THE NEVER ENDING STORY

The Cultural Evolution of Narratives

Part II...
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By

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Once upon a time...
Darwinian Natural Selection

• In On the Origin of Species
• 3 principals of natural selection
  1. Variation – There should be a variety of traits
  2. Inheritance – Traits should be passed from parent to offspring
  3. Competition – Some traits must be selected for while others not
Cultural Evolution

• Foundational concept – human culture meets these three principals
• Culture evolves in Darwinian sense (Mesoudi, Whiten & Laland, 2004)
• As examples of human culture narratives meet the three principles

“Each event, or incident, in a narration, possesses a certain potency of reproduction. The under potent is omitted; the normally potent is reproduced; the over potent is not only reproduced, but may so dominate all the rest as to change the whole course of the narration”

Bartlett 1920
Narrative Evolution

• Variation:
  • Aarne Thompson Uther (ATU) Index identifies over 2,000 international tale types in over 300 cultures
  • ATU 333 = Little Red Riding Hood
  • ATU 123 = The Wolf and the Kids
Narrative Evolution

• Inheritance
  • Social transmission of cultural traits
  • Stories told by our parents
  • Stories we tell our friends
Narrative Evolution

- Competition
  - No one person can know all stories
  - Selection of what to listen to
  - Selection of recall – some stories more memorable than others
  - Selection of what stories to pass on
Why does it matter?

• If stories evolve like organisms
• We can use methods to examine that evolution
• Predict how stories might evolve
Methods

• Cultural evolution approach uses range of methods
• We’ll discuss three:
  1. Transmission chains
  2. Corpus analysis
  3. Phylogenetic trees
Transmission Chains

- Pioneered by Frederic Bartlett
- Like ‘Chinese Whispers’ or ‘Telephone’
- Reveals processes of transmission
  - What is remembered?
  - What is passed on?
  - What parts of a story are preserved through transmission?
  - What changes are introduced?
Corpus Analysis

• A form of text analysis
• Uses computational approaches to analyse large volumes of text
• Make comparisons between texts at a large scale
• Answer questions impossible with coding by hand
A Phylogenetic Approach
A Phylogenetic Approach
Folktale “DNA”

Daughter goes out to visit grandmother
Mother goes out to visit her grandmother

She is attacked by a wolf
She is attacked by a tiger
She is attacked by a ogre

She is eaten up by the monster
She escapes from the monster
She is eaten up by the monster, but rescued by a woodcutter
Conclusions

• Cultural Evolution applies a Darwinian approach to culture

• Narratives show key features of
  • Variation
  • Heredity
  • Competition

• Researchers examine culture evolution using
  • Transmission chains
  • Corpus analysis
  • Phylogenetic trees