

Children's Story Authoring with Propp's Morphology

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Overview

1. Propp's morphology
2. Exploratory, paper & pencil study
3. Computer prototype

1 2 3

Propp's morphology

Propp's morphology
as a
story construction kit
for children

Break up plots into their constituent “functions” :

- An eagle carries the boy to the top of the highest mountain.
- A magical animal leads Suçenko to the lake at the heart of the forest.
- A fish tells Kelandra the way to the villain’s castle.
- **The hero arrives at the whereabouts of his object of search.**

Propp found 31 functions in 1000 Russian wonder tales.



Propp found 31 functions in 1000 Russian wonder tales.



Interactive Narrative

- **Kashani**, *Dynamic Storylines in Interactive Virtual Environments*.
- **Fairclough**, *Story Games and the OPIATE System*.
- **Grasbon, Braun et al.**, *GEIST*.
- **Peinado et al.**, *ProtoPropp*.
- **Prada et al.**, *TEATRIX*.
- **Tomaszewski & Binsted**, *The Limitations of a Propp-based Approach to Interactive Drama*.

Story Writing: Propp's Cards

- **Rodari**, *The Grammar of Fantasy*.
- **Charles**, *Making traditional tales relevant for contemporary children*.

Propp's Morphology

- A tool for **constructing plots**.
- To allow children to create well-structured stories of their own.
- To help to structure childrens' ideas, and to generate ideas.
- **Interact** with plots at different structural levels.

Research Questions

1. Can children use Propp's morphology to construct stories?
2. How successfully do they use it?
3. What do they do with it?

1 2 3

Exploratory, paper & pencil study

- **Two week study at Collingwood Primary School, Newcastle.**
- **Using paper story maps and story cards.**
- **Children wrote their stories on the story cards with pencils.**
- **42 participants aged 7-11.**
- **Quantitative and qualitative data.**

9




Or



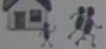
VILLAINY!


The villain steals an object, kidnaps a victim, or puts a spell on a victim.


Story Map


The Introduction
1 Home

Family members or just the future hero are introduced with their names and situations.


The Beginning, The Build Up: Things happen that make way for the villain to do villainy.


The Build Up
2 Someone Leaves

Parents or elders leave home because of: work, travel, business, war, death, or another reason.

The Build Up
3 Warning or Request

The hero gets a warning not to do something or a request to do something.

The Build Up
4 Ignored

The hero ignores a warning or request that has been given to him.

The Build Up
5 Spying

The villain spies or asks questions about the object or person he wants to get.


The Build Up
6 Information

INFORMATION
The villain gets the information he wants.


The Build Up
7 Trick

The villain puts on a disguise and plays a nasty trick on the hero or victim.


The Build Up
8 Fooled


The hero falls for the villain's trick and helps the villain.


The Problem or The Obstacle: a villainy or a need means that the hero leaves on a journey.

The Problem
9

VILLAINY!
The villain steals an object, kidnaps a victim, or puts a spell on a victim.

The Problem
10 Need or Want

The hero or someone else needs or wants something.

The Problem
11 Help

The hero learns of the villainy, need or want from a call for help, a request, a command, a threat, or news.

The Problem
12 Deciding

The hero decides or agrees to go on a journey to search for it and bring it.

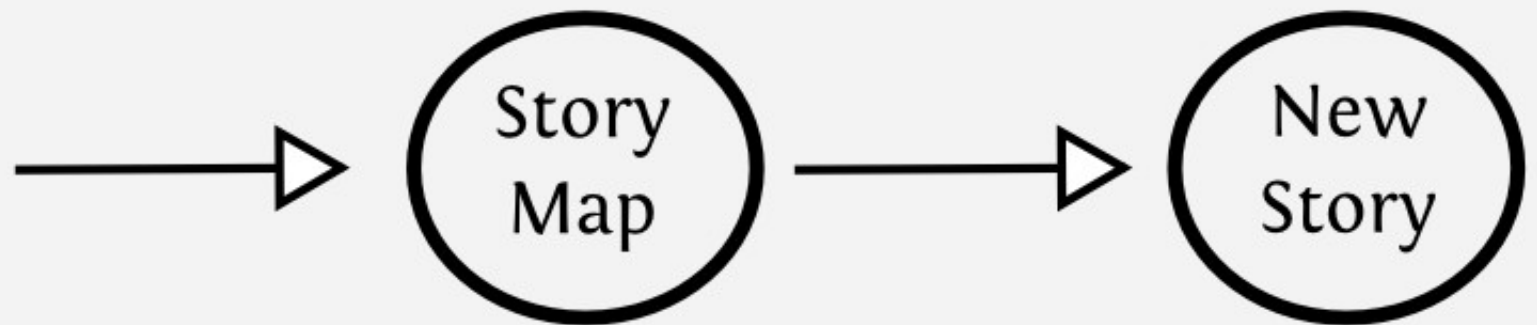
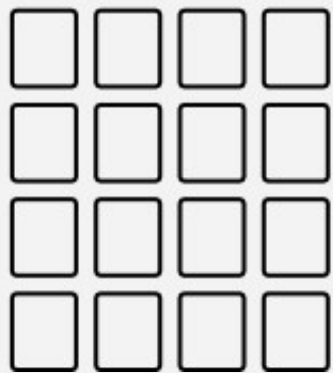
The Problem
13 Leaving

The hero leaves on a journey.

Week 1: Recasting a story



Week 2: Generating a story

Propp Cards



Quantitative Results

Function: Arrival, the hero arrives at the whereabouts of the object of search.

Species a: The hero uses a mobile means of transport: animal or vehicle, magical powers, etc.

Plot Event: A tsar gives an eagle to a boy. The eagle carries the boy to the top of the highest mountain.

Plot Event: A princess gives Ivan a ring. Young men appearing from out of the ring carry Ivan away to another kingdom.

Species b: The hero is guided: another character shows or leads the way, the hero follows a trail left by another character, the hero follows a sign, etc.

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How closely do the stories written match the Propp functions used?

Week 1, recasting: 86.96% - 90.20%

Week 2, generating: 77.32% - 79.28%

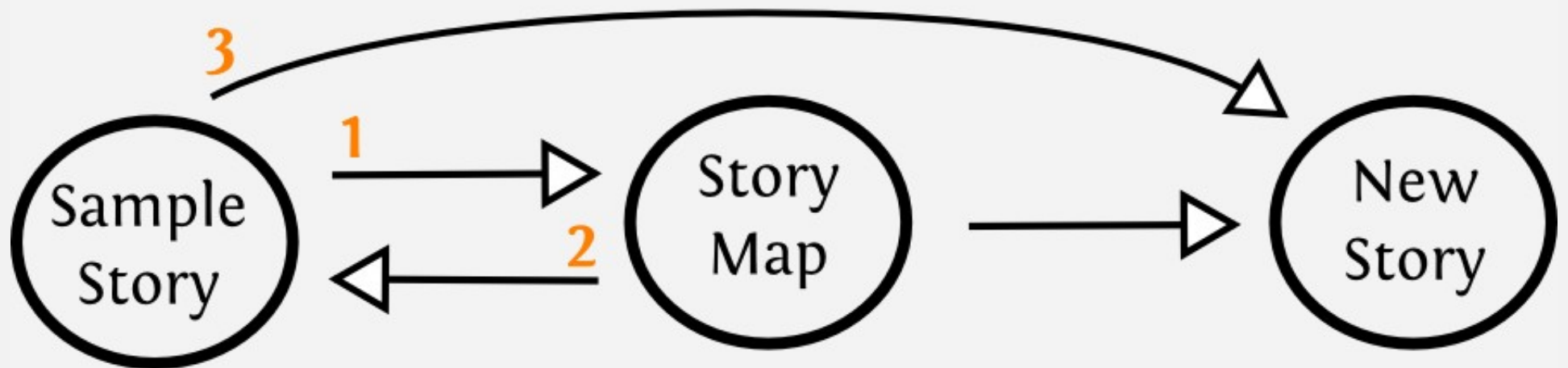
The accuracy
measure alone
does not account
for the quality of
the stories.

Qualitative Results

Week 1: Recasting a story



Week 1: Recasting a story



“Then the super hero saw Bonanza and threw a knife at his throat and his throat split open ...

Then Bonanza started to come alive and started to chase them.”



Writing is hard work.

Practical Limitations

**A paper interface is
too inflexible.**

**A paper interface is
too limiting.**

1 2 3

Computer prototype

Story Cards



My Story



The Future

1. Can children use Propp's morphology to construct stories?
 - Generate story maps without ever having seen a sample story.
 - Use multiple forms of assessment:
 - Accuracy measure.
 - Teacher's assessment.
 - Peer assessment.

Order of Difficulty

- Some Propp functions are easier than others.
- More constraints is easier: e.g. order of cards.
- Some constraints can be challenges: e.g. start with a difficult card.

Summary

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