

The Haiti Earthquake Experience

A Case Study

Michael Gibson, President Zapdramatic

michael@zap.ca

Abstract. The author summarizes his experience creating a story-based simulation from raw documentary footage taken in the aftermath of the 2010 earthquake in Haiti. The use of Propp's typology to create a heroic framework within which to organize the material is explained. The author introduces the concept of Negotiation Clouds to improve a fold-back story structure and create meaningful agency for the user without compromising author control of the narrative.

Keywords: Negotiation clouds, simulation, Haiti, Zapdramatic, Fold-back story, Propp, Inside Disaster, Michael Gibson, role-play, documentary.

1 Introduction

A PTV documentary crew led by director Nadine Pequenezza went down to Haiti a day and a half after the 2010 earthquake and spent two weeks filming the efforts of the International Red Cross. They returned to Canada with over two hundred hours of material to create the documentary film, *Inside Disaster*. Our job was to support the film by re-purposing the footage to create an interactive simulation that revealed the complex interdependencies of a Survivor, Journalist and Aid Worker. The challenge for us was to imbue the video fragments with the character arcs and plot twists that would keep the user engaged from beginning to end. Our goal was to create an interactive experience that not only revealed the false assumptions made by first responders that led to significant strategic errors but also to do so in such a way that the user was given agency in the execution of those errors and thus achieved a valuable virtual life experience without the consequences of the real world.

1.1 Structuring a Role-Play Documentary

What would you do if you were an inexperienced humanitarian, moved by the horrific images of suffering in Haiti, to organize a shipment of relief items only to discover that once you arrived you had to compete for logistical support with the 900 other NGOs on the ground? If you were a journalist, how would you make sense of the chaos? If you were a survivor who lost your home and family members and everything you owned, how would you react to the foreigners invading your city, who

seemed to be working at cross-purposes, bearing grossly inadequate amounts of food, water and medical aid? These were the questions that we sought to make live for our users. To do so, with documentary film, we needed to construct a narrative out of disconnected video fragments. An interactive experience where the user is given agency imposes additional challenges because the agency to do one thing or another can quickly create holes in our story that were not filmed. To address this issue we needed a linear structure where the content, the characters and events, could be interchanged but the functional sequence of the story remained consistent.

1.2 Propp's Typology

In his book, *Morphology of the Folktale*, Vladmimir Propp identified 31 sequential story elements that were consistent in 100 popular Russian folktales. Propp's research suggested not only that every good story contains most of these elements or functions, but also that the functions are always arranged in the same sequence. These functions are "independent of how or by whom they are fulfilled" (Propp 1968, p.21). Interactive designers have used Propp's typology before, notably Eudaemon (Tomaszewski & Binsted, 2007), GEIST (Grasbron and Braun 2001; Spierling, et al. 2002) and OPIATE (Fairclough 2005). Propp's typology is useful because the narrative progression depends on function rather than content. The functions are arranged in a consistent sequential order but the content within the functions can change. It thus allows us to swap content without derailing the narrative arc of the story. Tomaszewski and Binstead in their paper¹ describe the limitations they found applying Propp's typology. However, we found it useful because each of our three stories closely aligned with Propp's Hero's journey.

1.3 Learning Outcomes

Once we'd sketched out our stories from the video footage, we had to determine the key-learning outcome that each story could deliver to the user. We decided that in each case it would be based upon a common false assumption that we observed led to a bad strategic choice, which in turn, led to a negative outcome. To be effective, we wanted to ensure that most users initially made the wrong choice and experienced the negative consequences of a poor strategic decision. Our belief was that failure is the best teacher because it stings and makes us sit up and pay attention and demand to know what we did wrong. To achieve this objective we needed the simulation to mimic the rationalizing mental chatter that precedes a strategic mistake despite our better judgement. In essence, we needed the simulation to set up a realistic set of circumstances that would lead the user into making a false assumption and a strategic mistake. If the user by chance or otherwise chose the correct strategy then we needed the simulation to, in essence, negotiate with her to change her mind based on the exigencies of the moment. For example, in the Aid Worker story, the learning

¹<http://www2.hawaii.edu/~ztomasze/argax/pubs/2007-TomaszewskiBinsted-ProppLimitations.pdf>

outcome was that despite the urgent need, best practices dictated that aid should be sorted in advance of distribution because some items such as baby formula can actually do more harm than good. In Haiti there was scarcity of clean water and formula mixed with contaminated water could cause disease and possibly death. Many of the Aid groups arrived with containers full of mixed donations, some of which were inappropriate for the specific needs of the Haitian people. If the user made the correct decision to sort the donations, we designed the simulation to respond by serving up realistic circumstances to frustrate that intention such as congested roads, a lack of secure warehousing and inadequate logistical support. We supposed that only the most resolute of users would not give in and choose to acquiesce to the clamour of demand on the streets.

Propp's functions enabled us to weave unrelated video clips into a linear narrative but we still needed a means to allow user agency without an exponential growth of the size of the simulation or a confusion of the learning outcomes.

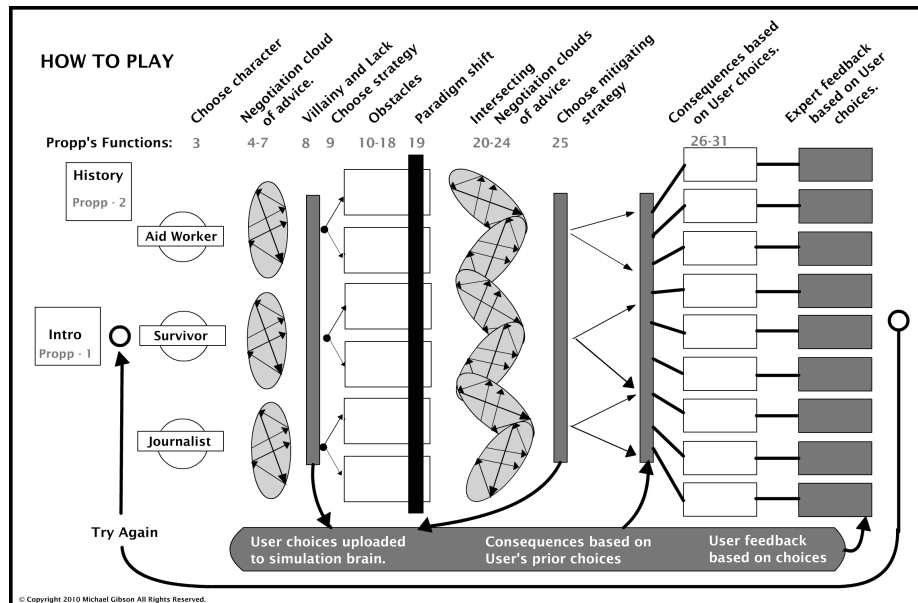


Figure 1: The diagram above shows the linear timeline of the simulation with Propp functions and the two strategic decision points preceded by the interactive negotiation clouds.

2. Foldback Story and Negotiation Clouds

Ernest Adams in his book *Fundamentals of Game Design* describes a structural approach called Foldback² story that addresses the issue of interactivity in a linear narrative. Essentially, the author can create a rich narrative structure and then at

² Fundamentals of Game Design Second Edition, pages 170-175

various points along the way, enable the User to branch off and make choices, creating the illusion that the user is in control only to have the narrative fold back by an inevitable pre-scripted event. In his analysis of the drawbacks of this approach he suggests that the user may feel cheated when she suspects that her illusion of choices actually has no consequence to the overall narrative. This sense of being cheated is exacerbated if the user is led to believe that every decision is strategic. Our script used a refinement of the fold-back story structure where we reduced the strategic decisions to one per role-play with the possibility of revisiting that decision after experiencing an initial consequence. The bulk of the user interactivity was not strategic but rather took place in what we call a negotiation cloud of information and advice and/or argument. The user enters the cloud purposefully and encounters circumstances and arguments contrary to that purpose. We call it a cloud because the duration and navigation of the user's stay is dependent upon the user's inquisitiveness and resolution to the initial strategy, not the game architecture. The primary purpose of the negotiation cloud is to educate and engage the user in a strategic argument. By creating a realistic environment where the user commits to a strategic mistake, the user then benefits from the negative experience when the virtual consequences ensue. A virtual experience while mirroring real life, doesn't pack the same life-changing consequences that the same mistake in the real world would bring about, the very mistake that the simulation is designed to correct.

3.0 Conclusion

We found that the use of Propp's typology was helpful to organize unrelated documentary footage into a coherent narrative experience. We also found that confining user interactivity to one of two types, Negotiation or Strategic, and by tying the strategic decisions directly to the learning outcomes, we were able to provide the user with meaningful agency in the negotiation clouds without losing narrative control or obfuscating the intended learning outcome.

The Haiti Earthquake Experience will launch in October at <http://www.insidedisaster.com>.

REFERENCES

- Adams, Ernest (2010) *Fundamentals of Game Design Second Edition*. Berkley, CA: New Riders.
- Propp, V (1968) *Morphology of the Folktale*. American Folklore Society and Indiana University.
- Tomaszewscki, Zach; Binstead, Kim (2007) *The Limitations of a Propp-based Approach to Interactive Drama* University of Hawaii—Manoa, Honolulu.