Communicating with Data – Storytelling

Dr. Ab Mosca (they/them)

Plan for Today

- Narrative structures
- Narrative structures in visualization
- Roles of the reader and the author

Storytelling with visualization



Discussion

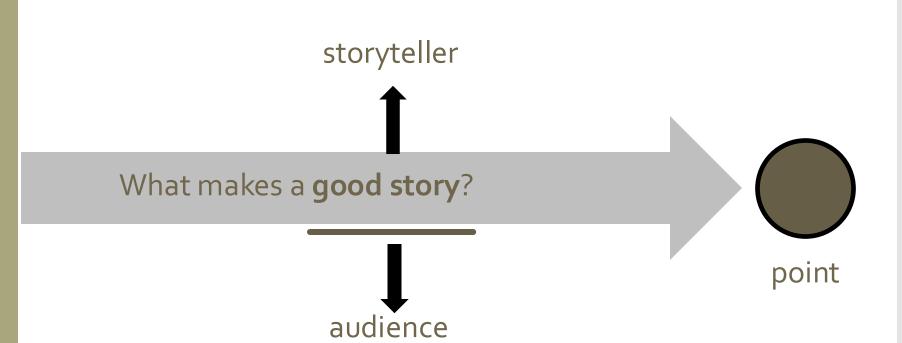


Story teller & Audience





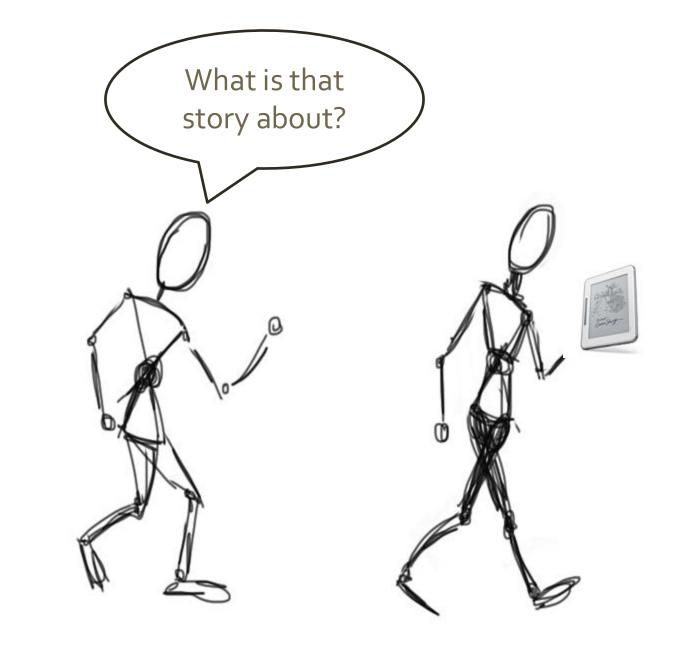
Discussion

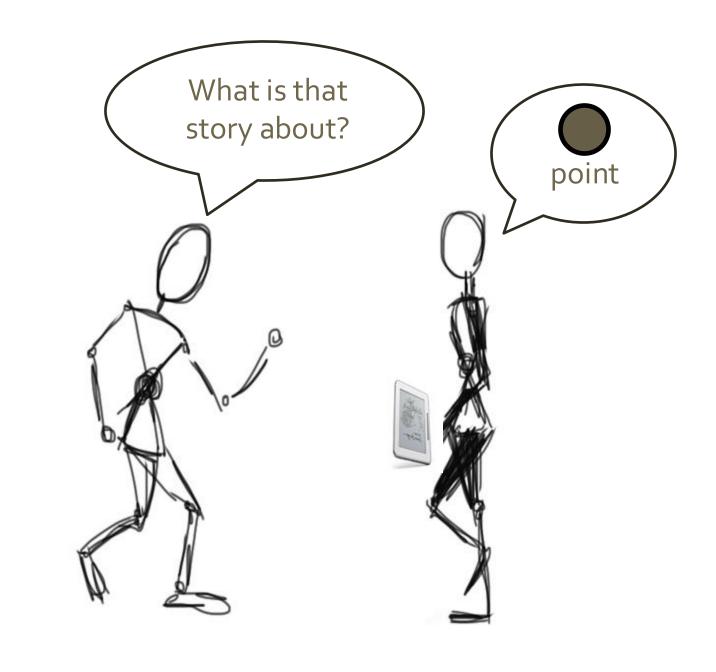


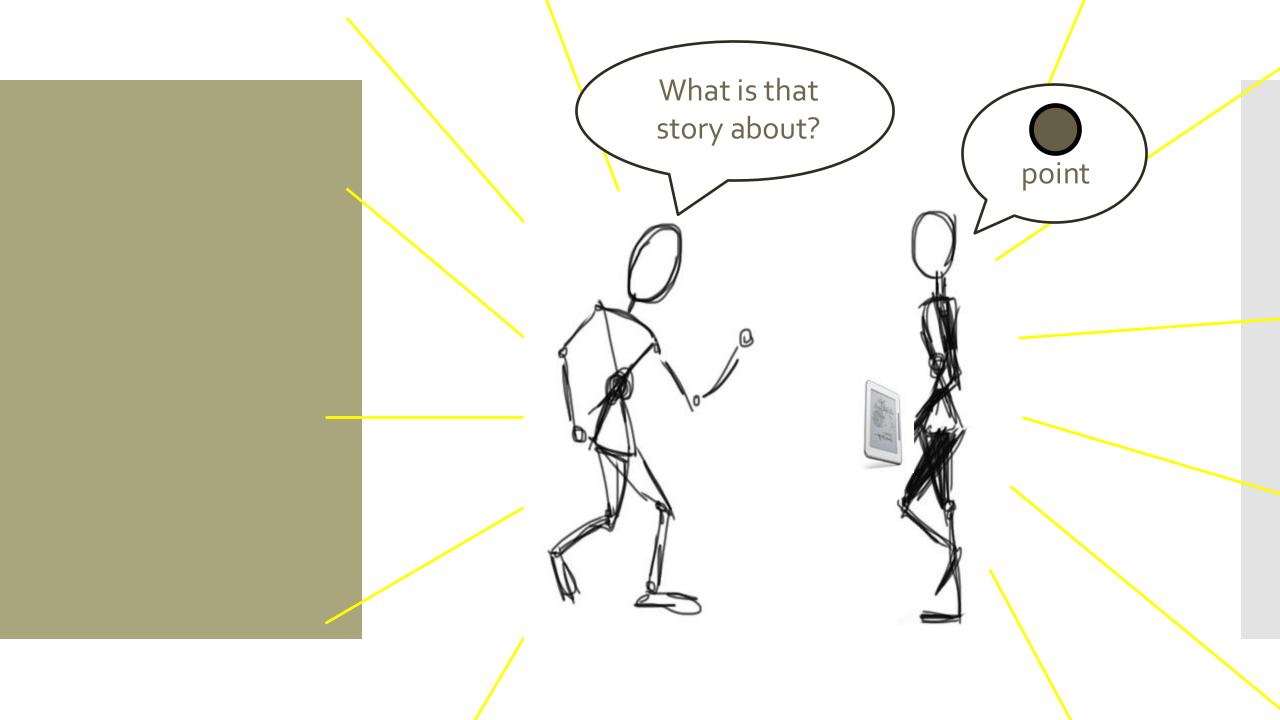




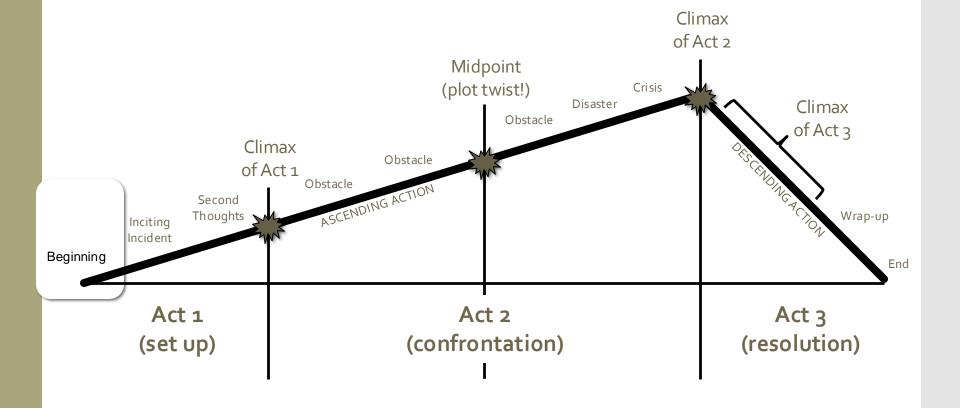






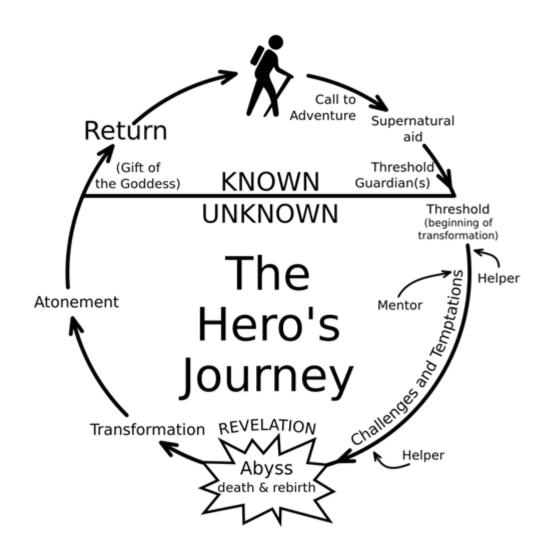


Ways to get to the point



Three Act Structure

Ways to get to the point



Ways to get to the point (according to Vonnegut)

Man in Hole

Boy Meets Girl

From Bad to Worse

Which Way Is Up?



The main character gets into trouble then gets out of it again and ends up better off for the experience.



Arsenic and Old Lace



Harold & Kumar Go To White Castle



The main character comes across something wonderful, gets it, loses it, then gets it back forever.



Jane Eyre

Eternal Sunshine of the Spotless Mind



The main character starts off poorly then gets continually worse with no hope for improvement.



The Metamorphosis



The Twilight Zone



The story has a lifelike ambiguity that keeps us from knowing if new developments are good or bad.



Hamlet



The Sopranos

Creation Story

In many cultures' creation stories, humankind receives incremental gifts from a deity. First major staples like the earth and sky, then smaller things like sparrows and cell phones. Not a common shape for Western stories, however.

Old Testament



Humankind receives incremental gifts from a deity, but is suddenly ousted from good standing in a fall of enormous proportions.



Great Expectations

New Testament



Humankind receives incremental gifts from a deity, is suddenly ousted from good standing, but then receives off-the-charts bliss.



Great Expectations with Dickens' alternate ending

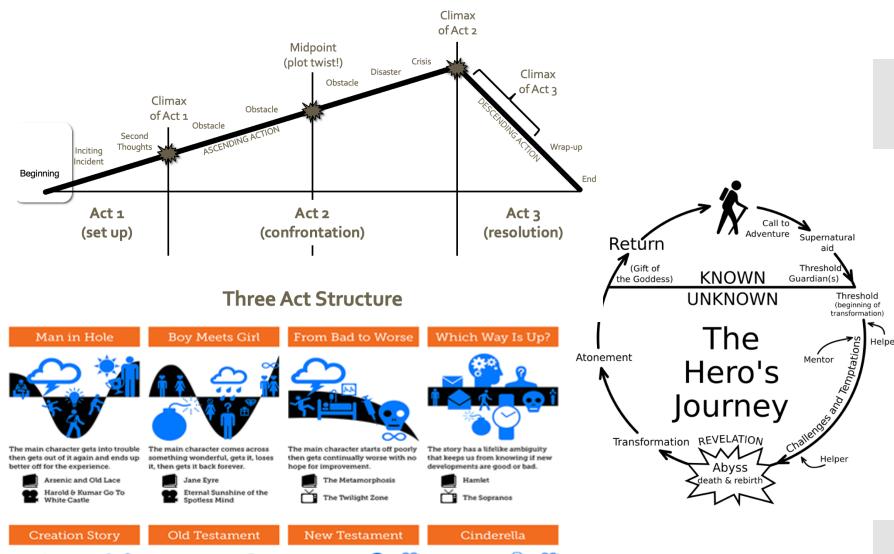
Cinderella



It was the similarity between the shapes of Cinderella and the New Testament that thrilled Vonnegut for the first time in 1947 and then over the course of his life as he continued to write essays and give lectures on the shapes of stories.

Designer: Maya Eilam, www.mayaeilam.com Sources: A Man without a Country and Palm Sunday by Kurt Vonnegut

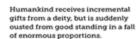
What movies use what arc?





In many cultures' creation stories, humankind receives incremental gifts from a deity. First major staples like the earth and sky, then smaller things like sparrows and cell phones. Not a common shape for

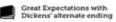
Western stories, however.







ousted from good standing, but then receives off-the-charts bliss.



It was the similarity between the shapes of Cinderella and the New Testament that thrilled Vonnegut for the first time in 1947 and then over the course of his life as he continued to write essays and give lectures on the shapes of stories.



And a bunch of other stuff, too...



Doesn't default to an easy solution

Goes beyond the five senses

Inner struggle

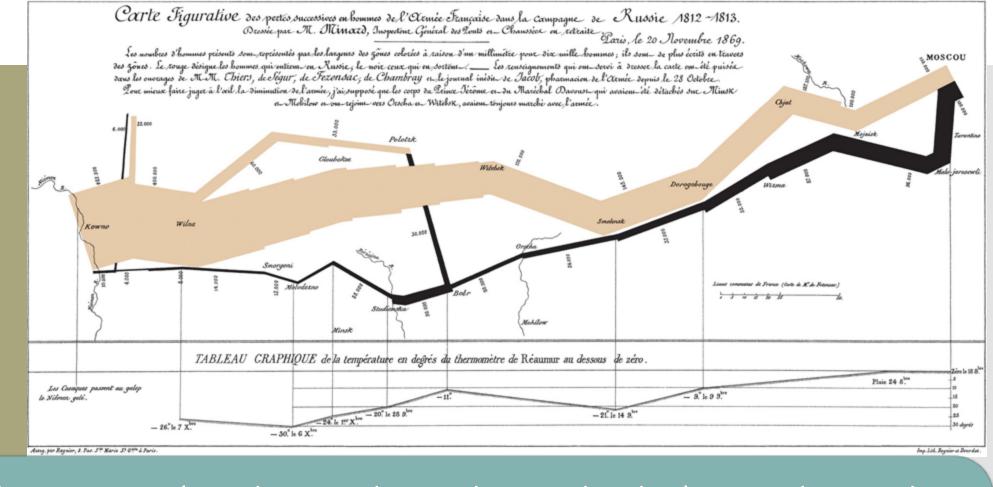
Storytelling with visualization



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Napoleon's March

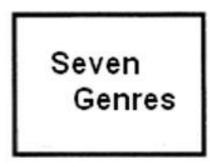


"Probably the best statistical graphic ever drawn, this map by Charles Joseph Minard portrays the losses suffered by Napoleon's army in the Russian campaign of 1812. Beginning at the Polish-Russian border, the thick band shows the size of the army at each position. The path of Napoleon's retreat from Moscow in the bitterly cold winter is depicted by the dark lower band, which is tied to temperature and time scales." - Edward Tufte

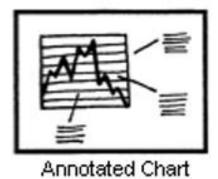
Design Space of Narrative Visualization

- 1. Genre
- 2. Visual Narrative Tactics
- 3. Narrative Structure

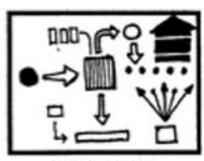
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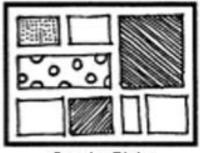


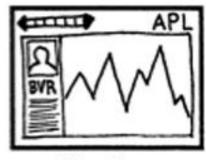














Flow Chart

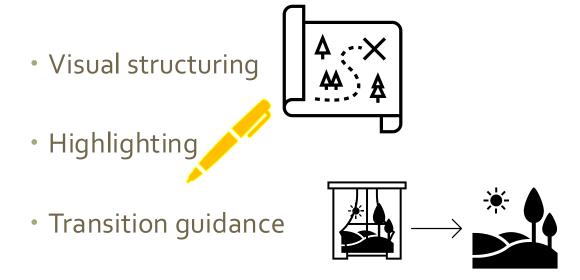
Comic Strip

Slide Show

Film/Video/Animation

Visual Narrative Tactics

Visual devices that assist and facilitate the narrative



Narrative Structure

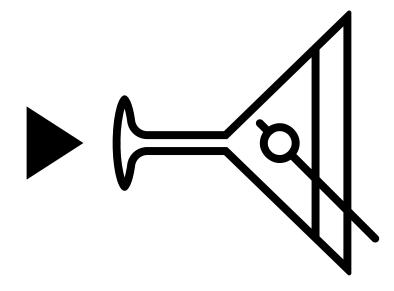
Author Driven

Reader Driven

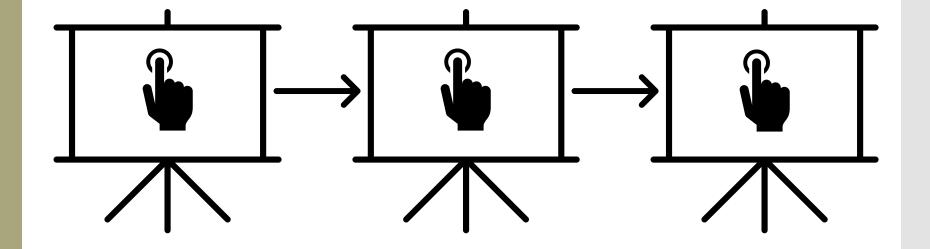
- Linear ordering of scenes
- Heavy messaging
- No interactivity

- No prescribed ordering
 - No messaging
 - Free interactivity

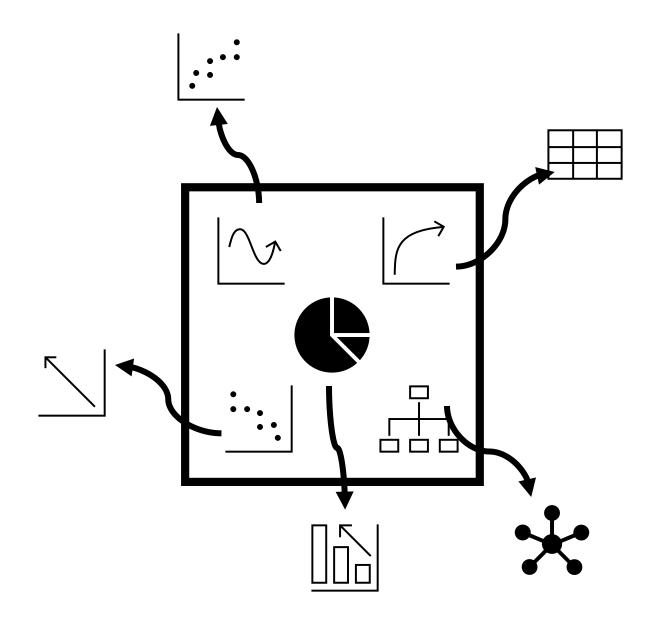
Narrative Structure: Martini Glass



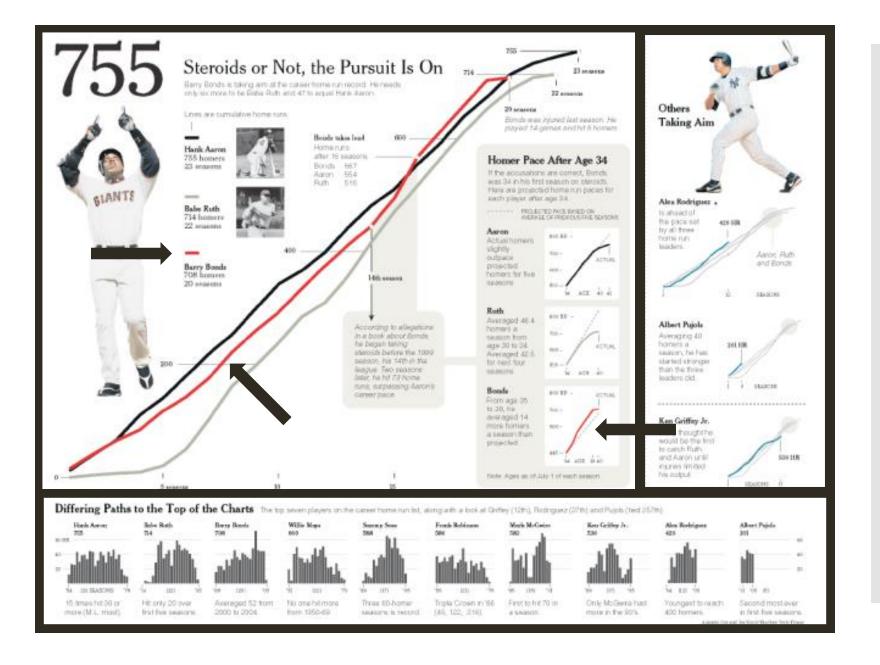
Narrative Structure: Interactive Slide Show



Narrative Structure: Drill-Down Story



Example: Baseball (static)



Example:
Wealth
inequality in
the US
(animated)



https://youtu.be/QPKKQnijnsM?si=j_hPOOslxFGkNgHM

Example:
Wealth
inequality in
the US
(interactive)



https://www.npr.org/sections/money/2015/02/11/384988128/the-fall-and-rise-of-u-s-inequality-in-2-graphs

Practice

- Work in small groups or pairs
- Pick a topic of interest to you
- Sketch 3 possible narrative visualizations for your topic
 - One should be primary author-driven
 - One should be primarily reader-driven
 - And the last should be somewhere between