The Pattern Pattern

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1 Structure Matters

Structure has long been seen as a key element of interactive reading and writing, from the earliest mentions of trails across micro-fiche [4] to rich links and virtual documents [13]. In the 1980s and 1990s links became the preeminent interaction method, to the extent that 'The Tyranny of the Link' was considered a serious issue [7]. Interactive stories written in early systems such as Storyspace were therefore comprised of complex link networks. Analysis revealed patterns in those networks: reoccurring link structures, discovered and rediscovered by authors, that provide particular behaviour or aesthetic effects [2]. For example, Tangles or Cycles, which enable readers to re-read previously encountered nodes in the network and reinterpret them with new eyes. Ever since, identifying structural patterns has been a favourite occupation for academics and authors alike [1][6].

Structure has long been part of the discussion of narrative, but historically this has been in terms of story elements like plot or character roles rather than interaction. Patterns appear here too, as in Propp's functions elicited from fairy-tales [10]. Post-structuralists such as Derrida pointed out the dangers of presenting particular structures as fundamental or universal. A danger exemplified by formulaic approaches to plot structure, even when dressed up as archetypes [3]. The meaning and value of story, the post-structuralists argued, is never universal, but rather contextual and dynamic. Universal structures are not universal at all, but rather the realisation of hegemonic forces in society and media.

Within Interactive Digital Narratives (IDN) there has always been a tension between the engineer's instinct to reach for structure, and the post-structuralist view that warns against it. This is a crucial tension for authoring systems, as it manifests directly in the author's interactions with their tools.

2 Macro, Meso, and Micro

Patterns appear at all levels of narrative analysis. At the *Macro* level they describe the narrative arc, from Aristole's *Poetics* and the three-act structure to Campbell's monomyth [5]. Within IDN the focus shifts to the overall interactive structure, such as Ashwell's Standard Patterns including Time Caves (heavily branching trees) or Gauntlets (linear stories with minor branches and deviations) [1].

At the *Meso* level they describe sub-structures that reoccur within that overall structure, which are used for specific narrative or interactive effect. Bernstein's original Hypertext Patterns are of this type, identifying structures such

as split/joins or mirrorworlds that are used to manage complexity [2]. Short calls these small-scale structures, her examples include Conversation Nodes, hubs in dialogue that help to orientate players [11]. In our own work on sculptural hypertext we have also discovered meso patterns, such as Parallel Threads and Phasing [6], that can be used by authors to make sense of otherwise complex sets of rules and constraints.

Finally we also see patterns at the *Micro* level, representing specific mechanics. These are the building blocks of IDN and are so familiar that they become almost invisible: the link, the choice, the unlock. These micro patterns are built into our tools, although in past work I have argued that meso patterns could also be useful as templates for authoring [9].

3 The Strange and the Uncommon

As IDNs become more gamelike they can play with new mechanics [8]. These Strange Hypertexts allow authors to experiment with new ways for readers to construct meaning, surfacing themes in the fabric of the media itself. As the post-structuralists warned, this challenges the universality of patterns that are grounded in our existing technologies and approaches.

In a previous AIS workshop I suggested that the notion of *Uncommon Patterns* might be useful [12]. These are patterns that are common and frequent *within* a work, but possibly unique *to* that work (perhaps exploiting a particular strange mechanic, in the example we were considering this was multi-player narrative). Uncommon patterns suggest that for authoring the aim is not to support specific patterns, but to enable new patterns to emerge and be reused via pattern templates or domain-specific languages.

Uncommon Patterns could be considered a post-structuralist approach to patterns. It is an approach that rejects universality, and instead embraces patterns that are localised in technology or individual works, enabling authors to challenge dominant approaches and explore new ways of constructing meaning within their stories.

Unfortunately it also makes the task of creating authoring tools even more challenging. For it means we are no longer in the business of teaching and supporting a finite set of patterns, but instead embracing the Pattern Pattern itself, and building tools with structural grammars that give authors the power to define their own patterns, and use them to break new ground.

Doubtless the post-structuralists might resist this too, pointing out that patterns are not the only way to think about authoring, and that they emphasise systematic approaches and thinking that could disenfranchise authors that do not share this worldview. There is of course some truth to this, but the correct response is surely informed action rather than inaction. The Pattern Pattern is a challenge to authoring tool designers, but one that could enable more sophisticated interactive experiences, whilst leaving authors their freedom to explore.

References

1. Ashwell, S.K.: Standard Patterns in Choice-Based Games (Jan 2015), https://heterogenoustasks.wordpress.com/2015/01/26/standard-patterns-in-choice-based-games/
2. Bernstein, M.: Patterns of Hypertext. In: Proceedings of the Ninth ACM Conference on Hypertext and Hypermedia : Links, Objects, Time and Space—structure in Hypermedia Systems: Links, Objects, Time and Space—structure in Hypermedia Systems. pp. 21–29. ACM (1998)
3. Booker, C.: The Seven Basic Plots: Why We Tell Stories. Continuum, London ; New York (Nov 2005)
4. Bush, V.: As We May Think (Jul 1945), https://www.theatlantic.com/magazine/archive/1945/07/as-we-may-think/303881/, section: Technology
5. Campbell, J.: The Hero with a Thousand Faces: Written by Joseph Campbell, 1999 Edition,. Fine Communications,US (Sep 1999)
6. Charlie, H., Verity, H., Mark, W., E, M.D.: Patterns of Sculptural Hypertext in Location Based Narratives. In: Proceedings of the 27th ACM Conference on Hypertext and Social Media. ACM (2016)
7. Halasz, F.G.: Hypertext"91 Keynote Talk (1991),
8. Millard, D.: Games/hypertext. In: ACM Conference on Hypertext and Social Media. pp. 123–126 (Jul 2020). https://doi.org/10.1145/3372923.3404775
9. Millard, D.E., Hargood, C., Howard, Y., Packer, H.: The StoryPlaces Authoring Tool: Pattern centric authoring. In: Authoring for Interactive Storytelling 2017 (Nov 2017), num Pages: 6
10. Propp, V.: Morphology of the Folktale: Second Edition. University of Texas Press, Austin, 2rev ed edition edn. (Jan 1971)
11. Short, A.E.: Small-Scale Structures in CYOA (Nov 2016), https://emshort.blog/2016/11/05/small-scale-structures-in-cyoa/
12. Spawforth, C., Gibbins, N., Millard, D.: Uncommon patterns - Authoring with story specific structures. In: Authoring for Interactive Storytelling Workshop - ICIDS 2018 (Dec 2018), num Pages: 6
13. Watters, C.: Information Retrieval and the Virtual Document. Journal of the American Society for Information Science **50**(11), 2 (1999)