Storytelling with Visualization

Megan Monroe
madey.j@gmail.com
www.madeyjay.com
Storytelling with Visualization
What makes a good story?
What makes a good story?

storyteller

What makes a good story?

audience
What makes a good story?
What was that story about?
What was that story about?

___!
What was that story about?
What makes a good story?

storyteller

point

audience
Three-Act Structure

Act One
(set up)

Beginning

Interesting Incident

Second Thoughts

Obstacle

Ascending Action

Climax of Act One

Act Two
(confrontation)

Midpoint (a big twist)

Obstacle

Disaster

Climax of Act Two

Act Three
(resolution)

Climax of Act Three

Decending Action

Wrap-up

End
SIX STAGE PLOT STRUCTURE

<table>
<thead>
<tr>
<th>0%</th>
<th>10%</th>
<th>25%</th>
<th>50%</th>
<th>75%</th>
<th>90-99%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I: SETUP</td>
<td>Stage II: NEW SITUATION</td>
<td>Stage III: PROGRESS</td>
<td>Stage IV: COMPLICATIONS &amp; HIGHER STAKES</td>
<td>Stage V: FINAL PUSH</td>
<td>Stage VI: AFTERMATH</td>
<td></td>
</tr>
</tbody>
</table>

- **Act I**: Turning Point 1
  - Opportunity
- **Act II**: Turning Point 2
  - Change of Plans
- **Act II**: Turning Point 3
  - Point of No Return
- **Act II**: Turning Point 4
  - Major Setback
- **Act II**: Turning Point 5
  - Climax
The Hero’s Journey

KNOWN

Call to Adventure

UNKNOWN

Threshold

Guardian(s)

Return

Return Threshold

Alonement

Transformation

Revelation

Abyss

Death & rebirth

Helper

Helper

Mortar

Road of Trials

Exit Threshold

Copyright ©2012 by Reg Mils. All rights reserved. Title font is not copyrighted. Any use without written permission, contact Reg Mils at dogpack@slapnet.net.
What makes a good story?

- Touches people
- Has substance
- Representative of the human condition
- Includes conflict and resolution
- Embraces idiosyncrasies
- Honest
- Makes people laugh
- Makes people cry
- Imaginable setting
- Goes beyond the five senses
- Doesn’t default to an easy solution
- Must arrive somewhere
- Outer struggle
- Has good characters
- Inner struggle
- Plot structure
- Created vivid images
- Relatable

storyteller

point

audience
good story big data
Storytelling with Visualization
Storytelling with Visualization
TED Talk

Wealth Inequality in America

https://www.youtube.com/watch?v=QPKKQnjnsM
Wealth Inequality in America Graphic
Carte Figurative des pertes successives en hommes de l'Armée française dans la campagne de Russie 1812-1813.

Dessiné par M. Ménard, Inspecteur Général des Ponts et Chaussées au service.

Daté le 20 Novembre 1869.

Les nombres d'hommes primitifs sont représentés par les barres des colonnes célébres à raison d'une millimètre pour mille hommes : ils sont de plus élevés en valeurs des années suivantes. Le tableau donne les hommes qui ont péri en Russie, le reste ceux qui sont restés. Les renforcements qui sont venus à donner la carte ont été précisés dans les ouvrages de M. Chavant, de Ségur, de Pezendeu, de Chambry et du journal inédit de Nécius, pharmacien de l'Armée depuis le 23 Octobre.

Pour mieux faire juger à l'œil la diminution de l'armée, j'ai supposé que le corps du Prince Jean et du Maréchal Davout, qui étaient détachés de Moscou, à Moscou ou sous ses ordres, avaient marché avec l'armée.

TABLEAU GRAPHIQUE de la température en degrés du thermomètre de Réaumur au dessous de zéro.

Les Campagnes primitifs au galop le bambou galère.

-26° le 7 X
-36° le 6 X
-11° le 14 X
-8° le 23 X
24° le 13 X
36° le 23 X
36° le 13 X
24° le 14 X
-11° le 23 X
-8° le 23 X
-26° le 7 X

Plaine 34° et
10° 24° 34°
Steroids or Not, the Pursuit Is On

Barry Bonds is aiming at the career home run record. He needs only six more to tie Babe Ruth and 47 to equal Hank Aaron.

Hank Aaron
755 home runs
23 seasons

Babe Ruth
734 home runs
22 seasons

Barry Bonds
708 home runs
20 seasons

Homer Pace After Age 34

If the accusations are correct, Bonds was 34 in his first season of steroids. Here are projected home run paces for each player after age 34.

Aaron
Actual home runs slightly outpace projected home runs for five seasons.

Ruth
Averaged 46.4 home runs a season from age 30 to 34. Averaged 42.5 for next four seasons.

Bonds
From age 35 to 39, he averaged 14 more home runs a season than projected.

According to allegations in a book about Bonds, he began taking steroids before the 1999 season, his 14th in the league. Two seasons later, he hit 73 home runs, surpassing Aaron's career pace.

Differing Paths to the Top of the Charts

The top seven players on the career home run list, along with a look at Griffey (12th), Rodriguez (27th) and Pujols (tied 25th).

Aaron
755

Ruth
734

Bonds
708

Willy Mays
660

Sandy Sosa
586

Fernando Robinson
586

Mark McGwire
586

Ken Griffey Jr.
530

Alex Rodriguez
429

Albert Pujols
429

15 times hit 30 or more (M.L. mod)
15 times hit 30 or more (M.L. mod)
Hit only 20 or first five seasons
Averaged .272 from 2000 to 2004
Averaged .272 from 2000 to 2004
No one hits more from 1950-69
Three 65+ home seasons is record
Triple Crown in '66 (43, 122, .316)
First to hit 70 in a season
Only McGwire had more in the 90's
Youngest to reach 400 home runs
Second most ever in first five seasons
Steroids or Not, the Pursuit Is On

Barry Bonds is taking aim at the career home run record. He needs only six more to tie Babe Ruth and 47 to equal Hank Aaron.

According to allegations in a book about Bonds, he began taking steroids before the 1998 season. He hit 73 home runs in 1998, surpassing Aaron’s career pace.

Homer Pace After Age 34

If the allegations are correct, Bonds was 34 in his first season on steroids. Here are projected home run counts for each player after age 34.

Aaron
Actual hits 425
Projected hits 480

Ruth
Average 46.4 home runs in a season from age 30 to 34.
Average 42.5 for next four seasons.

Bonds
From age 35 to 39, he averaged 42 home runs a season, surpassing Aaron’s career pace.

Differing Paths to the Top of the Charts

The top seven players on the career home run list, along with a look at Griffey (12th), Rodriguez (9th), and Pujols (10th).
Steroids or Not, the Pursuit Is On

Barry Bonds is taking aim at the career home run record. He needs only six more to tie Babe Ruth and 47 to equal Hank Aaron.

Lines are cumulative home runs.

Hank Aaron
755 home runs
23 seasons

Babe Ruth
734 home runs
22 seasons

Barry Bonds
708 home runs
20 seasons

Bonds took lead
Home runs after 16 seasons
Bonds career pace
Aaron
Ruth
554
516

Bonds was injured last season. He played 14 games and hit 6 homers.

Homer Pace After Age 34
If the accusations are correct, Bonds was 34 in his first season of steroids. Here are projected home run paces for each player after age 34:

Aaron
Actual home runs
slightly outpace projected home runs for five seasons

Ruth
Averaged 46.4 home runs a season from age 30 to 34.
Averaged 42.5 for next four seasons.

Bonds
Grew from age 35 to 39, he averaged 14 more home runs a season than projected.

Note: Ages as of July 1 of each season.

Differing Paths to the Top of the Charts
The top seven players on the career home run list, along with a look at Griffey (12th), Rodriguez (27th) and Pujols (led 25th).

15 times hit 30 or more (M.L. record)
Hit only 20 or more first five seasons.
Averaged 52 from 2000 to 2004.
No one hit more from 1950-69.
Three 60 home run seasons in record.
First to hit 70 in a season.
Only McGwire had more in the 90's.
Youngest to reach 400 home runs.
Second most ever in first five seasons.
Chess Match
http://www.turbulence.org/spotlight/thinking/gallery.html
Color Viz
http://muyueh.com/greenhoney/
Silk Road
Here is the English Dataset, keeping Lightness as a constant...
What makes a good story?

storyteller

point

audience
storyteller

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>audience</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
storyteller

→

audience
100m Dash
http://www.nytimes.com/interactive/2012/08/05/sports/olympics/the-100-meter-dash-one-race-every-medalist-ever.html?_r=0
Korean Prison Camps
Budget Forecasts
Movie Revenue

Tech IPO
Global Arms
http://armsglobe.chromeexperiments.com/
Evolution of the Web
http://www.evolutionoftheweb.com/
storyteller

audience
Temporal Event Data

Me:

6:00am Wake Up

6:01am Coffee

6:02am – 11:00pm Work on Dissertation

11:01pm Netflix
Children’s Trauma Unit

A - Airway
B - Breathing
C - Circulation (Pulse)
D - Disability (GCS)
E - Exposure (Secondary)
(Stop Talking)

(Show Demo)
Storytelling with Visualization

Megan Monroe
madey.j@gmail.com
www.madeyjay.com