You Will Get Yours: (review of Harry Brandt, *The Whites*)". *The New Yorker*.
- [17] Kakutani, M. 1997. "Never-Ending Saga". *The New York Times Magazine*. 40-41.
- [18] Leonard, E. 2007 *10 Rules of Writing*. William Morrow.
- [19] Mamet, D. 1996 *Make-believe town : essays and remembrances*. Little, Brown.
- [20] Mamet, D. 1998 *Three Uses Of The Knife: on the nature and purpose of drama*. Columbia University Press.
- [21] Bernstein, M. 2016 *Getting Started With Hypertext Narrative*. Eastgate Systems, Inc.
- [22] Bernstein, M. "Storyspace 3". *Hypertext 2016*. in press.
- [23] Millard, D. E., Hargood, C., Jewell, M. O., and Weal, M. J. 2013. "Canyons, Deltas and Plains: Towards a Unified Sculptural Model of Location-based Hypertext Proceedings of the 24th ACM Conference on Hypertext and Social Media". *HT '13*. 109-118.
- [24] Miller, L. 1998. "www.claptrap.com". *New York Times Book Review*. 43.
- [25] Moretti, F. 2007 *Graphs, Maps, Trees: Abstract Models for a Literary History*. Verso.
- [26] Murray, J. 1997 *Hamlet On The Holodeck: The Future of Narrative in Cyberspace*. The Free Press.
- [27] Rose, J. 2001 *The intellectual life of the British working classes*. Yale University Press.
- [28] Rosoff, M. 2004 *How I live now*. Wendy Lamb Books.
- [29] Rowell, R. 2013 *Fangirl*.
- [30] Stotts, P. D. and Furuta, R. 1989. "Petri-net based hypertext: Document structure with browsing semantics". *ACM Transactions on Office Information Systems*. 7, 1, 3-29.
- [31] Tosca, S. P. 2009 *The Lyrical Qualities of Links*. In *Reading Hypertext*, D. G. Mark Bernstein, ed. Eastgate Systems, Inc.