

Survey of the Brony Subculture

First Edition, Compiled by Verbose and opspe

I – Introduction

The present study sought to explore the brony fandom; the older, periphery demographic of the cartoon television series My Little Pony: Friendship is Magic (FiM). There have been many studies presented to the fandom previously and most notably, the Brony Study (Edwards and Redden, 2012). However, many are focused on specific intentions, such as dispelling myths or for personal projects. This study differs in that its primary purpose is to describe the fandom as it is currently. The aims of this study are to determine some of the less frequently inquired demographics of the fandom and to compare those statistics to that of comparable populations to see if and how the fandom differs. The study also investigates some better-known items related to the show itself, but again, other questions not normally asked on this scale have been posed. Finally, the study asks questions about participation in and opinions of the fandom. They also included items that asked questions about some of the more controversial content the fandom produces. Some of the latter items have not been asked in a systematic way or in a way that could be analyzed properly using statistical methods.

As mentioned earlier, the study goes on to use statistical analyses as well as other data from comparable populations to see how bronies vary within the fandom and how they vary from other groups, respectively. As such, the questionnaire was developed to be able to answer those questions and give answers that are more robust.

The purpose of the study is simply to better understand the community and to inform interested people about some of the demographics about the fandom, as well as what members do and what those members think about the show. The original questionnaire for the survey was developed by Know Your Meme (KYM) user bijutdo to understand bronies around the KYM site. KYM user Verbose created a questionnaire to add on more items about the fandom to learn more about this sub-community of bronies. During this process, several other users such as opspe, Blue Screen (of Death), and RandomMan suggested changes to the items, suggested new items, and suggested options for items. After the survey was completed for KYM, the authors and users asked Equestria Daily to post the questionnaire so that the survey could receive responses from more fans of the show, and potentially, a more diverse sampling.

II – Methodology

This section describes the methodology of the survey. Essentially, it describes the collection tool (i.e. the questionnaire), its items, and how the questionnaire was distributed. It also describes the measures taken to analyze the data. This will be a concise version of the methodology, but more inquiring parties may request specific information at verbosethetalky@gmail.com or can private message him at <http://knowyourmeme.com/users/verbose>.

The collection tool was a questionnaire with 26 items in total, which were divided into three sections: demographics, show items, and fandom items. The authors chose 25 items so as not to overburden the sample given that there was no direct compensation, but the questionnaire was long enough to preclude respondents who did not give appropriate consideration to the questionnaire while responding. Another item was added regarding social networking use after the first draft of the questionnaire. The first section had items requesting information on gender, age, religious affiliation, relationship status, social network use, opinions of furies (another large fandom with a considerable and established Internet presence), and sexual orientation, and race/ethnicity. The second section had items requesting information about when the respondents began to watch the show, their favorite and least favorite Mane Six pony, favorite secondary pony, favorite Mane Six pet, favorite and least favorite episode, whether the show is the best show ever created, and what the respondent liked about the cartoon. The third section has items requesting information on how respondents were involved with the fandom, a combination item on brony status and whether the respondent liked the show or not, what types of merchandise are bought, openness about being a brony, opinions of shipping, grimdark/gore, and Rule 34 (i.e. pornography of FiM-based characters), and favorite shipping pairs.

Most of the items were multiple choice or checkbox responses with options to choose more than one answer (the only exception was the age item), and some had an option to write in responses. For the sake of the current study, those responses were considered for replications of the survey to produce more complete choices for items and to potentially create new items.

For the sake of brevity, only some of the items will be discussed in detail. The item requesting information on frequency of social networking site use came from anecdotal observations that many bronies shunned the use of such sites (e.g., browsing FiM-sites' comments' sections and forums). The relationship status items was expanded with more inclusive choices to better understand how many bronies may be in a relationship or be single at one point. Some questionnaires have presented more limited options that do not give an option to state relationships, including simple dating, engagement, or civil union types of arrangements. This items included those choices along with others while presenting the option to choose more than one choice should respondents be divorced, separated, or widowed. The item on religion was also chosen based on anecdotal observations on FiM-related sites along with sites tied to Internet culture as a whole. It was observed that many attitudes were not endorsing, if not plainly negative in regards to, religion or faith. The items asking about opinions of furies and furry status stems from the common belief that many bronies may also be furies as well. There is anecdotal evidence that indicates that there may be a hostile relationship between bronies and furies on several smaller hubs of brony activity. The episode items (i.e. favorite and least favorite) have been seen

before, but not into Season 2 in a survey of this scale to the authors' knowledge. The items combining brony status and opinion of the show along with openness about being a brony were items seen and implied in other studies using personality test items. They were to assess how fans of the show may or may not be involved with the fandom while identifying with the fandom or even enjoying the show itself. It also provides data to potentially support or discredit theories in sociology that may describe how bronies openly identify with the fandom as a subculture (if identification serves purposes in relation to mainstream society). Finally, items on shipping, grimdark/gore, and pornography of FiM had not been posed in a survey of this scale prior to this question. It allows for data that could help answer what proportion of bronies feel a certain way about certain aspects of the fandom and to what extent.

This questionnaire was then distributed via three sources: primarily on the news site Equestria Daily, on the Internet phenomena documentation site Know Your Meme, and on the deviantArt page of Muumi/LavosVsBahamut. The original intent was to get a larger number of respondents in addition to increasing the diversity of the respondents within the survey.

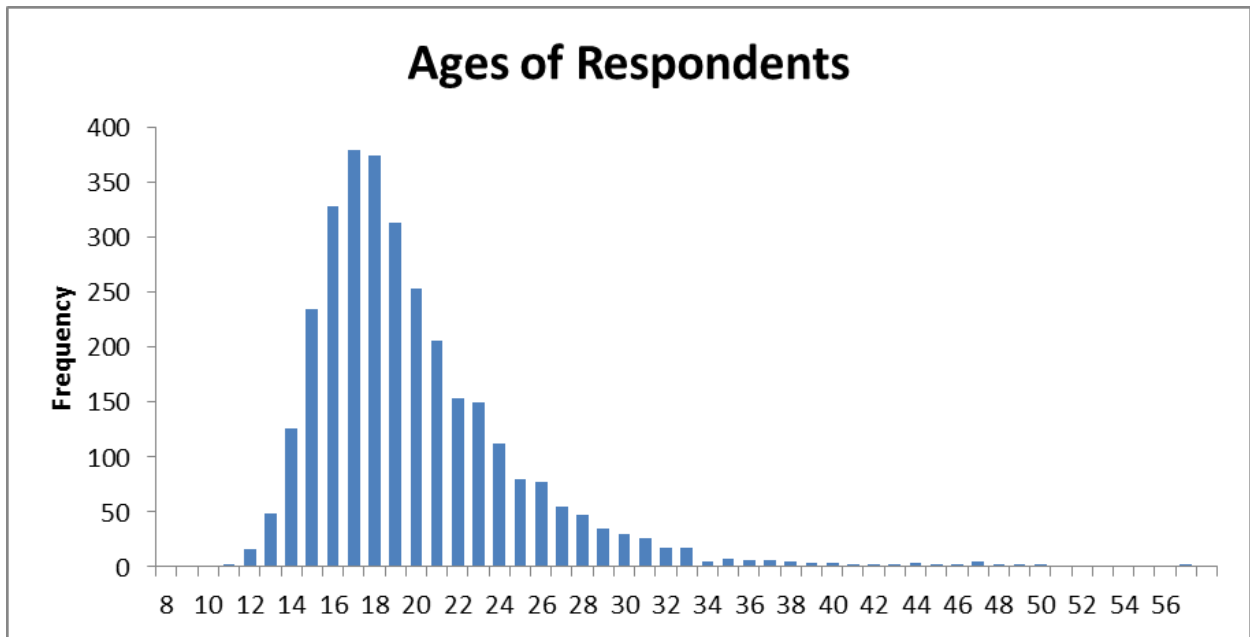
The statistical analyses involve simple descriptive data that are combined with some other comparable data. This will help to determine if bronies vary from more inclusive populations, in terms of demographics. Other analyses included chi-squared (χ^2) test, to determine differences in amounts of responses between two categorical variables, and Principal Component Analysis (PCA), a multivariate analysis methodology that characterizes covariance between variables. The mathematical bases for these methods are beyond the scope of this survey. Software used to analyze the data included Microsoft Excel, SPSS, and MatLab.

Furthermore, it should be taken into account that as a part of Internet culture, many of these findings from the sample could be similar to those who are also a part of Internet culture, but do not identify as bronies, and may not be indicative of only the brony community. However, the authors believe the data is accurate for the survey.

III – Results

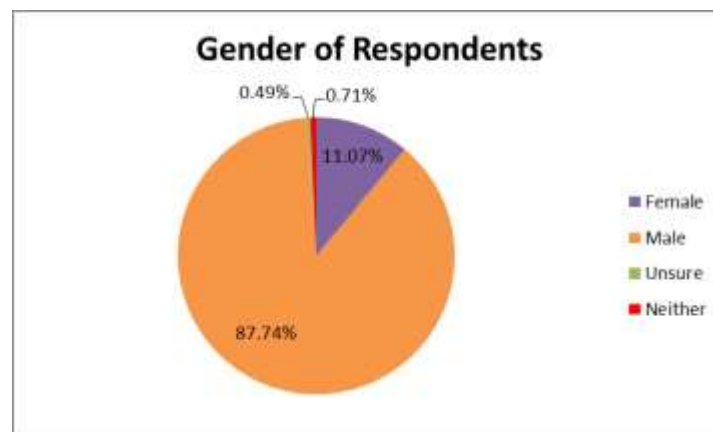
Part 1: Vital Statistics

Age:



Of the 3,751 respondents, the mean age was 19.97, with a standard deviation of 5.31. The median age was 19, and the mode was 17. The youngest was 8 and the oldest was 57. The ages of respondents appear to adhere to a Poisson distribution.

Gender:



The respondents were overwhelmingly male (87.74%), which agrees with the results found by another study of the Brony fandom (the Brony Study – Edwards and Redden, 2012).

Ethnicity:

Race/Ethnicity	Race/Ethnicity Distribution	Race/Ethnicity	Race/Ethnicity Distribution
White/Caucasian	2938 (81.57%)	Native American/American Indian	10
Asian (Asian Indian, Southeast Asian, Far East Asian)	212 (5.89%)	Middle Eastern	9
Hispanic/Latino	174 (4.83%)	Pacific Islander	8
White/Caucasian, Hispanic/Latino	84 (2.33%)	White/Caucasian, Hispanic/Latino, Native American/American Indian	8
White/Caucasian, Asian (Asian Indian, Southeast Asian, Far East Asian)*	65 (1.80%)	White/Caucasian, Middle Eastern	8
White/Caucasian, Native American/American Indian	32	White/Caucasian, Pacific Islander	7
Black/African-American	25	White/Caucasian, Black/African-American, Hispanic/Latino	5
White/Caucasian, Black/African-American	17	Total	3602

**Percentages of less than 1% are not shown. Responses with less than 5 are not presented.*

The respondents identify themselves as White/Caucasian only far more often than any other race/ethnicity (81.57%). This does not include those who identified as having a mixed racial/ethnic identity. After white, the singular identities that respondents identified with the most were Asian (5.89%), Hispanic/Latino (4.83%), African-American/Black (0.7%), Native American/American Indian (0.3%), Middle Eastern (0.2%), and Pacific Islander (0.2%).

Racial demographics from the (United States Census Bureau, 2010) have a far greater proportion of people who identify as black than those who did in the sample (12.7%), a smaller proportion of people who identify as Asian than those who did in the sample (4.8%), and a far greater proportion of those who identify as Hispanic and/or Latino (16.3%). The proportion of those who identify as Native Americans/American Indian (0.9%) or Pacific Islander (0.2%) differs little from the sample. Those who identified as being of Middle Eastern descent in the US census were considered white.

The differences in race/ethnicity were minimized when removing those who were not from the United States, but there were still noticeable differences in the sample from the population (e.g., 78.6% of respondents identified as white, 1.1% of respondents identified as black.) This provides evidence that the sample of respondents differ in this regard from the United States' population.

Location:

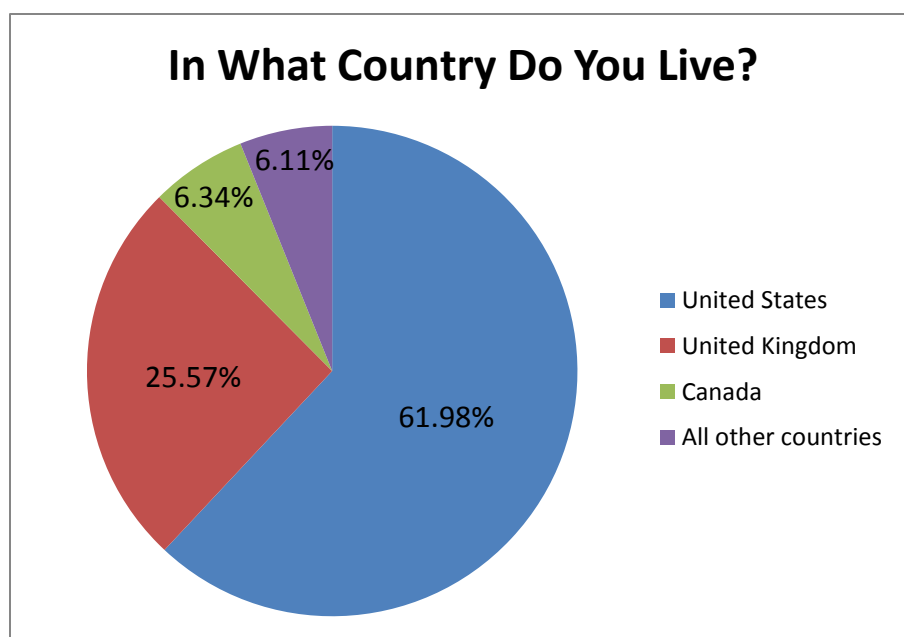
Rank	US State Location*	US State Location Distribution	Difference in Ranks**
	Total	1979	
1	California (1)	253	-
2	Texas (2)	140	-
3	New York (3)	99	-
4	Florida (4)	96	-
5	Michigan (8)	82	3
6	Illinois (5)	79	-1
7	Ohio (7)	78	-
8	Washington (13)	78	5
9	New Jersey (11)	71	2
10	Virginia (12)	68	2
11	Pennsylvania (6)	67	-5
12	Georgia (9)	59	-3
13	Minnesota (21)	51	8
14	Massachusetts (14)	48	-
15	Wisconsin (20)	45	5
16	North Carolina (10)	42	-6
17	Colorado (22)	39	5
18	Oregon (27)	39	9
19	Indiana (15)	38	-4
20	Arizona (16)	37	-4
21	Maryland (19)	35	-2
22	Utah (35)	34	13
23	Missouri (18)	30	-5
24	Tennessee (17)	29	-7
25	Connecticut (30)	25	5
26	Kentucky (26)	25	-
	<i>(US, no state given)</i>	22	
27	Oklahoma (28)	21	1
28	Iowa (31)	20	3
29	Nevada (36)	20	7
30	Kansas (34)	18	4
31	South Carolina (24)	18	-7
32	Alabama (23)	16	-9
33	Louisiana (25)	15	-8
34	New Mexico (37)	15	3
35	Maine (42)	14	7
36	New Hampshire (43)	14	7
37	Arkansas (33)	12	-4
38	Idaho (40)	12	2
39	North Dakota (49)	11	10
40	Nebraska (39)	10	-1
41	Alaska (48)	9	7

Rank	US State Location	US State Location Distribution	Difference in Ranks**
42	Hawai'i (41)	7	1
43	Mississippi (32)	7	-11
44	Rhode Island (44)	6	-
45	Montana (45)	5	-
46	West Virginia (38)	5	-8
47	Wyoming (52)	5	5
48	Delaware (46)	4	-2
49	Puerto Rico (29)	2	-20
50	South Dakota (47)	2	-3
51	District of Columbia (51)	1	-
52	Vermont (50)	1	-2

**States highlighted in green are the ten most populous territories in the United States. Number in parentheses indicates population rank from most to least in the 2010 United States Census.*

***Difference in Ranks is the difference between most populous states in regards to the 2010 United States Census and most populous states in regards to where respondents said they live.*

The respondents who live in the United States were most likely to live in California (12.8%), Texas (7.1%), New York (5.0%), Florida (4.9%), and Michigan (4.1%). This follows the five most populated states in the United States, except for Michigan, which ranks 8th in most populous states. (United States Census Bureau, 2010)



A majority of respondents reside in the United States (62%), but over a quarter live in the United Kingdom (26%). Within the sample, many respondents live outside of Canada and the United States where the show originally aired. This could speak to the nature of the Internet-based fandom, and how the focus of the fandom could be communicated to others regardless of location.

Social Media Usage:

Social Networking Site Use	Social Networking Site Use Distribution	Percentage
I use them very often.	472	12.88%
I use them regularly.	789	21.52%
I use them somewhat often.	442	12.06%
I use them occasionally.	646	17.62%
I use them rarely.	695	18.96%
I do not use social networking sites at all.	622	16.97%
Total	3666	

The responses for the social networking site use item were fairly well-distributed, as the category with the lowest frequency (i.e. “I use them somewhat often.”) still contained 12.06% of the respondents (perfectly distributed among six responses would be 16.67%). However, this seems to vary significantly from statistics relating to college students and their social networking use (Salaway *et. al.*, 2008). Many respondents in our sample were between the ages of 18 and 24, and the Brony Study found that many of their respondents were in higher institutions of learning (Edwards and Redden, 2012). Thus, this seems to be a comparable sample in important factors (i.e. age and education) except the specific inclusion in the Brony fandom.

A large percentage of respondents (16.97%, slightly more than a completely even distribution) stated that they do not use social networking sites at all. However, among the comparison study respondents, only 4.9% of respondents between the ages of 18-19 and only 7.2% of respondents between the ages of 20-24 did not use social networking sites at all.

When looking at respondents within the ages of this survey, the percentage of those who did not choose to use social networking sites at all was 16.2%, which is still a much greater percentage than those who chose not to use social networking sites in the comparison study (again, between 4.9% and 7.2%).

Relationship Status:

Relationship Status	Relationship Status Distribution
Single, not in a romantic relationship*	3069 (81.82%)*
Single, in an open relationship	87
Single, in a relationship	265 (7.06%)
Single, in a serious relationship	155 (4.13%)
Single, engaged	37
Married/In a civil union	78
Married (separated)	3
Ever Divorced	9
Ever Widowed	0

**Distribution for this category is only for those who responded “Single, not in a romantic relationship” and nothing else.*

An overwhelming majority of respondents identified themselves as not being in a romantic relationship of any sort (82.25%). This supports data from the Brony Study on the fandom in regards to relationship status (Edwards and Redden, 2012). However, this study specified “Single” in various ways to include responses for differences with those who are single.

It could be said that given the young age of the respondents as a whole, the number of bronies here who are not in a relationship of any sort would be very high. With that thought in mind, the analysis continued by comparing this data to data from the Centers for Disease Control and Prevention (Goodwin *et. al.*, 2002). Most males between and including the ages of 25 and 44 were married (59.1%). However, only 8.7% of male respondents in this age range in among the present survey were married or in a civil union. In those between and including the ages of 20 and 24, 15.6% of those from the CDC data were married and 0.7% of those from the present survey were married or in a civil union.

It should be noted that the CDC data was taken in 2002, and rates of marriage may have decreased significantly since then. It may be difficult to say if they have decreased enough to make the differences between the nationally representative sample and the sample from the present survey less drastic.

Religion:

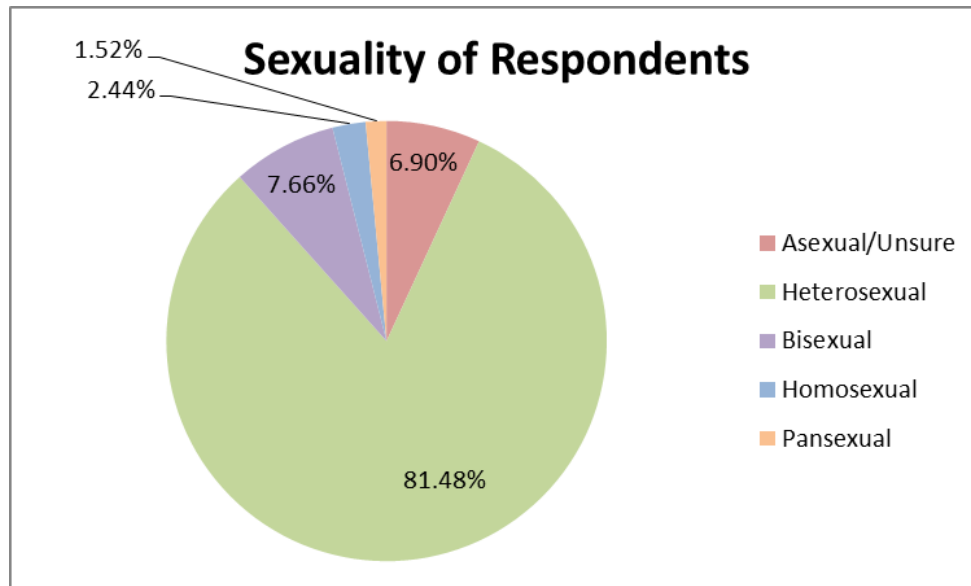
Religious Affiliation	Religious Affiliation Distribution
Atheist	1381
Agnostic	863
Christian (Protestant)	630
Christian (Catholic)	510
Not Listed	515
Buddhist	83
Jewish	40
Muslim	18
Hindu	4

Most respondents identified themselves as being Atheist (36.81%) and/or Agnostic (23.00%), as the item allowed respondents to choose more than one religious affiliation to best identify their beliefs. Many respondents identified as Christian (Protestant) (16.79%) and/or Christian (Catholic) (13.59%). However, this is very different from data on religious affiliation in the United States and in Europe.

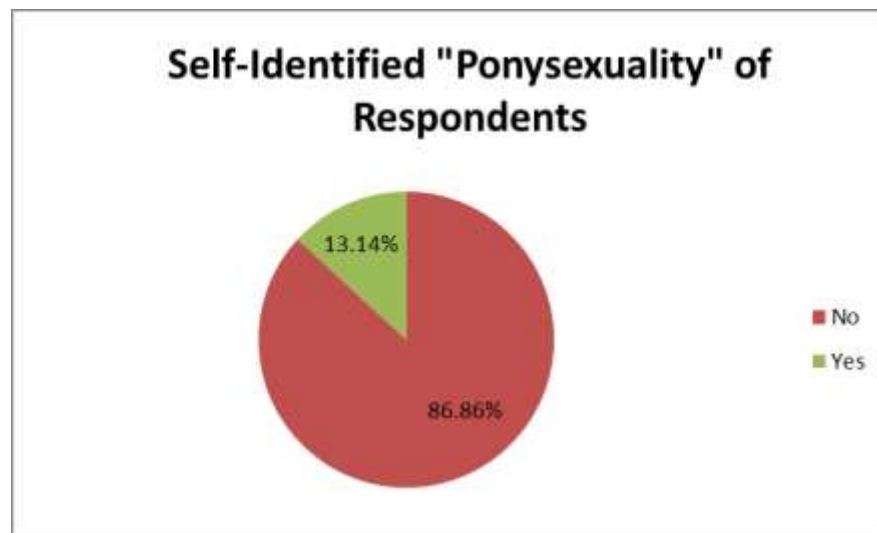
In the United States, over 78% of adults identified as being Christian, and only 16% identified themselves as being unaffiliated with any particular faith. Even fewer identified themselves specifically as Atheist (1.6%) or Agnostic (2.4%) (The Pew Forum on Religion and Public Life, 2008).

Bronies' religious and spiritual beliefs may fall in line more with European approaches to faith, as 52% believe that "there is a God," and 27% believe "there is some sort of spirit of life force." However, only 18% believe that there is no God or supernatural force or spirit. There are fewer who believe in a God in the United Kingdom (38%), but more who believe in some supernatural force or spirit (40%), and about the same who believe in no supernatural force at all (20%) (European Commission, 2005).

Sexuality:



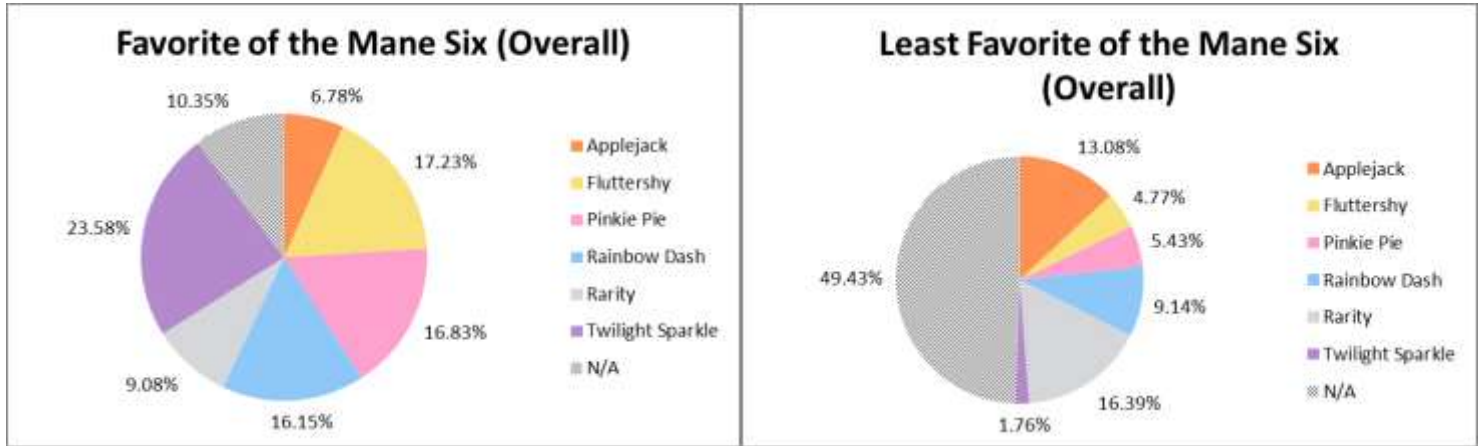
The vast majority of respondents were heterosexual (81.48%), although there are sizable bisexual (7.66%) and asexual (6.90%) minorities. Typical bisexual populations range from 0.5% to 3%, which is far less than the population represented here (Gates, 2011). Typical homosexual populations range from 0.5% to 2.5%, indicating that bronies have a large homosexual community (2.44%), but within statistical bounds (Gates, 2011). Statistics about pansexuality and asexuality are not common.



Further to this, "ponysexuality," i.e. sexual attraction to ponies, was investigated. The majority of respondents are not "ponysexual" (86.86%). "Ponysexuality" rates were slightly higher amongst homosexual or bisexual males than other populations, but no further correlations were present (see the PCA report on page 13 for more info).

Part 2: The Show

Favorites among the Mane Six:

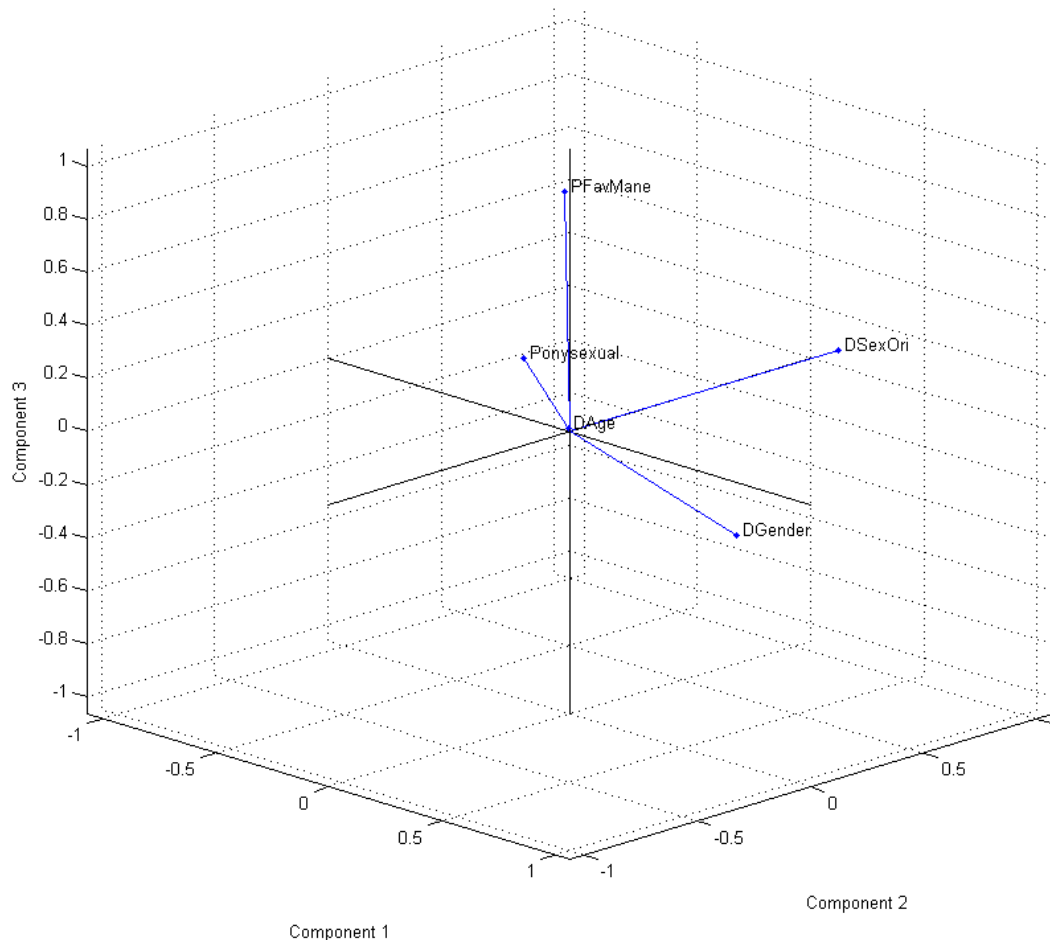


Twilight Sparkle was the favorite amongst respondents by a wide margin (23.58%). Pinkie Pie, Rainbow Dash, and Fluttershy were roughly tied for popularity, and Rarity and Applejack brought up the rear. Nearly half of respondents reported not having a least favorite. The favorite and least favorite ponies are generally inversely correlated, although it should be noted that Rarity and Rainbow Dash are disliked more than would be expected, given their popularity. The ratios of percent favorite to percent least favorite provide a qualitative key to understanding attitudes towards the Mane Six:

Applejack	0.518
Fluttershy	3.612
Pinkie Pie	3.099
Rainbow Dash	1.767
Rarity	0.554
Twilight Sparkle	13.398

Twilight Sparkle was universally liked, and Fluttershy and Pinkie Pie were roughly tied for second-tier popularity. Rainbow Dash was less popular on average – she was liked equally to Fluttershy and Pinkie Pie, but was more disliked than the latter two. Applejack and Rarity were roughly tied for least popular – Rarity was both more popular and more unpopular than Applejack; thus, it can be said that most respondents were neutral towards Applejack.

The covariance between Mane Six favorites and population demographics (age, gender, sexual orientation, and “ponysexuality”) was studied using Principal Component Analysis (PCA) and individual statistics.



P Fav Mane = Favorite of Mane Six

D Sex Ori = Sexual Orientation

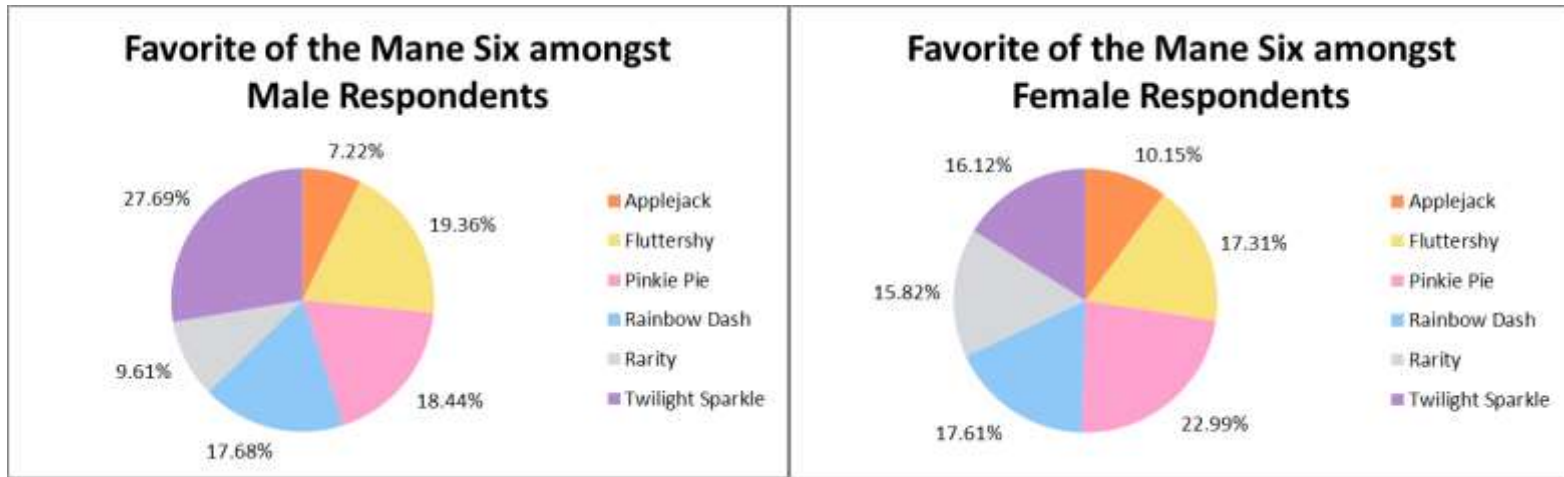
D Age = Age

D Gender = Gender

Each labeled vector represents a particular factor used during the PCA analysis; vectors that point in the same direction in Principal Component space show that the factors that they represent co-vary together; that is to say, that the factors are related.

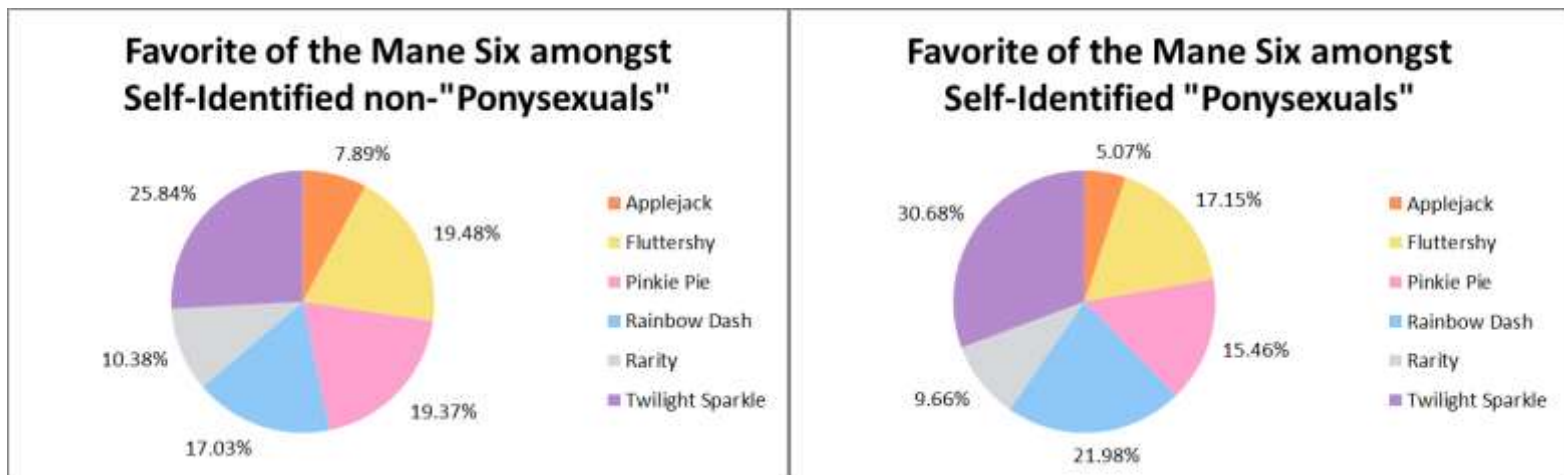
“Ponysexuality” had a higher correlation with homosexuality or bisexuality and with males, indicating that those groups were more likely to be “ponysexual.” Age was not correlated to any other factors. The rest of the factors – gender, sexual orientation, and favorite of the Mane Six – were aligned to Principal Component 1, Principal Component 2, and Principal Component 3, respectively, so no covariance could be easily determined between them. However, individual statistical analysis allowed some differences to be highlighted.

Gender and Favorite of the Mane Six:



Twilight Sparkle was much less popular amongst female respondents than amongst male respondents. Rarity was much more popular amongst females than males, and in general, the favorites were more evenly distributed amongst females.

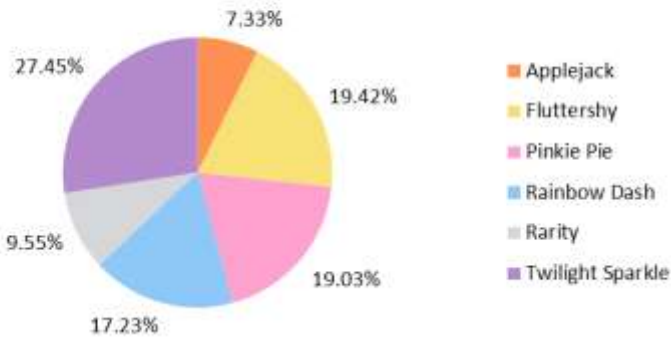
“Ponysexuality” and Favorite of the Mane Six:



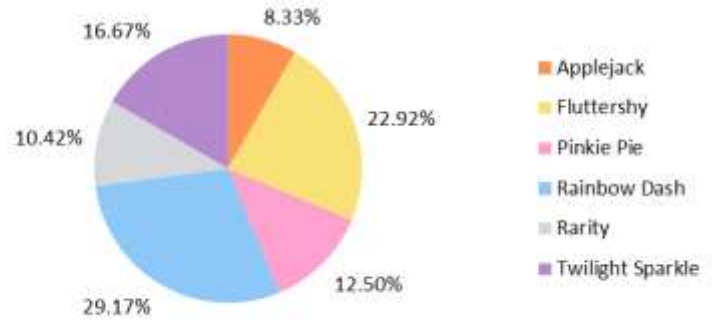
Comparing “ponysexuals” and non-“ponysexuals,” it is apparent that Twilight Sparkle and Rainbow Dash were more popular amongst “ponysexual” respondents, while the remaining four were less so. Twilight Sparkle and Rainbow Dash were equally more popular amongst “ponysexual” respondents (about 5% more so). The difference in Rarity’s popularity was less than the differences for Applejack’s and Fluttershy’s popularities. Pinkie Pie had the biggest drop in popularity between the two groups.

Sexuality and Favorite of the Mane Six:

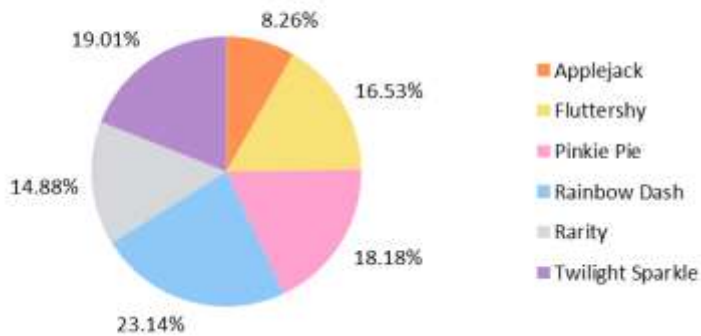
Favorite of the Mane Six amongst Heterosexual Respondents



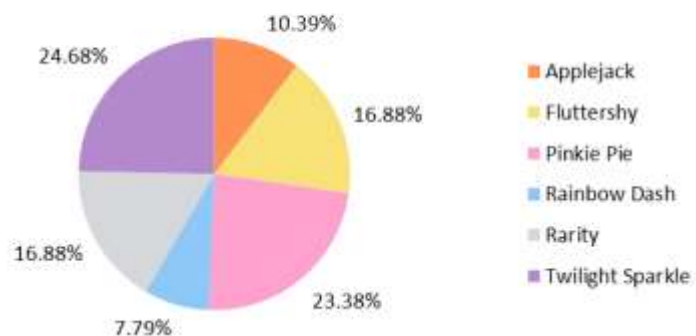
Favorite of the Mane Six amongst Homosexual Respondents



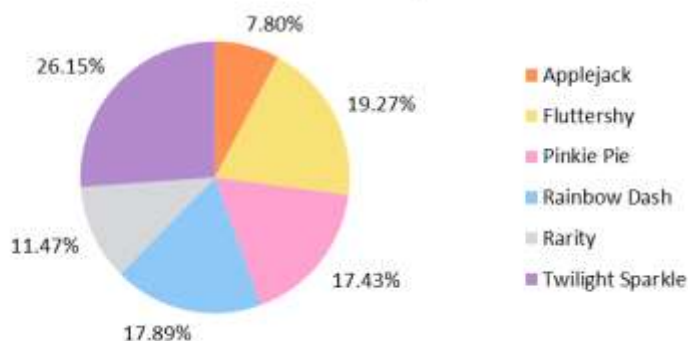
Favorite of the Mane Six amongst Bisexual Respondents



Favorite of the Mane Six amongst Pansexual Respondents



Favorite of the Mane Six amongst Asexual or Unsure Respondents



Comparing the favorites between sexual orientations, numerous things are apparent. Amongst heterosexual as well as asexual or unsure respondents, the favorites were roughly equivalent to the overall favorites. Rainbow Dash was markedly more popular amongst homosexual and bisexual respondents, and markedly less popular amongst pansexual respondents. Rarity was generally more popular amongst non-heterosexual respondents, especially with pansexual respondents, as was Applejack. Twilight Sparkle was significantly less

popular amongst homosexual and bisexual respondents than other populations. Fluttershy was less popular than average amongst bisexual and pansexual respondents, and more so amongst other populations, notably amongst homosexual respondents. Pinkie was far less popular amongst homosexual respondents than other populations, and was most popular amongst pansexual respondents.

Race/Ethnicity and Favorite of the Mane Six:

Groups were divided into those who identified with simply one race. Many of the race/ethnicity groups including mixed race groups did not have enough respondents in each cell to make a proper claim as to whether it varied enough from the other cells. The test statistic for this analysis (χ^2) was significant ($p < 0.001$), meaning that the finding was not likely due to chance.

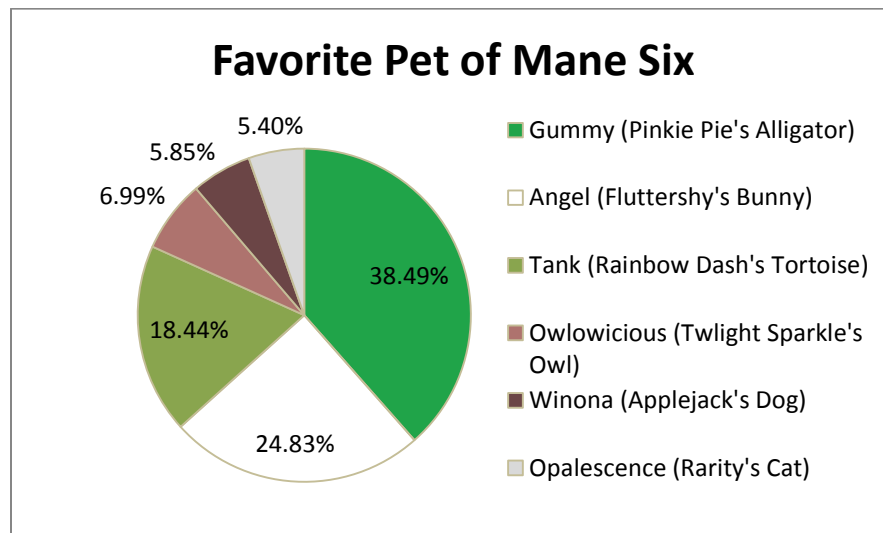
White respondents were a bit more likely to choose Rainbow Dash and Twilight Sparkle as their favorite pony than could be expected. Asian respondents were a bit more likely to choose Applejack and Fluttershy, and were a bit less likely to choose Rainbow Dash and Rarity. Black respondents were more likely to choose Applejack as their favorite pony, Latino/Hispanic respondents were more likely to choose among Pinkie Pie, Fluttershy, and Rarity as their favorite pony.

Religion and Favorite of the Mane Six:

The test statistic was not significant for this χ^2 , meaning that there is a considerable likelihood that these finding could be due to chance. Given the low number of respondents who identified solely by other religious affiliations, the cell counts were high enough for Atheist, Agnostic, and Christian (Protestant and Catholic) respondents.

Atheist respondents were a bit less likely to choose Applejack or Pinkie Pie as their favorite mane six pony than could be expected, and were a bit more likely to choose Rainbow Dash. Agnostic respondents were a bit more likely to choose Rarity. Catholic respondents were a bit more likely to choose Applejack or Pinkie Pie as their favorite mane six pony, and were a bit less likely to choose Twilight Sparkle. Protestant respondents were a bit more likely to choose Applejack as well.

Favorite Pets:



Among those who chose a favorite, over a third of respondents (38.49%) listed Gummy as their favorite pet among the mane six's pets. About a quarter of respondents (24.83%) chose Angel as their favorite.

Favorites among Secondary Characters:

Favorite Secondary	Distribution*
Derpy Hooves	769
Princess Luna	686
Discord	420
Scotaloo	245
Sweetie Belle	225
Spike	195
Princess Celestia	170
Trixie	138
Zecora	131
Apple Bloom	111
Big McIntosh	109
Cheerilee	85
Braeburn	24
Nightmare Moon	16
Granny Smith	13

**Choices with counts less than 10 are not shown. Characters that were not secondary characters by the definition given in the questionnaire were not considered in the analysis.*

Derpy Hooves (20.50%) and Princess Luna (18.28%) received the highest amount of responses for the favorite secondary character item. Since the survey was given a few months ago, this does not consider newly introduced and popular secondary characters such as Shining Armor, Cadence, or Chrysalis.

Favorite Episodes:

Favorite Episode*	Distribution	Favorite to Least Favorite Ratio
<i>Lesson Zero</i>	501	11.13
<i>Luna Eclipsed</i>	293	58.60
<i>A Friend in Deed</i>	277	8.39
<i>The Last Roundup</i>	211	13.19
<i>Party of One</i>	196	13.07
<i>Read It and Weep</i>	175	14.58
<i>Sonic Rainboom</i>	127	21.17
<i>The Cutie Mark Chronicles</i>	127	10.58
<i>The Return of Harmony - Part 2</i>	110	110.00
<i>Winter Wrap Up</i>	103	103.00
<i>Dragonshy</i>	80	7.27
<i>Sweet and Elite</i>	74	2.06

Favorite Episode*	Distribution	Favorite to Least Favorite Ratio
<i>The Super Speedy Cider Squeezy 6000</i>	69	2.38
<i>May the Best Pet Win!</i>	68	2.52
<i>Suited for Success</i>	67	4.19
<i>Sisterhooves Social</i>	61	3.21
<i>Green Isn't Your Color</i>	60	2.40
<i>Hearth's Warming Eve</i>	57	3.17
<i>The Best Night Ever</i>	55	6.88
<i>The Return of Harmony - Part 1</i>	55	6.88
<i>Secret of My Excess</i>	46	1.28
<i>Feeling Pinkie Keen</i>	43	0.33
<i>Hearts and Hooves Day</i>	33	0.77
<i>Bridle Gossip</i>	32	2.46
<i>Baby Cakes</i>	26	0.29
<i>A Dog and Pony Show</i>	23	0.32
<i>Friendship is Magic - Part 2 (Elements of Harmony)</i>	21	0.78
<i>Stare Master</i>	18	1.29
<i>Fall Weather Friends</i>	18	1.06
<i>Over a Barrel</i>	17	0.11
<i>Look Before You Sleep</i>	17	0.20
<i>Family Appreciation Day</i>	13	0.50
<i>The Show Stoppers</i>	11	0.10
<i>Applebuck Season</i>	10	0.50
<i>Griffon the Brush-Off</i>	9	0.04
<i>Boast Busters</i>	9	0.38
<i>A Bird in the Hoof</i>	9	0.33
<i>Swarm of the Century</i>	7	0.41
<i>The Mysterious Mare Do Well</i>	7	0.02

Favorite Episode*	Distribution	Favorite to Least Favorite Ratio
<i>Friendship is Magic - Part 1 (Mare in the Moon)</i>	6	0.78
<i>The Cutie Pox</i>	6	0.12
<i>The Ticket Master</i>	3	0.06
<i>Call of the Cutie</i>	2	0.03
<i>Owl's Well That Ends Well</i>	1	0.00
I do not have a favorite episode.	532	

*Episodes in rows with blue highlighting are episodes from Season 1, and episodes in rows with red highlighting are episodes from Season 2.

As of the time of the survey, Lesson Zero was, by far, the most likely to be respondents' favorite episode (13.35%). Four of the five (80%) most favorite episodes were from Season 2. However, only 12 (60%) of the 20 episodes most likely to be considered favorites of respondents were from Season 2 (in comparison to 8 from Season 1.) Many respondents stated that they did not have a favorite episode at all (14.18%).

Least Favorite Episodes:

Least Favorite Episode*	Distribution	Favorite to Least Favorite Ratio
<i>The Mysterious Mare Do Well</i>	408	0.02
<i>Owl's Well That Ends Well</i>	233	0.00
<i>Griffon the Brush-Off</i>	206	0.04
<i>Over a Barrel</i>	150	0.11
<i>Feeling Pinkie Keen</i>	131	0.33
<i>The Show Stoppers</i>	114	0.10
<i>Baby Cakes</i>	90	0.29
<i>Look Before You Sleep</i>	85	0.20
<i>A Dog and Pony Show</i>	72	0.32
<i>Call of the Cutie</i>	71	0.03
<i>Friendship is Magic - Part 1 (Mare in the Moon)</i>	66	0.09
<i>The Cutie Pox</i>	49	0.12
<i>The Ticket Master</i>	48	0.06
<i>Lesson Zero</i>	45	11.13
<i>Hearts and Hooves Day</i>	43	0.77

Least Favorite Episode*	Distribution	Favorite to Least Favorite Ratio
<i>Secret of My Excess</i>	36	1.28
<i>Sweet and Elite</i>	36	2.06
<i>A Friend in Deed</i>	33	8.39
<i>The Super Speedy Cider Squeezy 6000</i>	29	2.38
<i>May the Best Pet Win!</i>	27	2.52
<i>Friendship is Magic - Part 2 (Elements of Harmony)</i>	27	0.78
<i>A Bird in the Hoof</i>	27	0.33
<i>Family Appreciation Day</i>	26	0.50
<i>Green Isn't Your Color</i>	25	2.40
<i>Boast Busters</i>	24	0.38
<i>Applebuck Season</i>	20	0.50
<i>Sisterhooves Social</i>	19	3.21
<i>Hearth's Warming Eve</i>	18	3.17
<i>Fall Weather Friends</i>	17	1.06
<i>Swarm of the Century</i>	17	0.41
<i>The Last Roundup</i>	16	13.19
<i>Suited for Success</i>	16	4.19
<i>Party of One</i>	15	13.07
<i>Stare Master</i>	14	1.29
<i>Bridle Gossip</i>	13	2.46
<i>Read It and Weep</i>	12	14.58
<i>The Cutie Mark Chronicles</i>	12	10.58
<i>Dragonshy</i>	11	7.27
<i>The Best Night Ever</i>	8	6.88
<i>The Return of Harmony - Part 1</i>	8	6.88
<i>Sonic Rainboom</i>	6	21.17
<i>Luna Eclipsed</i>	5	58.60
<i>The Return of Harmony - Part 2</i>	1	110.00
<i>Winter Wrap Up</i>	1	103.00
I do not have a least favorite episode.	1336	

*Episodes in rows with blue highlighting are episodes from Season 1, and episodes in rows with red highlighting are episodes from Season 2.

The Mysterious Mare Do Well was far more likely to be considered the least favorite episode of respondents (10.87%). However, it should be noted that far many more respondents did not have a

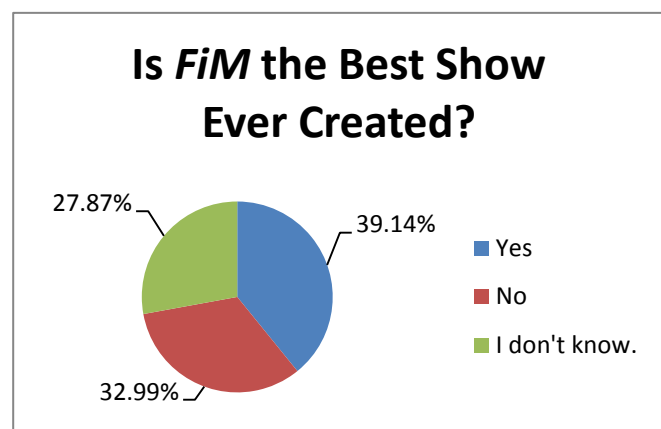
least favorite episode (35.61%). The episodes with the 10 most respondents were from Season 1 (80%), however, that proportion becomes even when considering the 20 episodes with the most respondents (50%).

Attitudes about the Show:

What do you like about the cartoon?	Distribution
The characterization/the characters	3529 (94.06%)
The humor	3398 (90.57%)
The style/design	3155 (84.09%)
The voice acting	3024 (80.60%)
The storyline/plot	2590 (69.03%)
The world building	2121 (56.53%)
The innocence	2117 (56.42%)
The morals	1923 (51.25%)
The drama	1097 (29.24%)
The nostalgia	1055 (28.12%)
I don't know	102 (2.72%)

Over 3,000 of the 3,752 respondents said that they liked the characters/characterization (94.06%), the humor (90.57%), the style/design (84.09%), and the voice acting of the show (80.60%). Although still large percentages, the fewest respondents claimed that the drama (29.24%) and the nostalgia (28.12%) were aspects they liked about the show.

The highest number of respondents said that *My Little Pony: Friendship is Magic* is the best show ever created (39.14% of those who responded). However, many respondents said that it was not (32.99%), and many said that they did not know (27.87%).



Part 3: The Fandom

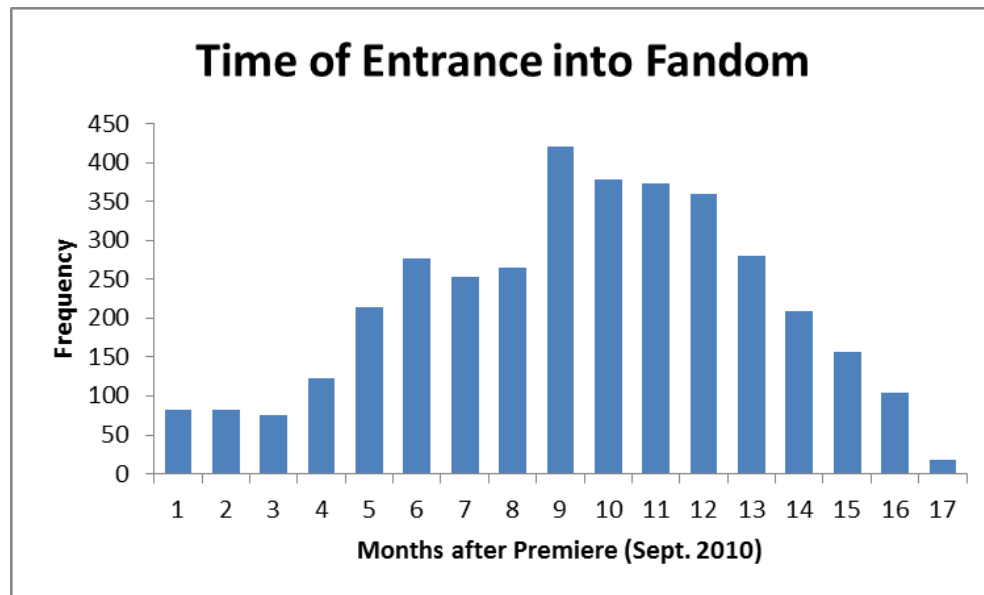
Opinions on the Fandom and the Show:

Qualitative Opinion of Show and Brony Status	Distribution
I am not a brony, and I do not like the show.	0
I am not a brony, but I am neutral towards the show.	6
I am not a brony, but I like the show.	146 (3.89%)
I am unsure if I am a brony, and I do not like the show.	0
I am unsure if I am a brony, and I am neutral towards the show.	1
I am unsure if I am a brony, but I like the show.	271 (7.22%)
I am a brony, but I do not like the show.	2
I am a brony, but I am neutral towards the show.	20
I am a brony, and I like the show.	3234 (86.19%)

**Percentages were listed only for categories with considerable counts.*

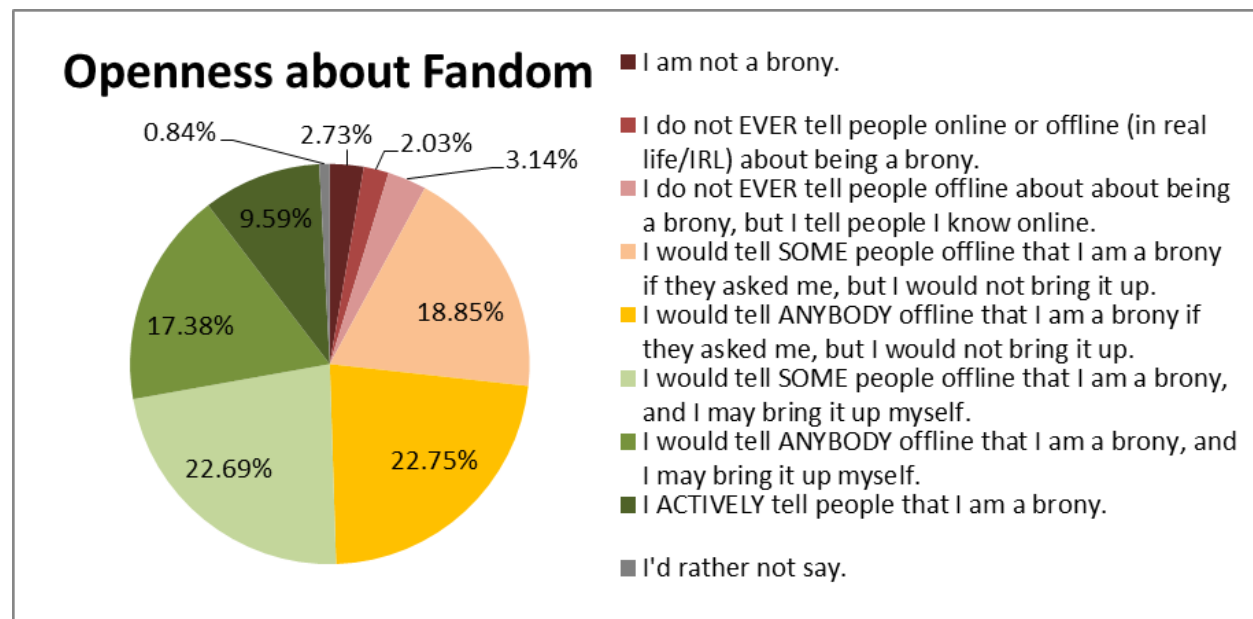
As expected, most respondents readily identified as being a brony, and nearly all respondents stated that they liked the show (97.31%). However, over a tenth of respondents did not identify as such (3.89%) or was unsure (7.22%).

Becoming a Brony:



It appears that the majority of respondents joined the fandom after the end of Season 1, during the summer of 2011. This can probably be attributed to the internet fervor surrounding the show during that time.

Openness about Being a Brony:



Approximately 50% (49.63%) of respondents would volunteer the info that they are a brony offline, given the correct conditions. A further 42% (41.60%) would admit to being a brony offline, but would not volunteer the info.

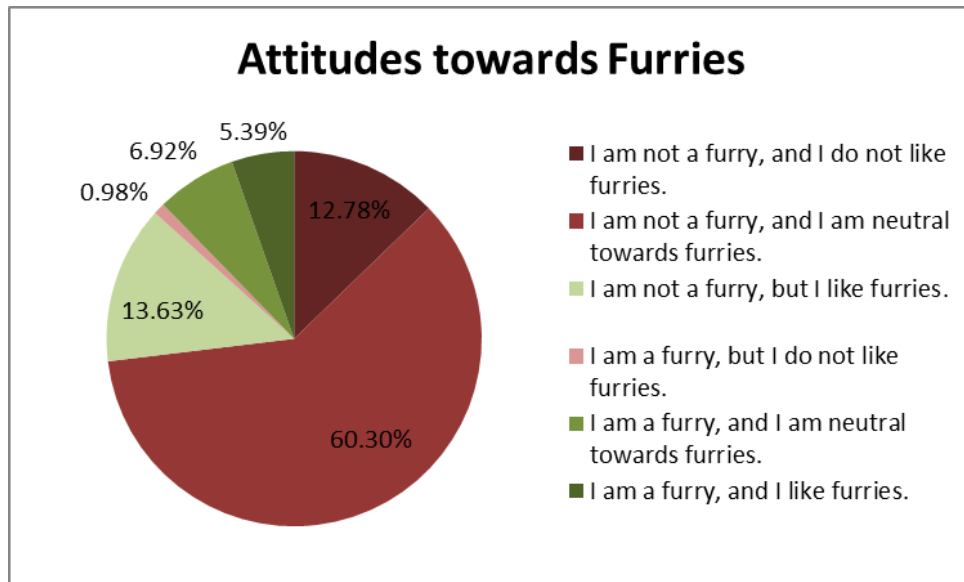
Social Network Use and Openness about Being a Brony:

The final χ^2 analysis was significant ($p < 0.001$). There were many different cells to consider, but respondents who used social networking sites less were also less willing to share their brony status with others. Those who used social networking sites more were more likely to share their brony status. (See graph below.)*

		Frequency of Social Networking Site Use					
Willingness to Tell Someone about Being a Brony		Do Not Use	Rarely Use	Occasionally Use	Somewhat Often	Regularly	Very Often
	Actively Tell	43	33	47	42	112	77
		60.1	67.1	62.4	42.7	76.2	45.6
		12.1%	9.3%	13.3%	11.9%	31.6%	21.8%
		-2.2	-4.2	-1.9	-.1	4.1	4.7
	Anybody, may bring it up	77	110	113	70	156	109
		107.7	120.4	111.9	76.6	136.7	81.8
		12.1%	17.3%	17.8%	11.0%	24.6%	17.2%
		-3.0	-.9	.1	-.7	1.7	3.0
	Anybody, would not bring it up	149	164	168	110	148	94
		141.3	157.9	146.8	100.4	179.3	107.2
		17.9%	19.7%	20.2%	13.2%	17.8%	11.3%
		.6	.5	1.8	1.0	-2.3	-1.3
	Some people, may bring it up	129	150	143	110	203	92
		140.3	156.8	145.7	99.7	178.0	106.5
		15.6%	18.1%	17.3%	13.3%	24.5%	11.1%
		-1.0	-.5	-.2	1.0	1.9	-1.4
	Some people, would not bring it up	129	153	130	80	123	73
		116.7	130.4	121.2	83.0	148.1	88.6
		18.8%	22.2%	18.9%	11.6%	17.9%	10.6%
		1.1	2.0	.8	-.3	-2.1	-1.7
	Only tell people online	34	33	18	11	12	7
		19.5	21.8	20.3	13.9	24.8	14.8
		29.6%	28.7%	15.7%	9.6%	10.4%	6.1%
		3.3	2.4	-.5	-.8	-2.6	-2.0
	Do not ever tell, online or offline	23	18	8	6	9	7
		12.0	13.5	12.5	8.6	15.3	9.1
		32.4%	25.4%	11.3%	8.5%	12.7%	9.9%
		3.2	1.2	-1.3	-.9	-1.6	-.7

*From top to bottom, each sub-row indicates actual respondent total, expected respondent total, percentage of respondents, and standardized residuals. A standardized residual with an absolute value greater than 2 indicates that it had a considerable effect on the χ^2 finding. Negative values indicate that counts are fewer than expected by chance, and positive values indicate that respondent totals were more than expected by chance.

Attitudes towards Furry Fandom:



The majority (86.71%) of respondents were not furries, and most (67.22%) felt neutral towards them. Slightly more respondents liked furries than did not (19.02% like vs. 13.76% dislike). Thus, it can be said that the Furry and Brony communities do not intersect, for the most part.

Purchasing My Little Pony Products:

FiM-Related Purchases	Distribution
I BUY official toys/models	1545 (41.18%)
I do not buy any FiM merchandise.	1442 (38.43%)
I BUY official clothing	1020 (27.19%)
I BUY fan-made items	761 (20.82%)
I BUY official episodes	569 (15.17%)

About 40% of respondents said they purchased official toys/models, and about as many said they did not buy any FiM merchandise. Only 15.17% of respondents said that they purchased official episodes, which is less than those who purchase fan-made items.

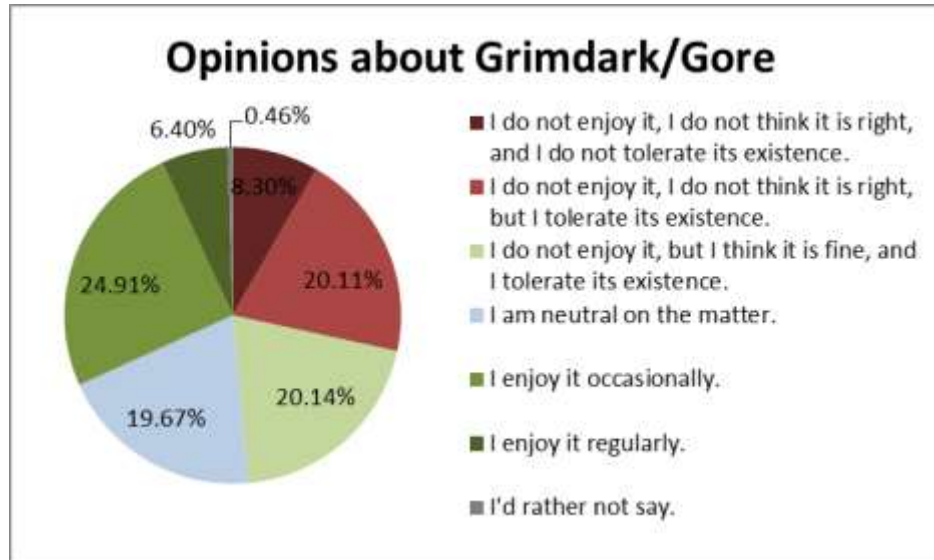
Methods of Involvement with Fandom:

Involvement with Fandom	Distribution
Visit Equestria Daily frequently	3277 (87.34%)
Look at FiM-fanart	3228 (86.03%)
Listen to FiM-inspired music	2942 (78.41%)
Read fanfiction	2423 (64.57%)
I lurk	1580 (42.11%)
Post in FiM threads/forums	1545 (41.18%)
Making fanart	925 (24.65%)
Writing fanfiction	642 (17.11%)
Visit Equestria Daily sometimes	321 (8.56%)
Making FiM-inspired music	199 (5.30%)
Write reviews	130 (3.46%)
Write articles	84 (2.24%)

Given the sampling, it was not surprising to see that “Visit Equestria Daily frequently” was the response chosen most frequently (87.34%). Most involvement seems to revolve around consuming products of the fandom (i.e. *looking* at fanart, *reading* fanfiction, *listening* to fan music) than producing said content. However, given that many of the respondents were recruited from Equestria Daily and two smaller webpages, it is notable that nearly a quarter of respondents produced fanart (24.65%).

Part 4: Shipping, Grimdark, and Rule 34

Attitudes towards Grimdark/Gory Content:



Slightly under half (48.55%) of respondents reported that they do not enjoy grimdark/gory content, and slightly under one third (31.31%) reported enjoying it. Approximately one fifth were neutral.

Attitudes towards non-Sexual Shipping:



Shipping is enjoyed by a small majority of respondents (54.10%). Approximately one-fifth (21.64%) do not enjoy shipping at all. Shipping is thus seen as more acceptable by the brony community than grimdark, although it also has a higher percentage of neutral respondents than grimdark. It can therefore be said that grimdark is a slightly more polarizing issue than shipping.

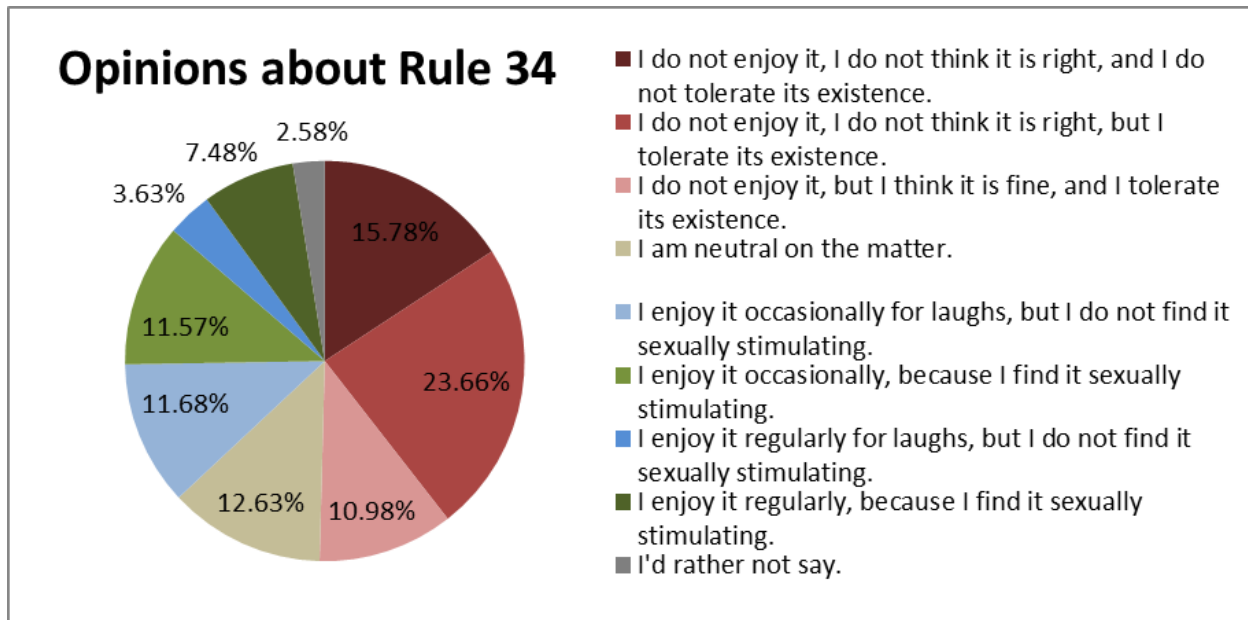
Favorite Shippings (Sexual and non-Sexual):

Favorite Shipping	Distribution
Vinyl Scratch, Octavia	437
Lyra, BonBon	345
Spike, Rarity	190
Applejack, Rainbow Dash	184
Big McIntosh, Fluttershy	123
Rainbow Dash, Twilight Sparkle	97
Trixie, Twilight Sparkle	93
Fluttershy, Pinkie Pie	81
Pinkie Pie, Rainbow Dash	80
Fluttershy, Rainbow Dash	65
Princess Celestia, Twilight Sparkle	64
Princess Luna, Twilight Sparkle	61
Cheerilee, Big McIntosh	45
Discord, Pinkie Pie	45
Princess Celestia, Discord	42

**It was an error that Doctor Whooves was omitted. However, there were 82 instances of "Whooves" in the shipping column of data for respondent generated responses, most of which were listed along with Derpy Hooves and 2 with Twilight Sparkle.*

Vinyl Scratch and Octavia (437) were listed most often as a favorite shipping pair given the offered choices, followed Lyra and BonBon (345). Among shipping restricted to the mane six, Applejack and Rainbow Dash were most likely to be considered respondents' favorite shipping (184).

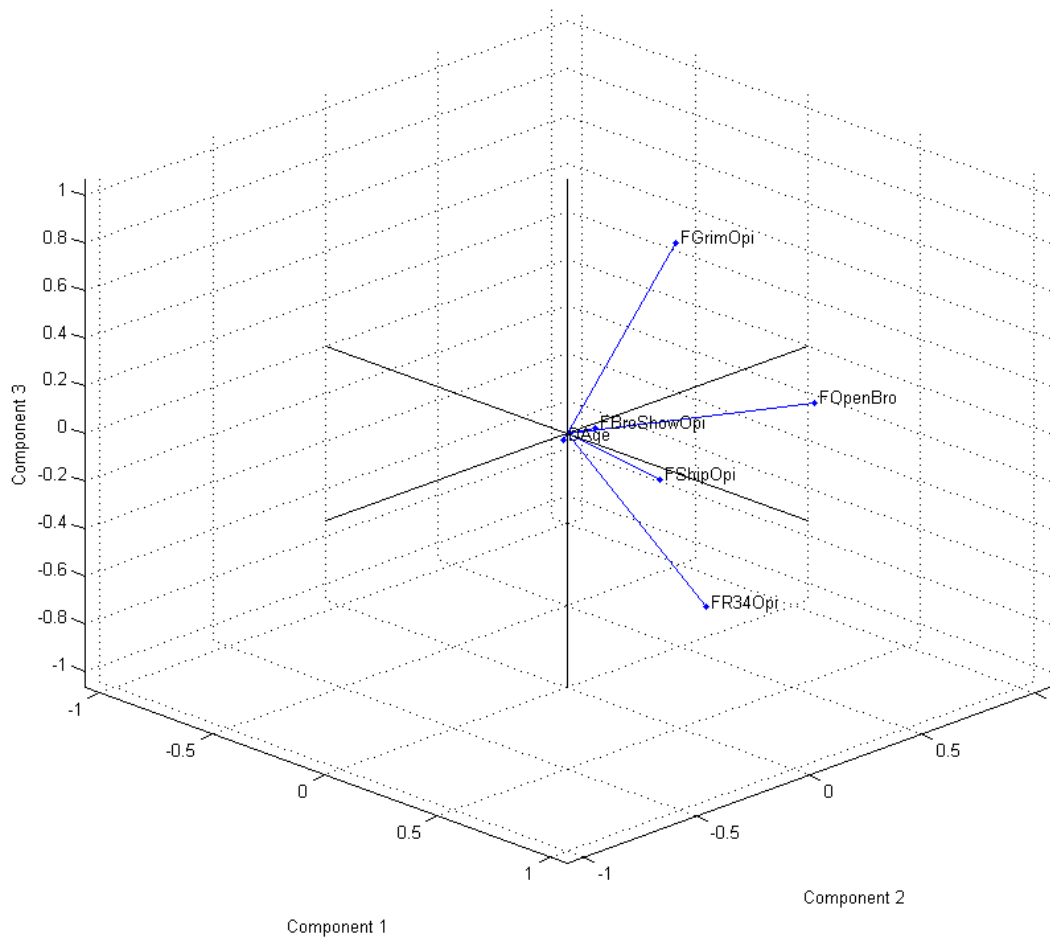
Attitudes towards Rule 34/Pornographic Content:



Approximately half (50.42%) of respondents do not enjoy Rule 34/Pornographic Content. Slightly more respondents view R34 for sexual stimulation (19.05%) than for humor (15.31%). Combined, about one third (34.36%) of respondents enjoy R34. It should be noted that a much smaller percentage of respondents feel neutral towards R34 than towards grimdark or shipping, and that a much larger percentage of respondents preferred not to declare their opinion. Naturally, R34 is the most polarizing issue within the brony fandom, but it should be noted that the statistics of R34 opinions do not differ greatly from those of grimdark.

More advanced analysis – Principal Component Analysis – was used to determine covariance between opinions on aspects of the fandom, opinions about the show, respondent age, and openness about the fandom.

On the chart on the next page, each labeled vector represents a particular factor used during the analysis; vectors that point in the same direction in Principal Component space show that the factors that they represent co-vary together; that is to say, that the factors are related.



FBroShowOpi = Opinion of the Show

FOpenBro = Openness about Being a Brony

DAge = Age

FGrimOpi = Opinion on Grimdark

FShipOpi = Opinion on non-Sexual Shipping

FR34Opi = Opinion on Rule 34

Openness is largely represented by Principal Component 2. Opinion on grimdark is represented by Principal Component 3 and Principal Component 1. Opinion on shipping is largely represented by Principal Component 1. Opinion on R34 is represented by Principal Components 1, 2, and 3. Age is not represented by any component; nor opinion on the show, indicating that they form no correlation with any other factors.

In general, fans of grimdark, shipping, and R34 are not wholly likely to be open bronies. Grimdark fans are slightly more likely to be open bronies than R34 or shipping fans. R34 fans are likely to also be shipping fans, as expected, but not necessarily the other way around. Grimdark fans are less likely to be shipping fans than R34 fans. Grimdark fans are not very likely to be R34 fans.

IV – Conclusions

Although other, larger scale investigations have found that the brony fandom does not conform to the myths and preconceived notions that surround it, they tend to neglect how nationally representative data compare to their own samples. The present study found that the fandom varies considerably from the norm, from sexual orientation to relationship status to racial identification and religious affiliations. Within the fandom, there are many interesting associations to be made about opinions about the show and opinions about the fandom. Even at a descriptive level, there are interesting patterns that continue to merit observation over the course of the fandom's development and evolution as one of the most impressive Internet phenomena in the history of the World Wide Web.

Although the statistical analyses were sound given the data, there are several limitations and omissions in this survey. Much of the data collected was categorical in nature. The social sciences may allow ordinal level data to be used in other analyses (e.g., analysis of variance, t-tests) but for the sake of practicality and with consideration for future iterations of the survey, the analysis did not include those statistical measures. Several options for items were omitted by accident, especially in regards to the shipping pair item (e.g., Doctor Whooves). There were also legitimate concerns with how the questions were phrased for some of the items (e.g., race and ethnicity are not the same thing; gore and grimdark are not the same thing). In addition, there were concerns with how some of the options may have been perceived as nominal (i.e. the responses are qualitatively different but have no inherent order) when the authors meant for them to be ordinal (i.e. the responses have an inherent order, but the intervals between each adjacent rank are not necessarily equidistant).

There is also an issue of generalizability due to the sampling process. The pilot survey for Know Your Meme yielded less than 100 participants, but the current survey had over 3,700. It can be assumed that the results may be more indicative of those who frequent Equestria Daily (specifically those who read the Nightly Roundups) and not of those in the community. Furthermore, it should be taken into account that as a part of Internet culture, many of these findings from the sample could be similar to those who are also a part of Internet culture, but do not identify as bronies, and may not be indicative of only the brony community. However, the authors believe the data is accurate for the survey.

There are currently plans for a much improved version of this survey that will include more items, more choices (and more accurate choices) for items, and a sampling that distributes the survey among other larger FiM-related sites and threads (/mlp/ of 4chan, Ponychan, Ponibooru, reddit, tumblr, etc.). There is anecdotal evidence that suggests there are differences among bronies who visit some sites more frequently than others. Those differences may suggest differences among communities within the subculture, which also merit exploration; items will also be added to collect data on opinions of other larger communities, where respondents feel most comfortable, from where they found the survey initially, etc. The authors ask for cooperation with groups all over the Internet to best sample the brony community as a whole and to describe it accurately and objectively.

If the audience has any questions about the survey or any of the aspects of it, then please contact the authors (see below for information). The authors also welcome and humbly request suggestions as to how to improve the survey for subsequent incarnations.

Acknowledgements:

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- **Verbose** is a forum moderator on the Internet phenomena documentation site Know Your Meme. He has watched the show since March 2011, and has been actively involved in the brony community on KYM and Ponibooru since July 2011. He is currently pursuing a graduate degree in the social sciences. He can be reached by emailing verbosethetalky@gmail.com or by sending him a private message at <http://knowyourmeme.com/users/verbose>.
- **opspe**, a fellow Know Your Meme user, spends most of his time shooting lasers at toilet paper while listening to loud music. When he's not doing that, he enjoys observing, analyzing, and sometimes participating in subcultures. He has been following the show since July 2011. He can be reached by emailing opspe.kym@gmail.com or by sending him a private message at <http://knowyourmeme.com/users/opspe>.

References:

- Edwards, P & Redden, M. H. (2012). Brony Study (Research Project). Retrieved from <http://www.bronystudy.com/id1.html>.
- European Commission (2005). Social values, Science and Technology. Retrieved from http://ec.europa.eu/public_opinion/archives/ebs/ebs_225_report_en.pdf.
- Gates, G. J. (2011). How many people are lesbian, gay, bisexual, and transgender? The Williams Institute, UCLA School of Law. Retrieved from <http://williamsinstitute.law.ucla.edu/wp-content/uploads/Gates-How-Many-People-LGBT-Apr-2011.pdf>.
- Goodwin P. Y., Mosher W. D., and Chandra A. (2010). Marriage and cohabitation in the United States: A statistical portrait based on Cycle 6 (2002) of the National Survey of Family Growth. National Center for Health Statistics. *Vital Health Stat* 23(28).
- The Pew Forum on Religion and Public Life (2008). U.S. Religious Landscape Survey Religious Affiliation: Diverse and Dynamic. Retrieved from <http://religions.pewforum.org/pdf/report-religious-landscape-study-full.pdf>.
- Salaway, G., Caruso, J. B., and Nelson, M. R. (2008). The ECAR Study of Undergraduate Students and Information Technology, 2008. EDUCAUSE Center for Applied Research. Retrieved from <http://net.educause.edu/ir/library/pdf/ERS0808/RS/ERS0808w.pdf>.
- United States Census Bureau (2010). State & County QuickFacts: USA. Retrieved from <http://quickfacts.census.gov/qfd/states/00000.html>