Interactive Storytelling in the AI Era: Using Propp's Methodology to Enhance User Experiences

Written by: Mona Khorsandi

Read Article-Persian Version:

Link: https://mahnamehsaba.ir/12136/

Introduction

The rise of interactive media, such as video games and interactive films, has transformed storytelling into a dynamic and participatory experience. Unlike traditional narratives, where the audience passively absorbs the story, interactive media invites users to influence the plot, shape character arcs, and decide outcomes. Games like Fortnite and interactive films on platforms like Netflix have demonstrated the power of this medium to engage users deeply.

However, this evolution also presents unique challenges: how can these stories maintain narrative coherence while allowing for user-driven choices? This is where Vladimir Propp's narrative methodology, with its structured archetypes and functions, can play a transformative role. By integrating Propp's framework with Artificial Intelligence (AI), interactive media can offer rich, personalized storytelling experiences that maintain narrative integrity, even as users actively shape the plot.

Interactive Media: The AI Connection

AI has revolutionized interactive storytelling by enabling media to adapt dynamically to user inputs. For example, in video games like Fortnite, AI-driven algorithms analyze player choices and behaviors to offer customized storylines. Similarly, interactive films use decision trees powered by AI to create branching narratives that cater to user preferences.

While this approach allows for unprecedented user engagement, it often sacrifices narrative depth and coherence. Without a clear structure, interactive media risks becoming fragmented or repetitive. Propp's methodology offers a solution by providing a consistent narrative backbone that AI can adapt to user inputs.

Propp's Methodology in Interactive Storytelling

Propp's narrative framework identifies 31 functions and recurring archetypes, such as the hero,

villain, and helper, which structure traditional folk tales. In an interactive setting, these elements can serve as modular building blocks, enabling AI to craft personalized but coherent stories based on user decisions.

For instance:

- User-Defined Archetypes: Players can choose to embody specific roles, such as the hero or helper, while AI ensures that their choices align with the larger narrative structure.
- Dynamic Plot Functions: As users make decisions—whether to confront a villain or ally with a helper—AI-driven algorithms can draw from Propp's functions to adapt the plot organically.
- Customized Endings: Propp's framework allows for multiple endings that feel narratively satisfying, ensuring that user-driven stories retain thematic depth.

Example: Applying Propp to Interactive Games

Imagine an interactive game where users explore a mythical world inspired by Persian folklore. Using Propp's methodology, AI could adapt the story based on user decisions while maintaining coherence:

- The Villain (Zahhak): Users might choose to confront or evade the villain, with AI adjusting the stakes and challenges accordingly.
- The Hero's Journey (Fereydun): Players can shape their path as the hero, deciding whether to rely on helpers or face trials alone.
- The Helper: NPCs (non-playable characters) could take on the role of Propp's helper archetype, offering guidance or resources based on user interactions.

This approach ensures that while users shape the story, the narrative retains its cultural and structural integrity.

Interactive Films: A New Frontier

Interactive films, such as Netflix's *Black Mirror: Bandersnatch*, have shown how user-driven narratives can create immersive viewing experiences. However, the lack of a guiding narrative structure often leads to disjointed storytelling. By integrating Propp's methodology, interactive films could:

- Align Choices with Archetypes: Ensure that user decisions align with established archetypes, such as hero or villain, maintaining narrative coherence.
- AI-Driven Branching Paths: Use Propp's functions as a template for branching storylines, allowing AI to craft personalized but cohesive narratives.
- Cultural Depth: Interactive films based on cultural stories, like those in the Shahnameh, could use Propp's framework to ensure authenticity while adapting to diverse user choices.

Challenges and Opportunities

While the integration of AI and Propp's methodology holds immense promise, it also presents challenges:

- Complexity of Implementation: Designing AI systems capable of dynamically adapting Propp's functions requires advanced algorithms and extensive testing.
- Balancing User Freedom and Narrative Integrity: Striking a balance between user-driven choices and cohesive storytelling is a delicate task.
- Cultural Sensitivity: When adapting traditional narratives like Shahnameh, developers must ensure that AI respects cultural values and avoids stereotypes.

Despite these challenges, the potential of this approach is immense. Interactive media powered by Propp's methodology could revolutionize storytelling by offering users personalized yet meaningful experiences.

Conclusion

As interactive storytelling continues to evolve, integrating Propp's narrative framework with AI-driven media offers a unique opportunity to create engaging, culturally rich, and coherent narratives. Whether in video games or interactive films, this approach ensures that user-driven stories retain the depth and integrity of traditional storytelling.

By combining the timeless principles of Propp's methodology with the cutting-edge capabilities of AI, we can unlock new possibilities for immersive, meaningful storytelling in the digital age.