The character social network of

Mulan (1998)

Mulan 1998 & 2020

- Mulan remake was a major flop: it was not vey accepted by the audience, controversies on the plot, it did badly on box office, and it resulted in USD$ 141 million lost, Recovering only 30% of its budget from the earnings.
- A comparison between the two movies character network
- See characters and which ones are related to each other, and how it contributes to the pot of the movie
- Compare the changes made in the adaptation of the animation to the live action..
- Classic Disney animated movie with a bad rated live action adaptation
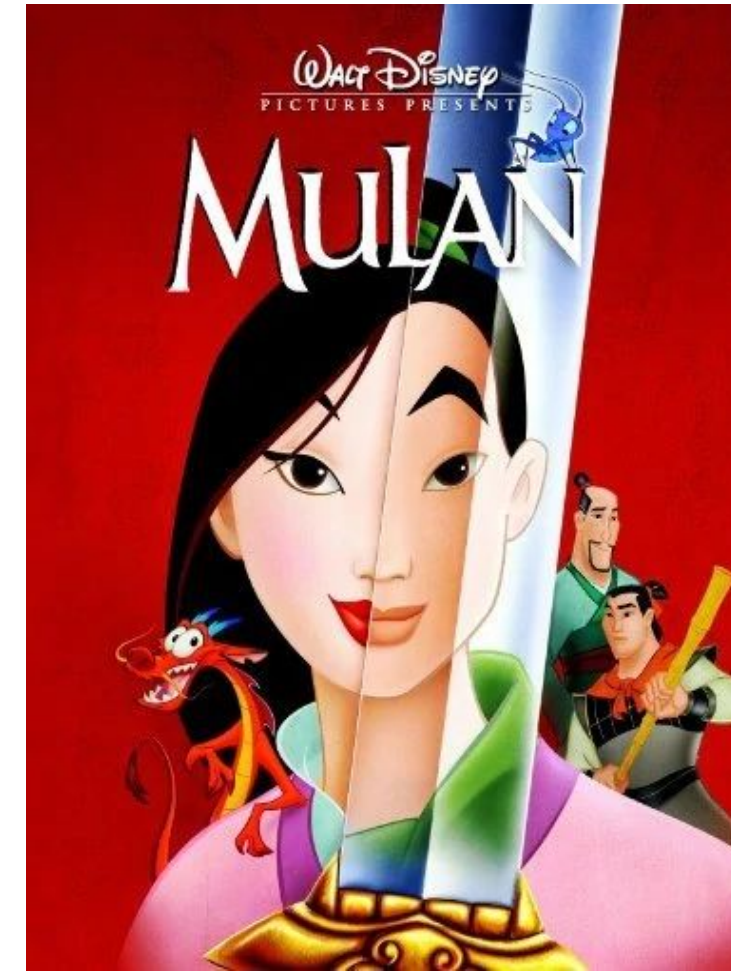
Sampling Unit

Grandma Fa: Yep, this cricket's a lucky one. [Cri-Kee falls over out of fright]

Fa Li [sighing in relief]: Hai.

[Mulan arrives on Khan jumping over the recent accident in the street and jumps off with hay stuck in her hair]

Mulan: I'm here. [Seeing a stern look from her mother] What? But Mama I had to--

Fa Li: None of your 'xcuses. Now let's get you cleaned up. [They walk together into the preparation area]

Mulan 1998

Mulan 2020

- Script & Movie → dialogue
- Conversation between two parties, excluding when someone talked to a crowd or to themselves.
- Direct, because it has a direction (speaker to listener)
- Weight is 1
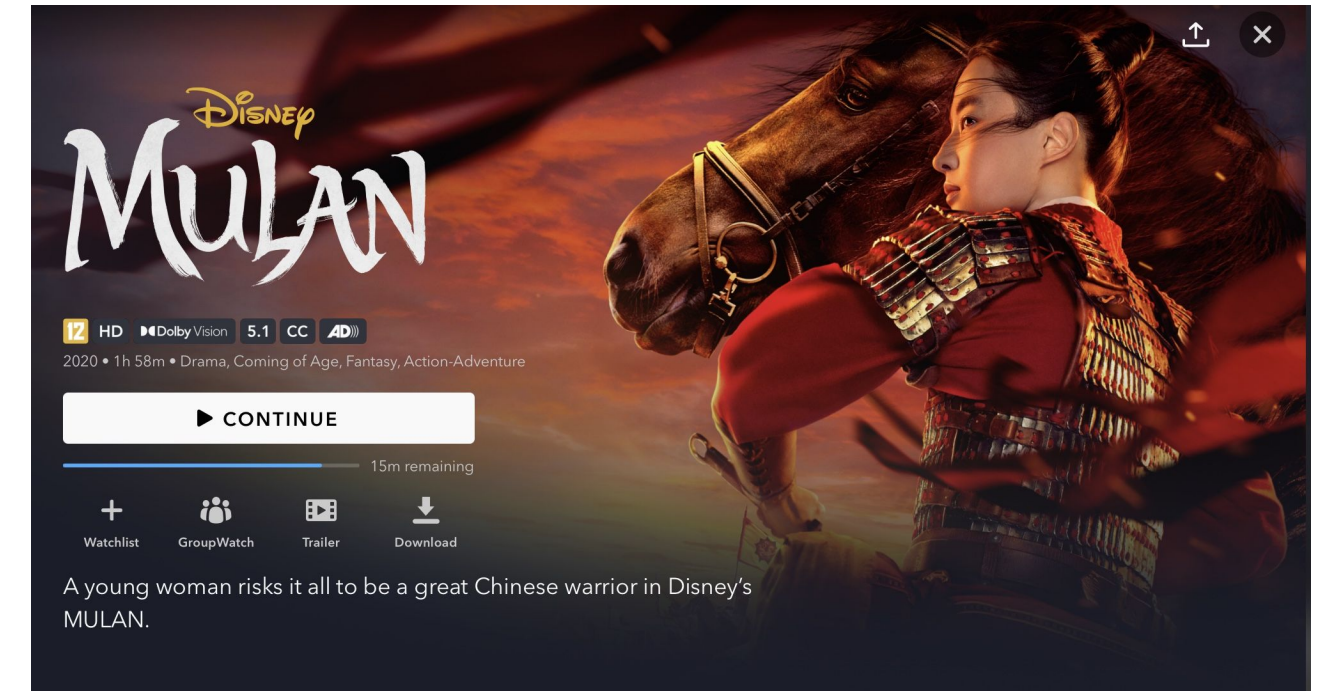
Sampling Unit

Source	Target	Type	Weight
Guard	Shan-Yu	Directed	1
Shan-Yu	Guard	Directed	1
General Li	Emperor	Directed	1
Chi Fu	General Li	Directed	1
General Li	Emperor	Directed	1
Emperor	General Li	Directed	1
Emperor	Chi Fu	Directed	1
Chi Fu	Emperor	Directed	1
Emperor	Chi Fu	Directed	1
General Li	Emperor	Directed	1
Emperor	General Li	Directed	1
Fa Zhou	Ancestors	Directed	1
Mulan	Fa Zhou	Directed	1
Fa Zhou	Mulan	Directed	1
Mulan	Fa Zhou	Directed	1
Fa Zhou	Mulan	Directed	1
Mulan	Fa Zhou	Directed	1
Fa Zhou	Mulan	Directed	1
Mulan	Fa Zhou	Directed	1
Fa Zhou	Mulan	Directed	1
Mulan	Fa Zhou	Directed	1
Fa Zhou	Mulan	Directed	1

Mulan 1998

Source	Target	Type	Weight
Xianniang	Bori Khan	Directed	1
Bori Khan	Xianniang	Directed	1
Xianniang	Bori Khan	Directed	1
Bori Khan	Xianniang	Directed	1
Xianniang	Bori Khan	Directed	1
Hua Li	Mulan	Directed	1
Mulan	Hua Li	Directed	1
Hua Zhou	Mulan	Directed	1
Hua Li	Hua Zhou	Directed	1
Hua Zhou	Hua Li	Directed	1
Hua Li	Hua Zhou	Directed	1
Hua Zhou	Hua Li	Directed	1
Hua Zhou	Mulan	Directed	1
Mulan	Hua Zhou	Directed	1
Hua Zhou	Mulan	Directed	1
Mulan	Hua Zhou	Directed	1
Chancellor	Emperor	Directed	1
Emperor	Chancellor	Directed	1
Chancellor	Emperor	Directed	1
Emperor	Chancellor	Directed	1
Chancellor	Emperor	Directed	1
Warrior	Emperor	Directed	1
Chancellor	Warrior	Directed	1
Warrior	Chancellor	Directed	1

Mulan 2020

Relational Form and Content

- Directed Network
- Weighted Network
  - weak ties
  - strong ties
- Not 100% accurate data
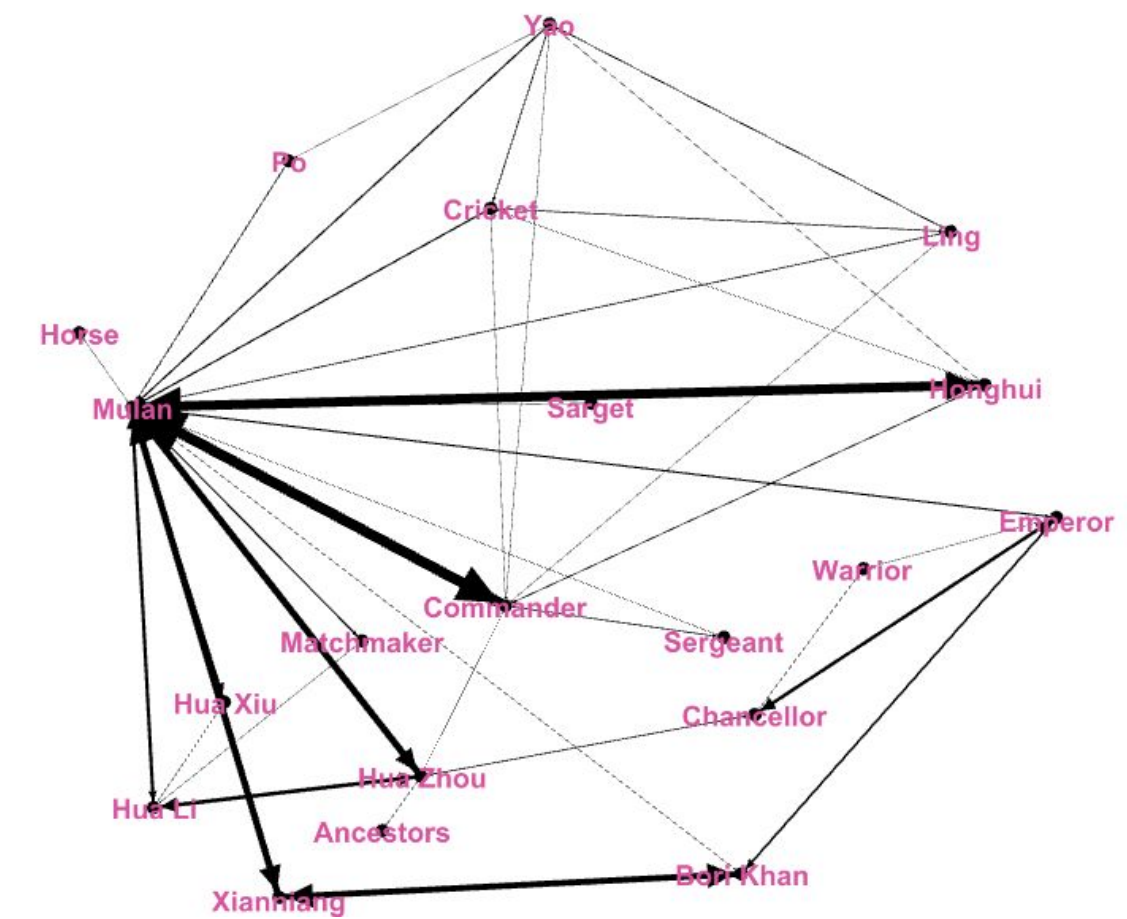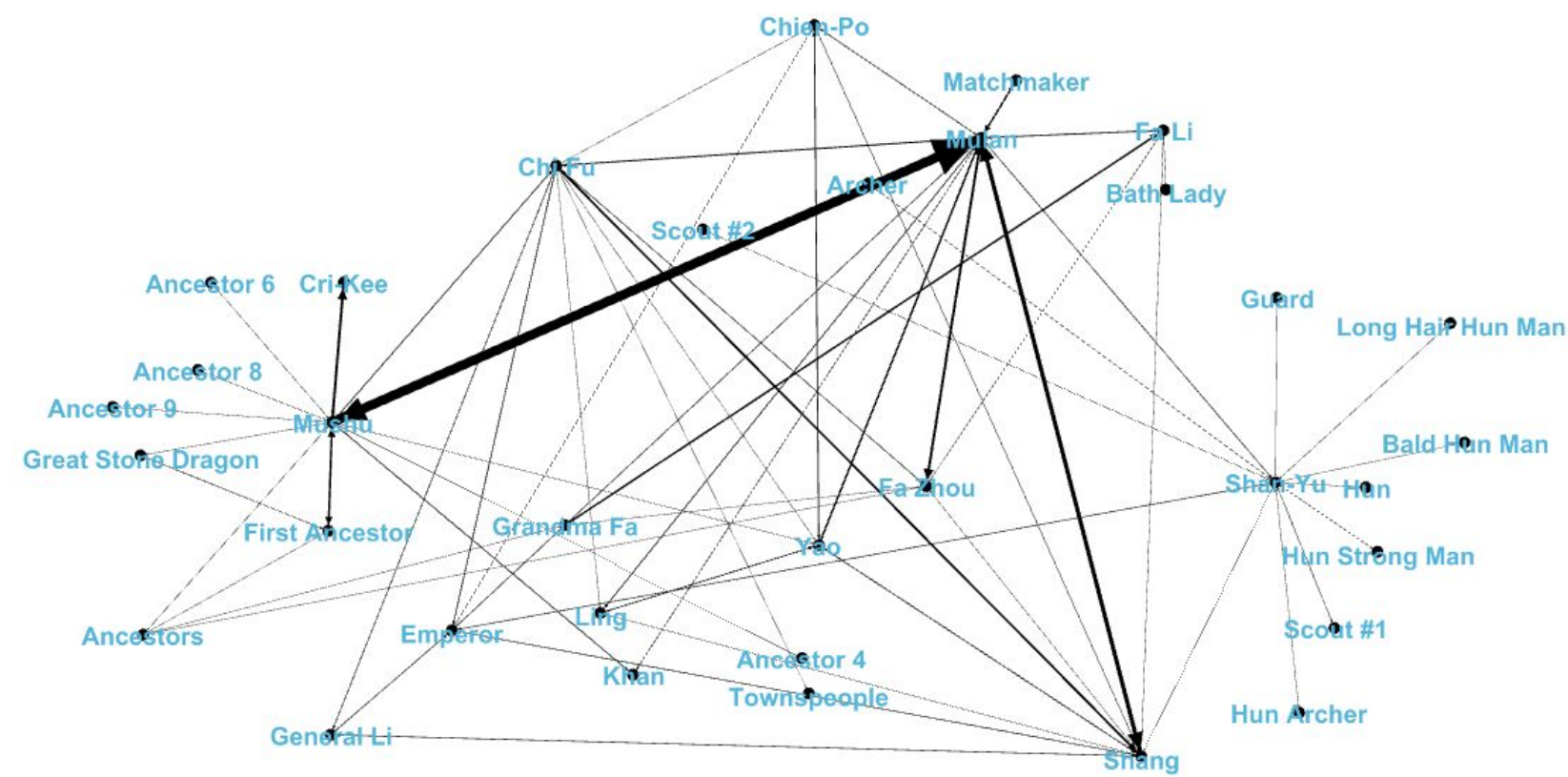
Node Centralities

- Mulan
- Chi Fu
- Shan -Yu
- Mushu
- Emperor

Closeness

- Mulan
- Shan-Yu
- Mushu
- Chi Fu
- Shang

Betweenness

Id	Label	closness centrality	harmonic closness centrality	betweeness centrality
Mulan	Mulan	0.65	0.730769	401.683333
Chi Fu	Chi Fu	0.541667	0.653846	99.366667
Shan-Yu	Shan-Yu	0.52	0.628205	366
Mushu	Mushu	0.52	0.628205	302.383333
Emperor	Emperor	0.490566	0.557692	35.083333
Shang	Shang	0.472727	0.570513	78.116667
Fa Zhou	Fa Zhou	0.45614	0.532051	48.733333
Chien-Po	Chien-Po	0.440678	0.519231	1
Fa Li	Fa Li	0.42623	0.480769	46.466667
Yao	Yao	0.42623	0.49359	11.166667
Ling	Ling	0.419355	0.474359	0
General Li	General Li	0.412698	0.467949	0
Matchmak	Matchmak	0.4	0.429487	0
First Ances	First Ances	0.356164	0.426282	25
Ancestor 8	Ancestor 8	0.350649	0.391975	0
Ancestor 4	Ancestor 4	0.350649	0.391975	0
Ancestor 9	Ancestor 9	0.350649	0.391975	0
Hun	Hun	0.350649	0.391975	0
Bald Hun M	Bald Hun M	0.350649	0.391975	0
Long Hair I	Long Hair I	0.350649	0.391975	0
Guard	Guard	0.346667	0.387821	0

Closeness

Id	Label	closness centrality	harmonic closness centrality	betweeness centrality
Mulan	Mulan	0.65	0.730769	401.683333
Shan-Yu	Shan-Yu	0.52	0.628205	366
Mushu	Mushu	0.52	0.628205	302.383333
Chi Fu	Chi Fu	0.541667	0.653846	99.366667
Shang	Shang	0.472727	0.570513	78.116667
Fa Zhou	Fa Zhou	0.45614	0.532051	48.733333
Fa Li	Fa Li	0.42623	0.480769	46.466667
Emperor	Emperor	0.490566	0.557692	35.083333
First Ances	First Ances	0.356164	0.426282	25
Yao	Yao	0.42623	0.49359	11.166667
Chien-Po	Chien-Po	0.440678	0.519231	1
Grandma F	Grandma F	0.325	0.391026	1
Ling	Ling	0.419355	0.474359	0
General Li	General Li	0.412698	0.467949	0

Betweenness

Ego-centric Network

- Mulan
  - degree 23
  - **indegree 11**
  - outdegree 12
  - weighted indegree 128
  - weighted outdegree 97
  - weighted Degree 225
  - the most important character

Id	Label	indegree	outdegree	Degree	weighted indegree	weighted outdegree	Weighted Degree
Mulan	Mulan	11	12	23	128	97	225
Shan-Yu	Shan-Yu	11	9	20	12	14	26
Mushu	Mushu	9	9	18	58	88	146
Chi Fu	Chi Fu	7	10	17	22	33	55
Shang	Shang	9	7	16	48	37	85
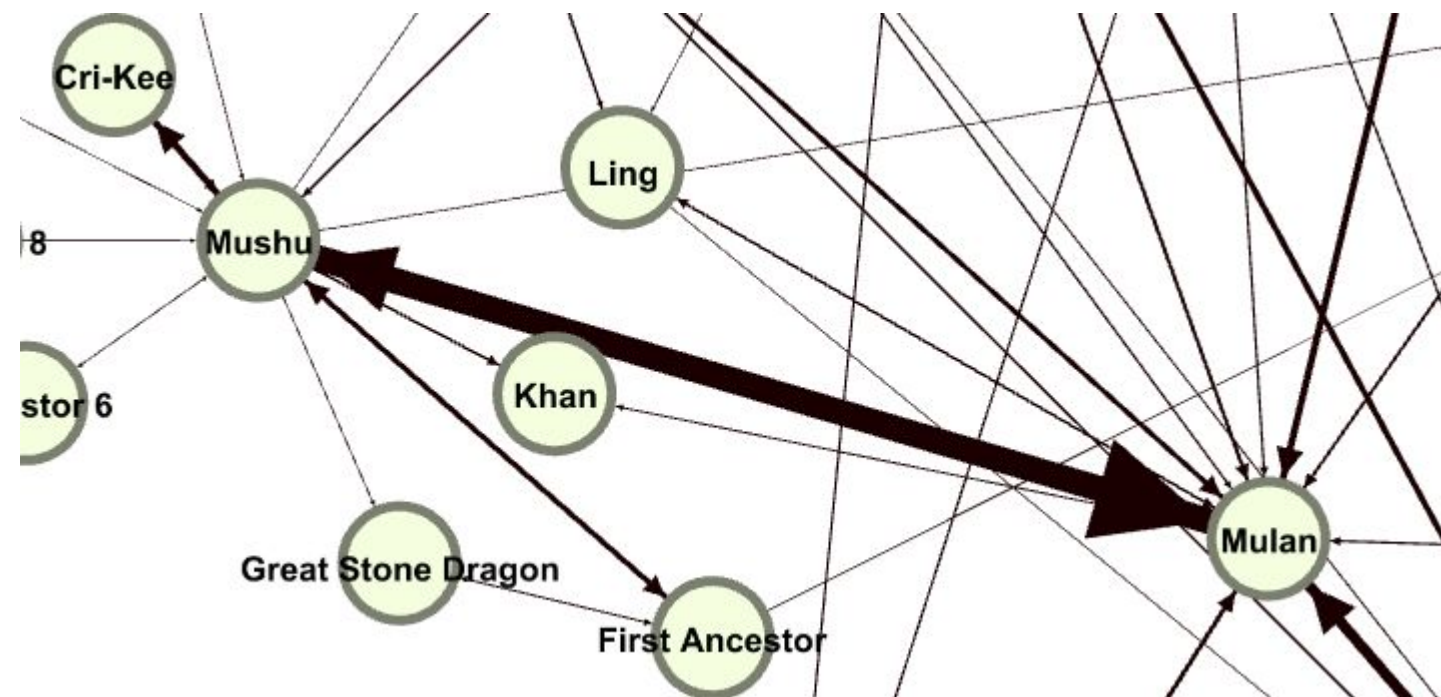
Dyadic Network

Mushu & Mulan
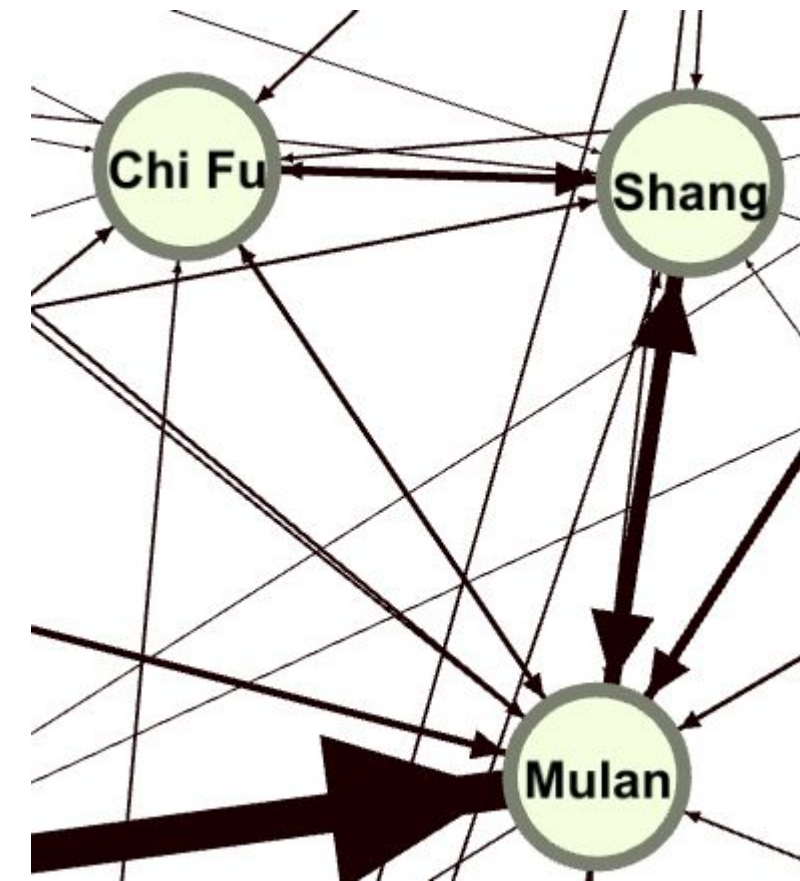- spend the most time together
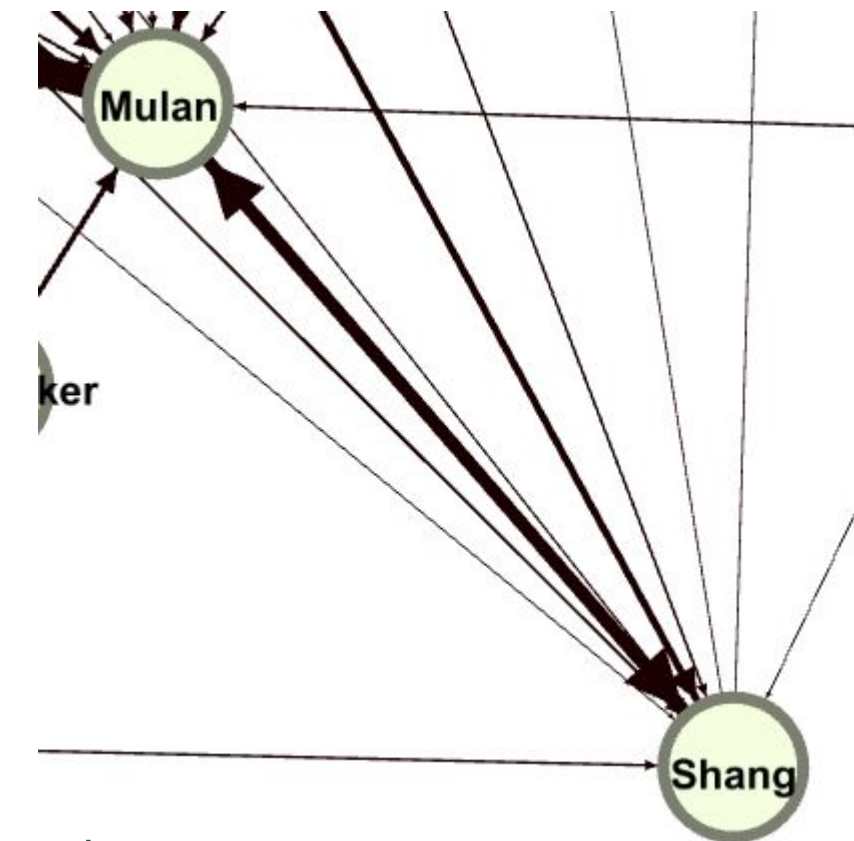
Shang & Mulan
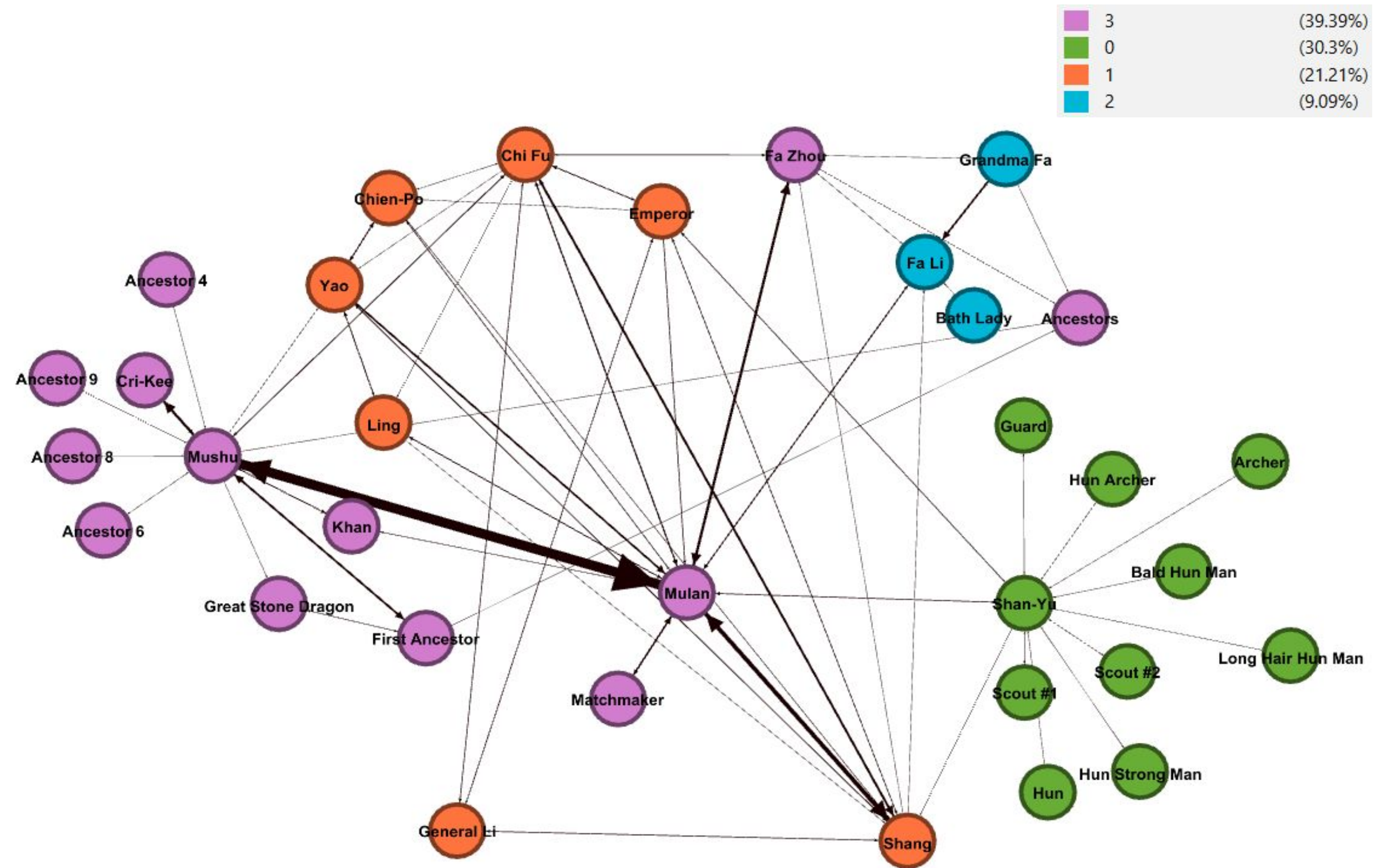- develop a strong relationship during the movie

Mulan 1998

Triadic Network

- Mulan - Shang - Chi Fu
  - military connection
  - Chi Fu has great connection with both characters
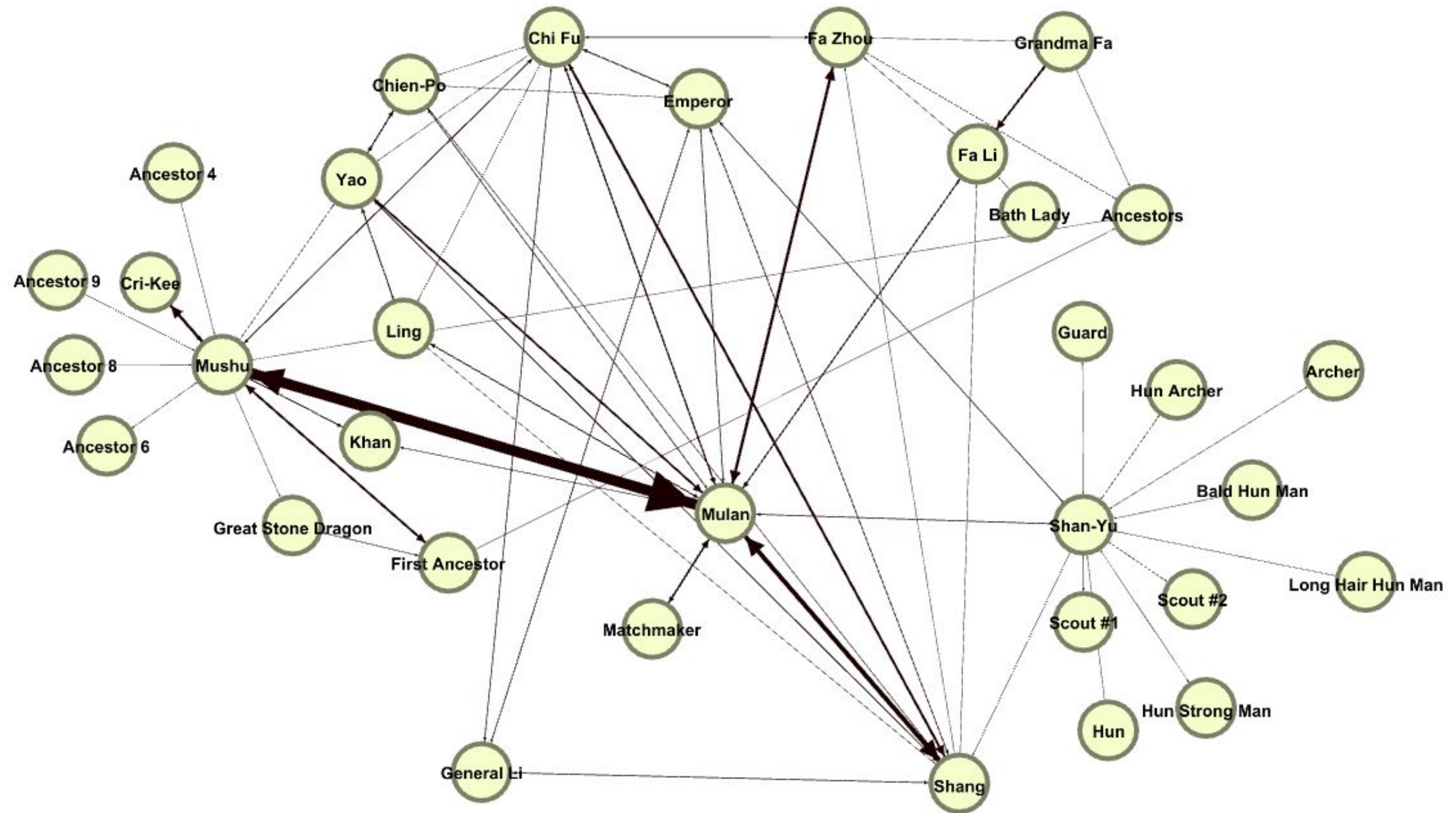 - all in top 5 centrality

Groups

- Purple - Family
- Orange - Army
- Green - Huns
- Blue - Women

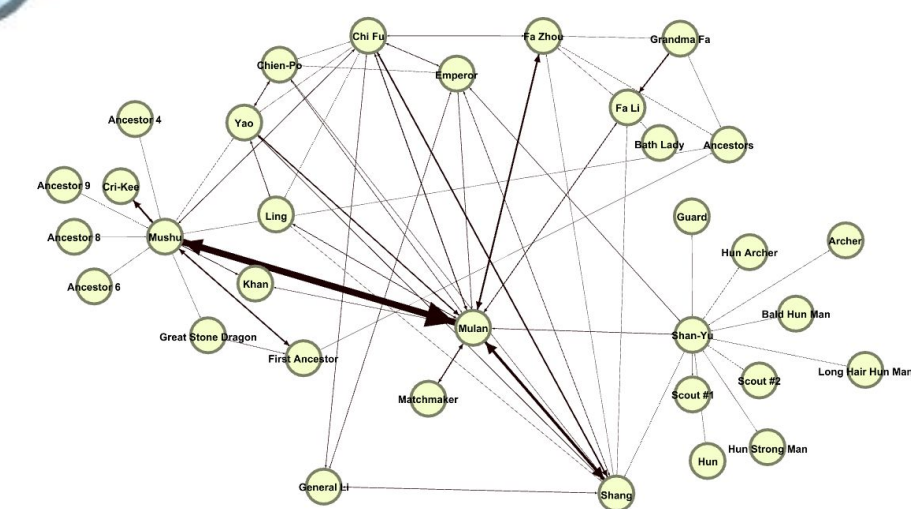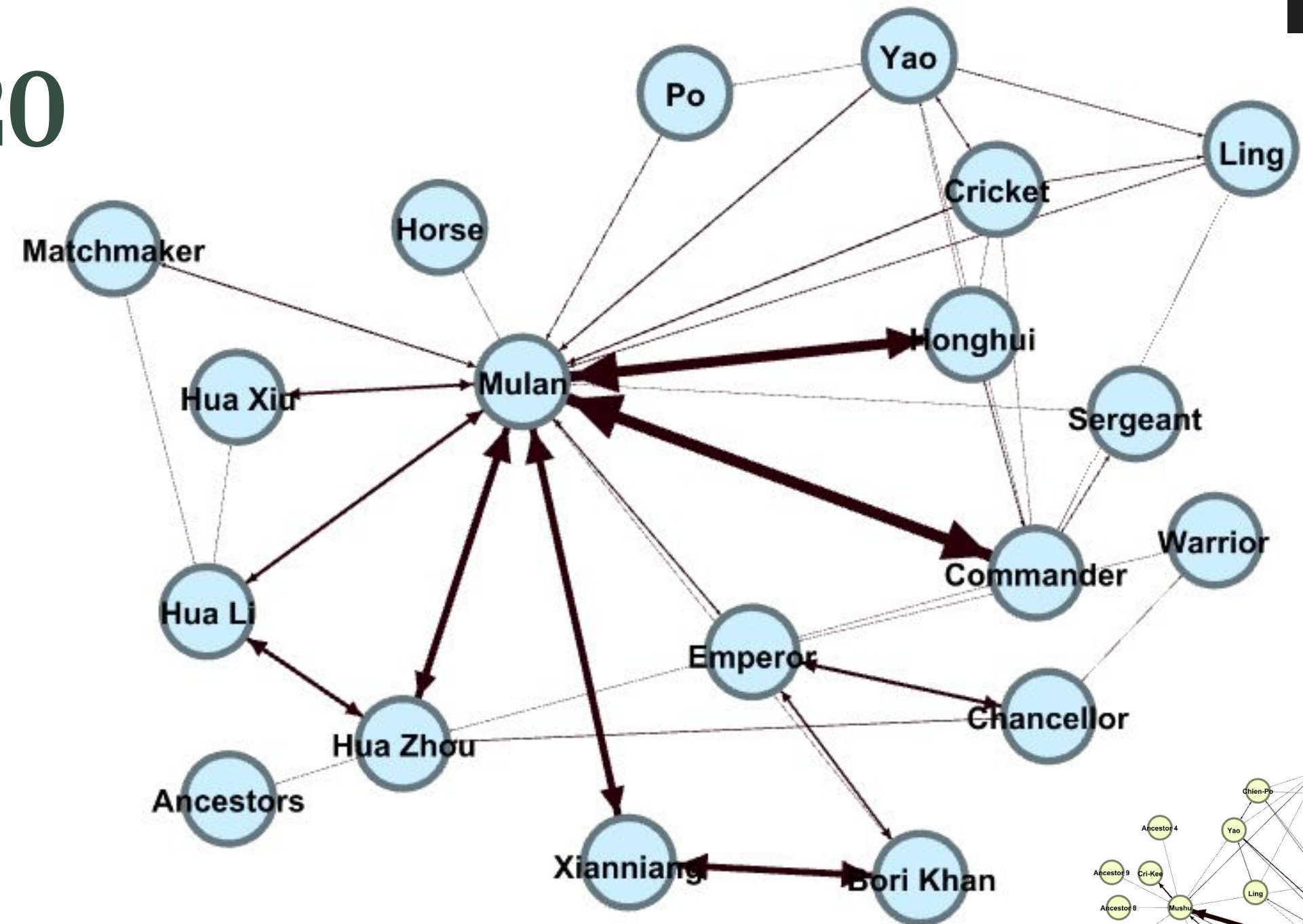|		
🟪 3	(39.39%)
🟩 0	(30.3%)
🟧 1	(21.21%)
🟦 2	(9.09%)

Mulan 1998

Complete Network

- Mulan & Mushu
- Mulan & Shang
- Important characters for the development of the story

Mulan 1998 & 2020

- Drastic change in the network
- Removal of important nodes
  - Mushu
  - Shang
- New nodes
  - Cricket
  - Xianniang
  - Bori Khan
  - Hong Hui
  - Hua Xiu

Assumptions

#1

Different relationships are established along the plot, as the scenario and environment changes.

And during those changes, the relationship remains and it it possible to generates new groups.

- Village, Army, Imperial City

#2

Centrality shows the main characters of the movie, who have greater influence on others.

The direct contact, direct dialogue, and interaction makes it possible to have that influence.

- Mushu & Mulan relationship

#3

Networks are subject to change as times goes by, as there can be addition or removal of entities, and their relationship.

- different groups;
- animation & live action

Importance

It is the central characters, those have greater centrality, in the original animated movie, that makes the live action something that the public will look forward to see it.

This is a way for DIsney to analyze all of their animated movies, see the character network analysis, get the central ones and not have them removed in the adaptation, as they are the main characters. This way, Disney can make better decision,

Going further, it is a research that all movie production companies should make when deciding to reboot a movie, or a TV Show, that combined with and analysis at the people's response to their actions of removing or adding a character, can lead the company to make a million-dollar decision.

All Releases

DOMESTIC (–)
–
INTERNATIONAL (100%)
$69,965,374
WORLDWIDE
$69,965,374
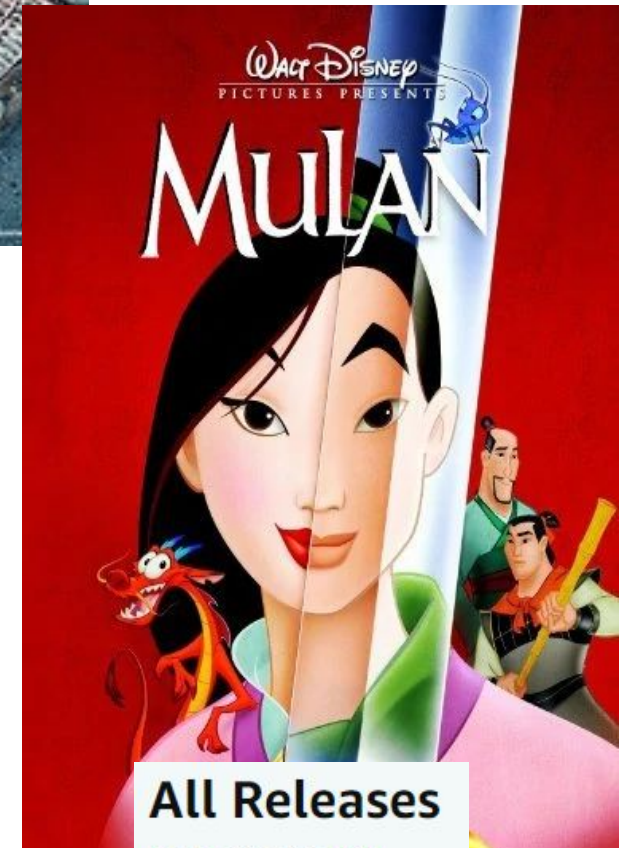
All Releases

DOMESTIC (39.6%)
$120,620,254
INTERNATIONAL (60.4%)
$183,700,000
WORLDWIDE
$304,320,254

References

Chen, B. (n.d.). Novel Approaches and Analytics. Retrieved October 19, 2022, from

https://bookdown.org/chen/snaEd/

How Can Leaders Make Better Decisions. (2021, April 1). Social Network Analysis: Structural Holes, Brokerage &

Closure. YouTube. Retrieved October 19, 2022, from https://www.youtube.com/watch?v=zRS0mCPlcwA

Kyle Genday. (2019, November 25). Introduction to Gephi: Marvel Hero Network. YouTube. Retrieved October 19,

2022, from https://www.youtube.com/watch?v=tA52nIj4kOg

Mulan. (n.d.-a). Box Office Mojo. Retrieved October 19, 2022, from https://www.boxofficemojo.com/title/tt0120762/

Mulan. (n.d.-b). Box Office Mojo. Retrieved October 19, 2022, from

https://www.boxofficemojo.com/title/tt4566758/

Mulan (1998). (1998, December 3). IMDb. Retrieved October 19, 2022, from https://www.imdb.com/title/tt0120762/

Mulan (2020). (2020, September 4). IMDb. Retrieved October 19, 2022, from

https://www.imdb.com/title/tt4566758/

pvierth. (2020, April 9). Network Analysis with Gephi. YouTube. Retrieved October 19, 2022, from

https://www.youtube.com/watch?v=WpFZmIJTjA8

Thank you!