

Computational approaches to narrative

Allison Parrish
New York University



What is narrative?



Narrative, a working definition

“Narrative is the representation of an event or a series of events.” (Porter 2008)

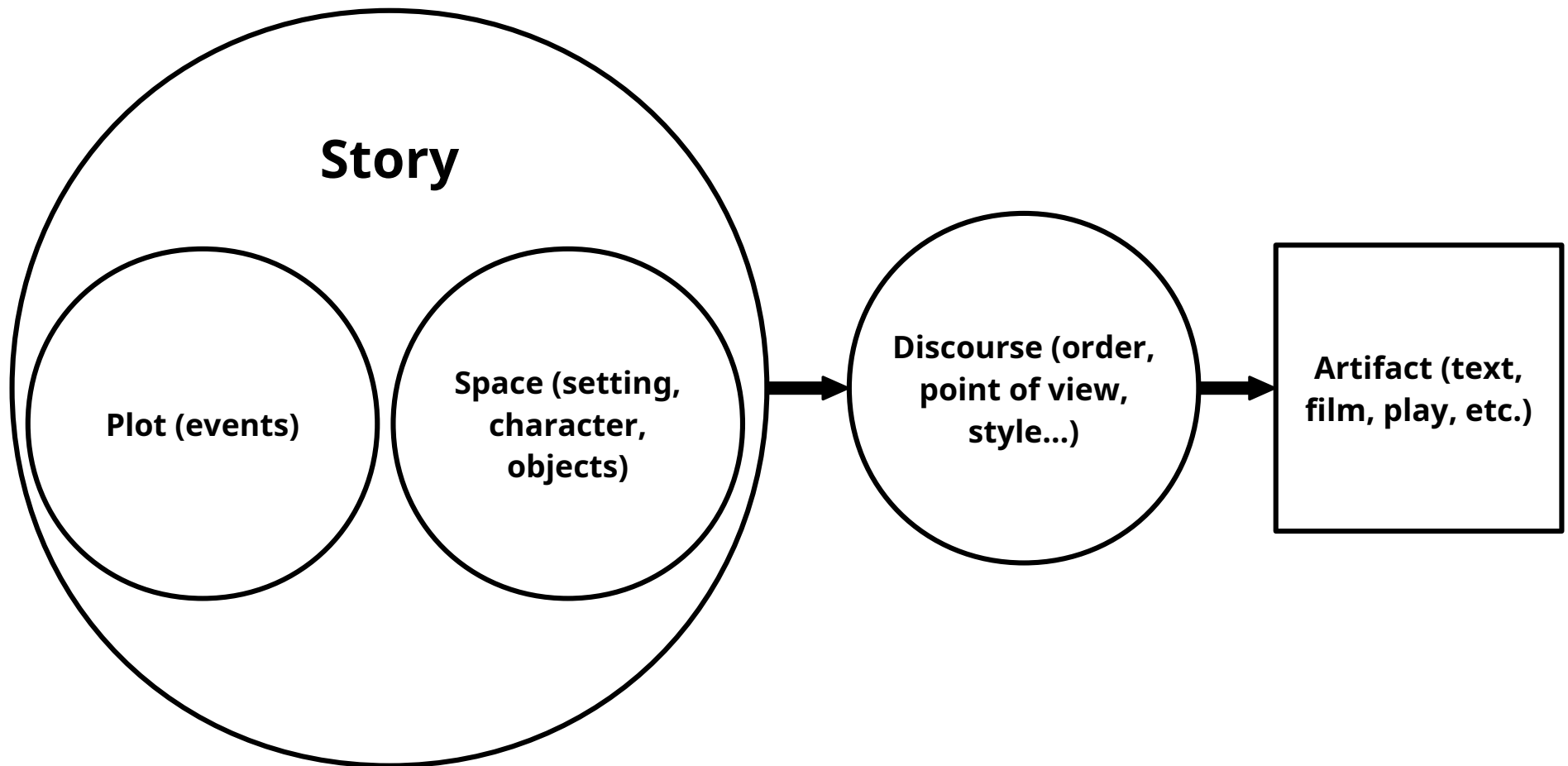


Components of narrative

- narrative: *story* + *discourse*
- story: *plot* + *space*
- plot: events, ordered in time (instigated by entities in a space)
- space: characters, settings, props, etc. ("storyworld")
- discourse: a particular telling of the story (style, ordering, duration, focalization, etc.)

(Adapted from Kybartas and Bidarra)

Our adorable structuralist model of narrative





Rodgers & Hammer

Special_Effect • 1.9M views



Cinderella - Don't Know

CinderellaVEVO  79M views

Music video by Cinderella performed by Cinderella
Island Def Jam Music Group

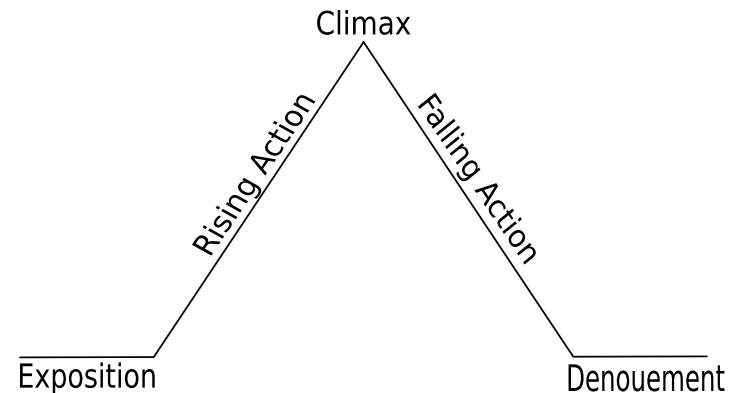
Cinderella

- Plot:
 - Ill-treated heroine
 - Fairy godmother
 - Rags transformed into magic dress
 - Meeting a prince
 - Lost shoe
 - Shoe test
 - Happy marriage
- Space/storyworld
 - Château in rural France
 - Lady Tremaine and stepsisters
 - Glittering palace
 - Animal friends
- Discourse
 - Adaptations (folktale, novel, film)
 - Order of events (flashback?)
 - Point of view
 - Style

(adapted from description of *Cendrillon* in Cox, p. 36)

Theories of plot

- Joseph Campbell's *monomyth*:
"A hero ventures forth from the world of common day into a region of supernatural wonder: fabulous forces are there encountered and a decisive victory is won: the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man" (Campbell, p. 23)



- Freytag's pyramid
- Plotto (Cook)
- Every book of writing advice ever



**Why approach narrative
with computation?**



Interactive narratives

- Change the “plot” of the story (order of events) based on user input
- Model the storyworld in such a way that the user can “explore” it, independent of plot
- Dynamic characters respond to player action
- Tell the story from different points of view
- Etc.



An aid to understanding structure and aesthetics

“[A]n attempt to uncover unarticulated aesthetic preferences in the human author and then force the machine to recapitulate these.”—Emily Short,
Parrigues Tarot



Create surprises

- "If you don't invent a new technique then what you're making probably isn't new"—Phillip Glass
- Randomness + computational models = ability to produce surprises (that wouldn't have happened otherwise)

Citations

- Kybartas, B., and R. Bidarra. "A Survey on Story Generation Techniques for Authoring Computational Narratives." *IEEE Transactions on Computational Intelligence and AI in Games*, vol. 9, no. 3, Sept. 2017, pp. 239–53. IEEE Xplore, doi:10.1109/TCIAIG.2016.2546063.
- Abbott, H. Porter. *The Cambridge Introduction to Narrative, 2nd edition*, Cambridge University Press, 2008, p. 14
- Cox, Marian Emily Roalfe. *Cinderella; Three Hundred and Forty-Five Variants of Cinderella, Catskin, and Cap o'Rushes*. London, The Folk-lore Society, 1893. Internet Archive, <http://archive.org/details/cu31924007918299>.
- Campbell, Joseph. *The Hero with a Thousand Faces*. New World Library, 2008.
- Cook, William. *Plotto: The Master Book of All Plots*. Tin House Books, 2011.