

Text Mining to Understand Gender Issues: Stories from The Red Pill, Men's Rights, and Feminism Movements

by

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I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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Abstract

Addressing gender issues has become important worldwide. The United Nations (UN) endorses big data projects as a valuable tool to monitor its gender-related development goals. In this thesis, we first motivate the examination of The Red Pill, Men’s Rights, and Feminism movements to identify gender issues. We present data-mining methodologies to analyze over 40,000 posts and 2 billion comments that were made on social media in relation to these social movements. Specifically, we examine the themes these movements discuss and their perspectives on them. We also analyze the people involved with these movements, by comparing their discussions and interests with other online communities. Our analysis leads to three main findings. First, gender movements discuss workplace sexism, personal safety, rape, and legal issues among other gender issues, and different movements often have different perspectives on these issues. Second, people involved with the Men’s Rights movement are similar to people who are politically right-leaning and associated with sexist or racist content, whereas people involved with the Feminism movement are similar to those who are politically left-leaning, support minorities, body acceptance, and survivors of sexual assault. Third, people involved with The Red Pill movement are similar to those who do not believe in the egalitarianism of race or gender. We obtain insights beneficial to entities affected by gender issues, such as governments, and international organizations such as the UN Women.

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Dedication

This is dedicated to the ones I love.

Table of Contents

List of Tables	viii
List of Figures	ix
1 Introduction	1
2 Related Work	4
3 Data	6
4 Methodology	11
4.1 Themes & Perspectives Extraction	11
4.1.1 Data Preprocessing	12
4.1.2 Topic Extraction	13
4.1.3 Perspectives Extraction	15
4.1.4 Themes Extraction	15
4.2 Keyword Extraction for Themes & Perspectives	18
4.3 People Involved with Gender Movements	21
4.3.1 Textual Similarity of Comments	21
4.3.2 Commenting Activity Similarity (subreddit2interests)	26
4.4 Limitations and Assumptions	28

5	Results	30
5.1	Themes & Perspectives	30
5.1.1	Themes	30
5.1.2	Perspectives	31
5.2	Keywords Associated with Themes & Perspectives	49
5.3	People Involved with Gender Movements	55
5.3.1	Textual Similarity of Comments	55
5.3.2	Commenting Activity Similarity (subreddit2interests)	58
6	Discussion	63
7	Conclusions and Future Work	67
	References	70
	APPENDICES	80
A	Gender Related Terms and Subreddits	81
.1	Gender Related Terms	81
.2	Subreddits of Interest	83

List of Tables

3.1	Gender Subreddits Statistics	10
4.1	Number of posts used remaining cleaning for Content Analysis (Themes, Perspectives, and associated Keywords Extraction)	13
4.2	Similar pairs of topics extracted by NMF and SeaNMF from r/MensRights. Only the top few words are shown because of space constraints.	18
4.3	Control subreddits used for Keyword Extraction. D_C consists of posts sampled from these subreddits.	19
5.1	Themes discussed across gender forums. The % for each subreddit is with respect to the total # of posts in that subreddit. The “Total” % is with respect to the total # of posts in our corpus. Some topics were deemed too noisy and discarded (bottom row)	32
5.2	r/TheRedPill keywords used to discuss each theme	49
5.3	r/MensRights keywords used to discuss each theme	51
5.4	r/Feminism keywords used to discuss each theme	53
5.5	Subreddits similar to gender subreddits (using syntactic text similarity and a threshold of .37)	57
5.6	Subreddits similar to gender subreddits (using semantic text similarity with unweighted averages and a threshold of .9991)	59
5.7	Subreddits similar to gender subreddits (in terms of commenting activity, with a threshold of .60).	62

List of Figures

3.1	The structure of a typical subreddit. All posts and comments on this subreddit are pertinent to Star Wars. This subreddit also has a description of its main interests, in this case, Star Wars. User names have been redacted for privacy.	7
3.2	Users can post on subreddits and comment on posts. User names have been redacted for privacy.	8
3.3	Subreddits with the highest number of subscribers. The gender-oriented subreddits were found farther down, approximately ranked between the top 50 to 500 in terms of number of subscribers.	9
4.1	Overview of our methodology that uses posts and comments to understand content and people, respectively	12
4.2	Topic Extraction: Using NMF to automatically extract topics discussed in r/MensRights	14
4.3	Sample topic descriptors (ranked lists of words) produced by NMF for r/Mensrights. Uninformative words are circled.	15
4.4	Ranked lists of topics suggested for each r/Mensrights post. We choose the highest ranking topic for each post as its final topic (circled).	15
4.5	Similar topics discussed in different subreddits	16
4.6	Themes & Perspectives Extraction	16
4.7	Redundancy in topics extracted by LDA from r/MensRights	17
4.8	<i>n</i> -grams with most negative LLR values in <i>Health / Abuse</i> discussions in r/Feminism. <i>n</i> -grams crossed out were deemed imprecise, the remainder are declared keywords.	20

4.9	Every subreddit can be expressed as a tf-idf vector of the words used on Reddit. Subreddits that are textually more similar have a higher cosine similarity.	24
4.10	Subreddit to tf-idf vector matrix (subreddit2tfidfvec). Using only tf-idf values to represent subreddit content restricts us to syntactic similarity measurements.	24
4.11	We multiply the tf-idf vector matrix from Figure 4.10 with pre-trained word2vec embeddings to produce a (tf-idf weighted) subreddit to embedding matrix. This matrix can be used to measure the semantic similarity between subreddits.	25
4.12	Every subreddit can be expressed as a vector of user overlap values (later converted to PPMI) with the top 200-2000 subreddits on Reddit. Subreddits whose users have similar interests will have a higher cosine similarity.	27
4.13	Subreddit to user overlap matrix (subreddit2interests). Every cell is further converted into PPMI values (by normalizing it by the sum of its row and column, taking its logarithm, and converting it to 0 if it is negative).	28
5.1	Themes distribution in r/TheRedPill	31
5.2	Themes distribution in r/MensRights	33
5.3	Themes distribution in r/Feminism	33
5.4	Themes distribution in r/AskMen	34
5.5	Themes distribution in r/AskWomen	34
5.6	Perspectives on <i>Health / Abuse</i>	35
5.7	Perspectives on <i>Reproductive Issues</i>	36
5.8	Perspectives on <i>Criminal Justice System</i>	36
5.9	Perspectives on <i>Other Gender Issues</i>	37
5.10	Perspectives on <i>Other Social Issues</i>	38
5.11	Perspectives on <i>Education</i>	39
5.12	Perspectives on <i>Political Issues</i>	39
5.13	Perspectives on <i>Self Esteem / Grooming</i>	40
5.14	Perspectives on <i>Dating / Flirting</i>	41

5.15 Perspectives on <i>Relationships</i>	43
5.16 Perspectives on <i>Work</i>	44
5.17 Perspectives on <i>Family</i>	45
5.18 Perspectives on <i>Sex / Pornography</i>	45
5.19 Perspectives on <i>Gender Movements</i>	46
5.20 Perspectives on <i>Media</i>	47
5.21 Perspectives on <i>Money</i>	48
5.22 Perspectives on <i>Sports / Video Games</i>	48

Chapter 1

Introduction

Addressing gender issues has become important worldwide. The employment rate for women in the European Union (EU) is 66.6%, as compared to 78% for men [19]. Research in Ireland has indicated that men are less likely to seek help for mental health issues [38]. It has been reported that some women in North America are less satisfied with their engineering work experiences than men [17]. Therefore, it is unsurprising that Canada prioritizes gender equality in its international efforts [67]. Similarly, the European Commission has committed to promoting gender equity in the EU [18]. Furthermore, the United Nations Women endorses the use of *big data* to monitor its gender-related goals [55].

The push to use data to help resolve gender issues is reminiscent of a recent drive to use data for social good, where researchers stated “... data from computerized social service, education, and health records; open data portals; social media posts; web searches; and mobile GPS devices and sensors can help to illuminate social problems and propel effective solutions.” [23]. Social media posts, in particular, act as unfiltered and uncensored sources of public opinion on a variety of topics [99]. In fact, online platforms that also provide anonymity to its users especially allow individuals to speak freely about controversial, personal, or intimate topics [83]. These advantages have made social media a suitable venue for people to express sensitive gender-related issues. For example, sexual assault survivors have used the Twitter hashtag #ididnotreport to share unreported experiences with sexual assault or street harassment [48]. Therefore, in this research, we find and analyze social media data to describe the various gender issues people currently face.

The challenge of finding and analyzing social media data relevant to a particular social issue (such as gender issues) has been faced in prior work in the context of racial issues. Choudhury et al. [26] examined issues of racial conflict and misconduct by analyzing tweets

about the #BlackLivesMatter social movement. Their work used social media as “a sensor for quantifying discourse around sensitive topics such as race and societal violence” and serves as our inspiration for the use of social media posts generated by *social movements* to understand related social issues. In particular, in this thesis, we use social media posts generated by *gender movements* to understand gender issues. There are many gender movements with a social media presence, for example Feminism, #MeToo, #NotAllMen, The Red Pill, and Men’s Rights.

Topically, close to our research is the recent work of Lucy et al. [56], who linguistically analyzed gender forums on Reddit, a large social media platform with over 200 million monthly users¹. These forums discussed fashion advice, general advice, and men’s rights. They found that some gender forums have few users in common but are still textually similar and that the same words may be associated with different sentiments when used by different gender forums. Their analysis is primarily linguistic. Our work differs in that we focus on *identifying the issues* being discussed and *increasing our understanding of the users* of these forums.

In this thesis, we analyze social movements related to gender by mining over 40,000 posts and almost 2 billion comments from Reddit. These posts are labeled with the gender movement that generated them, but not with the specific issue they address. We also have limited information about the people who generated this content because Reddit users are not required to reveal personal information (such as other interests or affiliations) on the platform. Moreover, creating a Reddit account only requires a username and password; thus users usually remain anonymous. Therefore, our technical challenge is to extract useful information from the available data to understand the content being generated and the people involved with gender movements. In particular, we analyze the posts and comments generated by The Red Pill, Men’s Rights, and Feminism movements, since they are the largest gender movements on Reddit.

Specifically, we address the following research questions:

RQ 1: What are the issues The Red Pill, Men’s Rights, and Feminism movements post about online?

RQ 2: What are the characteristics of people who comment on The Red Pill, Men’s Rights, and Feminism movements?

To answer **RQ1**, we use text mining methods such as topic-modeling to extract the topics discussed by gender movements. To address **RQ2**, we use a vector representation

¹Reddit usage statistics can be found [here](#).

of the people involved with a gender movement. This vector has 2047 dimensions and summarizes user interests by mining their commenting activity. Such vector representations of people’s interests allow us to analyze and compare the people involved with gender movements. To the best of our knowledge, there is no prior work that mines a large social media dataset to obtain insights on both the issues and people associated with gender movements. The main findings of this research are as follows.

We discovered that gender movements post about issues such as family law, sexual violence, personal safety, dating, consent, media representations, workplace sexism, workplace harassment, criminal justice system, pink tax, and gender differences in education. Different gender movements offer different perspectives on certain issues. For example, Men’s Rights discusses false rape accusations in addition to sexual assault faced by men, whereas Feminism primarily discusses sexual assault faced by women.

We also extracted several data-driven characteristics of the people involved with gender movements. First, the people who comment on The Red Pill movement are similar to other gender communities such as Men’s Rights and Incels, and to people who reject egalitarianism of race and gender. Second, the people who comment on the Men’s Rights movement are similar to politically conservative communities, people whose content is known to be racist and misogynist, and people who are interested in Jordan Peterson and atheism. Third, the people who comment on the Feminism movement are similar to groups who are politically less conservative, are helpful to various minority groups (related to disability, race, and orientation), provide counseling to victims of sexual violence, are against a Men’s Rights group on Reddit, and promote body acceptance.

The remainder of this thesis is organized as follows. Chapter 2 discusses related work. Chapter 3 introduces our dataset. Chapter 4 describes our methodology. Chapter 5 discusses the experimental results. Chapter 6 discusses and contextualizes our results, and Chapter 7 concludes the thesis with the implications of our findings and directions for future work.

Chapter 2

Related Work

This thesis is related to two bodies of work: text mining and gender movements. In the context of text mining, we apply state-of-the-art information retrieval techniques (discussed in detail in Chapter 4). In terms of gender movements, to the best of our knowledge, we are the first to leverage large social media datasets to extract gender issues. Prior research in this area has been both data-driven and qualitative.

First, we discuss data-driven analyses of gender movements. These did not examine the issues or people involved with gender movements.

Field et al. [30] studied how people were portrayed in nearly 30,000 news articles covering the #MeToo movement. They generated sentiment, power, and agency scores for entities in these news articles using word embeddings and supervised learning, and found that these articles are sympathetic towards women who have experienced sexual harassment, and present accused men as powerful. For example, entities such as Justice Steven O’Neill and Donald Trump were portrayed as powerful in articles covering the #MeToo movement. In contrast to Field et al., we examine the discourse of a movement rather than its media coverage, in order to understand the issues and people involved, rather than how they are portrayed.

LaViolette et al. [51] examined over 670,000 comments made in two gender forums on Reddit, Men’s Rights and Men’s Liberation. They used a combination of text classification models and qualitative analysis, and identified the linguistic features that distinguish Men’s Rights and Men’s Liberation. For example, words that were unique to Men’s Rights included criminality, law and the justice system-related words such as accusation, arrest, charge, etc. Men’s Liberations contained many more identity and emotion-oriented phrases such as gendered, feminine, vulnerable, and insecurity. Lucy et al. [56] also linguistically

analyzed several gender communities on Reddit. They found that these communities have few users in common but are textually similar, and that the same word is sometimes associated with different sentiments when used by different gender communities. For example, the word “obsessed” is used positively by a community discussing female fashion but is used negatively by a Men’s Rights community. Furthermore, the comments made by female and male fashion advice groups had high text similarity, but low user similarity. These works were linguistic and did not focus on the topics or issues discussed.

An informal survey of Men’s Rights users on Reddit discovered that survey participants were mostly male, white, between the ages of 17 to 20, indifferent to religion, and politically strongly conservative [102]. However, this survey naturally suffers from a self-selection bias, whereas our analysis uses *all* Men’s Rights discourses to understand their users.

Next, we review research that has analyzed the issues pursued by gender movements.

Prior work on the Feminism movement shows that Feminism has focused on a variety of legal and social equality issues that influence women, evolving through the decades. These issues included the right to vote, equality in the workplace, and violence against women [43, 76, 14]. These analyses are either historical (documenting the Feminist movement throughout the 19th and 20th centuries) or qualitative (using interviews and surveys). Moreover, contemporary analysis of Feminism often focuses on sexual violence, for example examining the #MeToo and #Intersectionality movements [101, 30], whereas we analyze *all current* Feminist issues that emerge in Reddit discussions.

Scholarly and popular media analyses of the issues discussed by movements such as Men’s Rights and The Red Pill are similarly historical or qualitative. Ging analyzed the online discourse of The Red Pill and associated communities to state theories about the masculinities adopted by these communities and analyze their assumptions. [35]. Men’s Rights groups have been found to discuss issues such as family courts, male circumcision, domestic violence, and education [59, 2, 64, 97].

We emphasize that our research yields data-driven results on gender issues and people; we do not seek out to verify specific results that have been observed in prior work. This thesis also does not attempt to verify whether or not the claims made by movements are true, i.e., we extract the issues that are discussed by the movements without attempting to verify that the issues genuinely occur.

Chapter 3

Data

Reddit (reddit.com) is a social curation website where registered users submit content in the form of links or text posts. Users form and join interest-based forums called *subreddits* (for example, r/lifehacks or r/StarWars), and within these forums they *post* relevant content. Other users can *comment* on these posts (Figure 3.2). A subreddit’s name and optional description suggests the main interest of the users of the subreddit (Figure 3.1). Throughout this thesis, we use the terms “forum”, “interest-group”, and “subreddit” interchangeably. There are over a million subreddits on Reddit¹.

We sort the subreddits by the number of subscribers they have, according to redditmetrics.com. Figure 3.3 shows the largest subreddits. We manually select the top subreddits with clearly gender-oriented names: r/TwoXChromosomes, r/AskMen, r/AskWomen, r/TheRedPill, r/TrollYChromosome, r/MensRights, r/Feminism. At the time of selection, all of these subreddits had more than 90,000 subscribers. We discard r/TwoXChromosomes since it is a “default” subreddit (to which users were automatically subscribed if they created a Reddit account before 2017²). We also discard r/TrollYChromosome since its users primarily share images with little text. The remaining five subreddits form our list of *gender subreddits*. Of these, r/AskMen and r/AskWomen contain *generic gender* discussions. They are general Q&A forums seeking advice from men’s and women’s perspectives, respectively. The remaining three gender subreddits are aligned with gender *movements*. In our analysis, we focus on movement subreddits and we compare them to the corresponding generic gender forums.

¹Subreddit count can be found [here](#).

²User curated list of default subreddits used by prior work [56] is available [here](#).

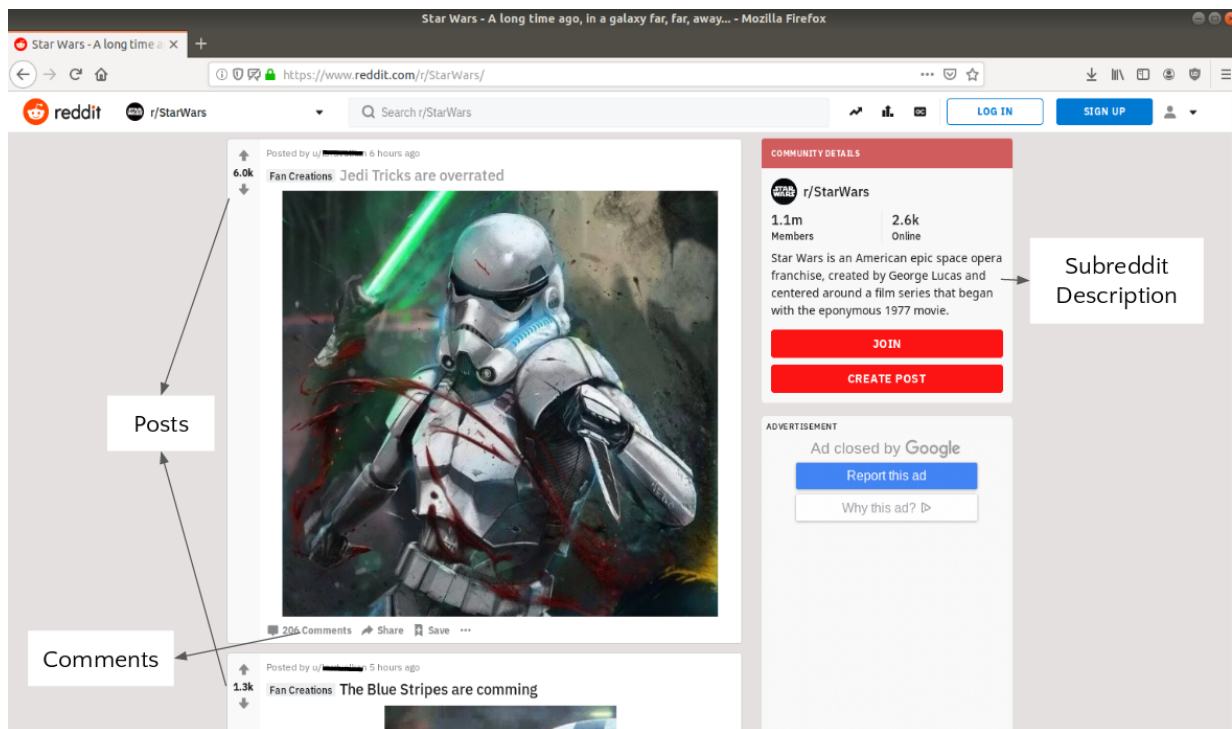


Figure 3.1: The structure of a typical subreddit. All posts and comments on this subreddit are pertinent to Star Wars. This subreddit also has a description of its main interests, in this case, Star Wars. User names have been redacted for privacy.

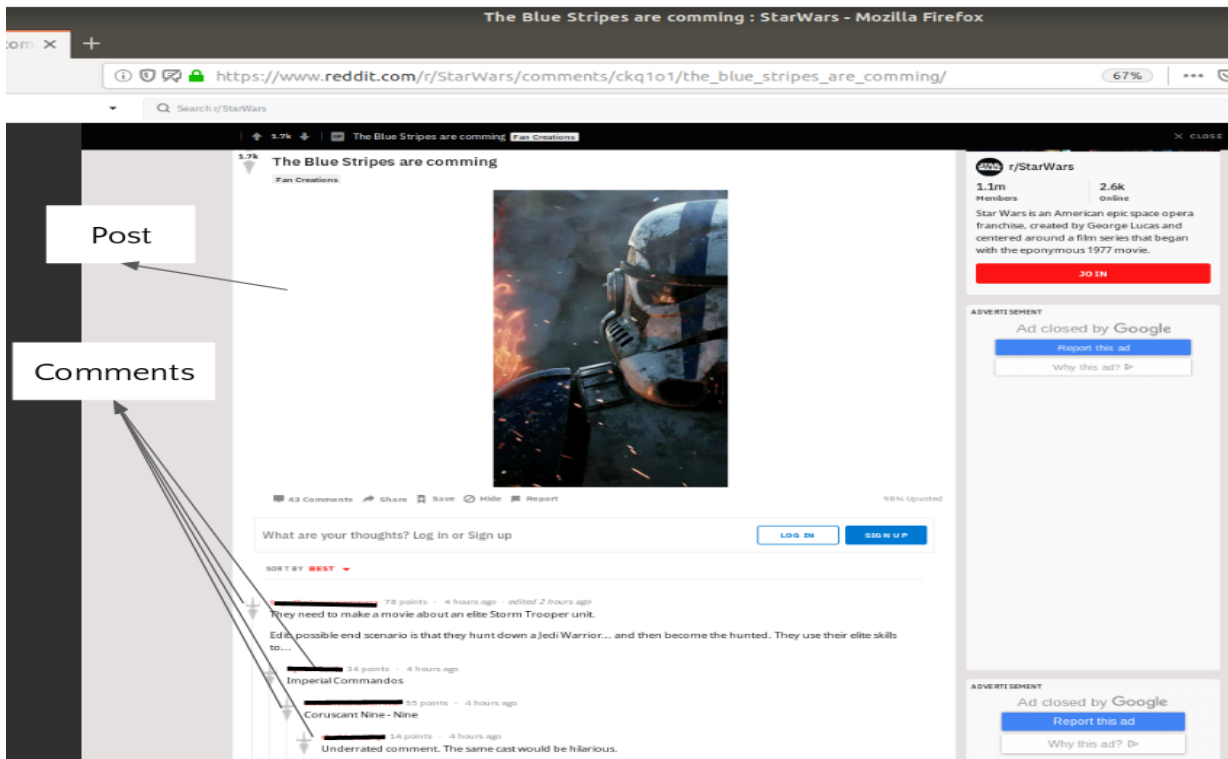


Figure 3.2: Users can post on subreddits and comment on posts. User names have been redacted for privacy.

Rank	Subreddit	Subscribers
1	funny	19895474
2	AskReddit	19510110
3	todayilearned	18981496
4	worldnews	18977231
5	Science	18932710
6	pics	18886430
7	gaming	18413642
8	IAmA	18097375
9	videos	17973194
10	movies	17824982
11	aww	17433245
12	Music	17051188
13	blog	16507239
14	gifs	16321999
15	news	16218736
16	explainlikeimfive	15705452
17	askscience	15634059
18	EarthPorn	15529380
19	books	14732532
20	television	14730352
21	mildlyinteresting	14477756
22	Showerthoughts	14344618
23	LifeProTips	14254907
24	space	13998772
25	DIY	13915297
26	Jokes	13829496
27	gadgets	13710381
28	nottheonion	13651430
29	sports	13542942
30	food	13533040
31	tifu	13398895

Figure 3.3: Subreddits with the highest number of subscribers. The gender-oriented subreddits were found farther down, approximately ranked between the top 50 to 500 in terms of number of subscribers.

Table 3.1 shows the number of posts, comments, and subscribers associated with the gender subreddits.

Table 3.1: Gender Subreddits Statistics

Gender subreddit	# subs	# posts	# comments	# users
r/TheRedPill	250K	47K	1.6M	80K
r/MensRights	170K	80K	1.6M	100K
r/Feminism	90K	40K	170K	30K
r/AskMen	500K	200K	6.5M	330K
r/AskWomen	500K	170K	5.5M	250K

Reddit users are not required to reveal personal information on the platform. Therefore, it is non-trivial to understand the people involved with particular subreddits. We leverage the interest-based organization of Reddit to characterize the users of gender subreddits, examining the content of the users' comments and where they choose to comment.

Our analysis was conducted on data publicly available on Google Big Query. We use three years of Reddit post and comment data, from December 2015 to December 2018. The source code is available on our project [Github](#).

Chapter 4

Methodology

The goal of this thesis is to understand gender movements using Reddit. We categorize our methodology by which research question it seeks to answer. Figure 4.1 summarizes the overall methodology. As shown in Figure 4.1, Sections 4.1 and 4.2 investigate the content generated by gender movements, despite the lack of fine-grained topical information within a subreddit. These sections use posts data (from gender subreddits, and “control” subreddits that are unrelated to gender, to be explained in Section 4.2). Sections 4.3.1 and 4.3.2 study the people associated with movement subreddits, despite the lack of personal information. These sections use comments data (from all subreddits, not just gender ones). We mention some notable limitations of our methodology in Section 4.4.

Throughout our text mining methods, we distinguish between “syntactic” and “semantic” techniques. Semantic methods capture the *meaning* of text, whereas syntactic methods represent text using word counts or sentence structure. Whenever we claim a certain method captures semantics better than another, we will clarify how the meaning of text was captured.

4.1 Themes & Perspectives Extraction

Here, we discover the themes discussed across gender subreddits, and the different perspectives expressed in the discussions. Broadly, we (1) extract the fine-grained topics discussed in each subreddit. (2) For each subreddit, we cluster together the subreddit’s posts which discuss the same topic. (3) For each subreddit, we read random samples of 15-20 posts categorized under each topic to make qualitative statements about the various perspectives

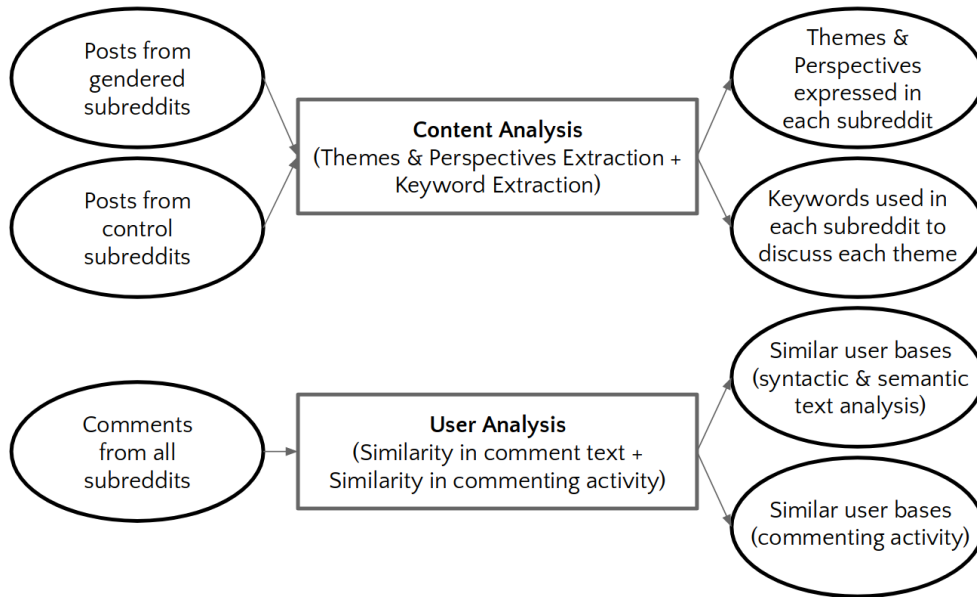


Figure 4.1: Overview of our methodology that uses posts and comments to understand content and people, respectively

the subreddit contains regarding that topic. (4) We finally merge related topics within and across subreddits into broader themes. At this step, each theme consists of similar topics and each subreddit may have different perspectives on these themes, as judged during step (3). We perform these steps on data that has been preprocessed, as explained below.

4.1.1 Data Preprocessing

We use only posts (not comments) to extract the topics being discussed. Comments on a post do not necessarily contain text *informative* of the topic being discussed. For example, a post may state “I love gardening!”. Someone may comment “So do I!”, which, on its own, does not contain any information on the topic being discussed (i.e. gardening). We preprocess the posts from each gender subreddit as described below.

- We use Ekphrasis, a text preprocessing tool for social media [7], to compress elongated words (“yaaaay” → “yay”), correct common misspellings (“korrekt” → “correct”), segment hashtags (“#tvseries” → “tv series”), and unpack contractions (“can’t” → “can not”).

- We stem each word using the Snowball tokenizer [74], reducing inflections of words to their roots (“leaving” → “leav”).
- We remove standard stop-words such as “the” and “is” [72]. We also remove words that occur in fewer than 1% (too rare) and in more than 95% (too popular) of the posts in a subreddit.
- We discard posts that are too short (with fewer than 256 characters) or too long (with more than 4096 characters) after cleaning. Posts that are too short may not contain enough text to deduce the topic being discussed, whereas posts that are too long may encompass more than one topic. The threshold of 256 - 4096 characters has been used by prior work that mined Reddit text [44]. We discovered that more than 80% of posts are too short; they are sometimes short questions the poster asked subreddit readers, sometimes URLs, sometimes images with little to no text, and at other times spam.

Between 5% (2K posts) to 20% (20K posts) of the posts in each subreddit are left after preprocessing (see Table 4.1).

Table 4.1: Number of posts used remaining cleaning for Content Analysis (Themes, Perspectives, and associated Keywords Extraction)

Gendered subreddit	Before cleaning		After cleaning	
	#	%	#	%
r/TheRedPill	47K	18.2%	8K	18.2%
r/MensRights	80K	10.9%	8K	10.9%
r/Feminism	40K	4.5%	2K	4.5%
r/AskMen	200K	9.5%	20K	9.5%
r/AskWomen	170K	4.6%	7K	4.6%

We now explain how we extract the themes and perspectives discussed by these posts.

4.1.2 Topic Extraction

We extract the topics discussed by each gender subreddit using their preprocessed posts. For simplicity, we describe extracting topics from r/MensRights first.

Unsupervised topic extraction (or modeling) from a corpus of text documents has been extensively explored in prior work [1]. Broadly, topic-modeling algorithms identify the topics discussed in the corpus, and quantify the importance of each topic to each document (assuming a single document may mention several topics). In our experiments, Non-negative Matrix Factorization (NMF) was the best topic-modeling algorithm for r/MensRights (and the other gender subreddits). We will explain this choice later in this section.

NMF ingests the 8K r/MensRights posts, where each post is expressed as a Term Frequency - Inverse Document Frequency (tf-idf) vector. It also takes as input the *number* of topics, K [100]. In our experiments, we chose $K = 50$ for all the gender subreddits. This choice of K will be explained later in this section. NMF extracts K topics in the form of “topic descriptors” (ranked lists of words that describe each topic). It also produces a ranked list of most suitable topics for each post.

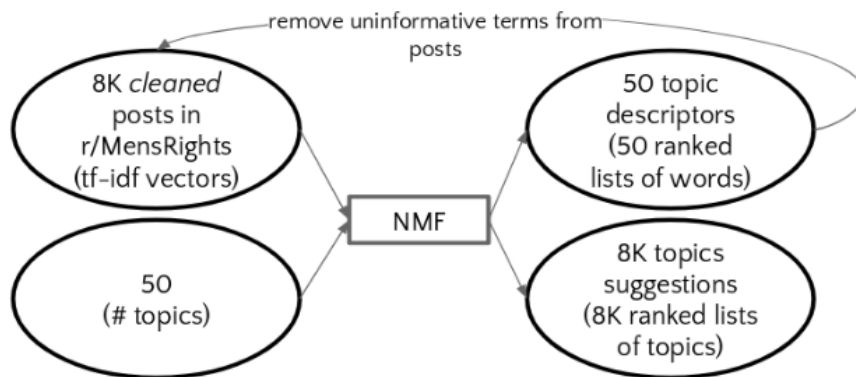


Figure 4.2: Topic Extraction: Using NMF to automatically extract topics discussed in r/MensRights

Figure 4.3 shows examples of the topic descriptors NMF produced. We observed many *uninformative* terms despite standard and frequency based stop-word removal during data preprocessing. These terms did not provide information about what is distinctive about a topic. They included terms such as “would”, “else”, “also”, besides domain-specific terms such as “woman” and “man” that are common in gender texts. We removed these words from the posts and re-used NMF to discover more informative topic descriptors. We thus iteratively built a custom stop-list of uninformative terms, till NMF produced topic descriptors without any uninformative words in its top 15 words. Custom stop-lists have also had to be similarly iteratively built by prior work using topic-modeling [90, 12].

Figure 4.2 summarizes the use of NMF to determine the 50 topics discussed in r/MensRights.

0: peopl think would one make thing see even use good way like person know someth
 1: woman man abort respons would husband wrong say hit kill life word murder even
 2: women men oppress power less societi treat even war sexist stem children mani differ also
 ...

Figure 4.3: Sample topic descriptors (ranked lists of words) produced by NMF for r/Mensrights. Uninformative words are circled.

Figure 4.4 shows examples of the ranked lists of topics NMF suggested for several posts. Since we limited the lengths of our posts during data preprocessing, we do not expect a single post to discuss more than one topic. Thus, we choose the highest ranking topic for each post as its most appropriate or final topic.

Doc 0 : topic 5 > topic 3 > topic 2 > ...
 Doc 1 : topic 30 > topic 2 > topic 5 > ...
 Doc 2 : topic 0 > topic 47 > topic 5 > ...
 ...

Figure 4.4: Ranked lists of topics suggested for each r/Mensrights post. We choose the highest ranking topic for each post as its final topic (circled).

4.1.3 Perspectives Extraction

We use the above methodology to extract 50 topics from each of the five gender subreddits. We read these 250 topic descriptors, and 15-20 random posts clustered under each topic (up to 500 posts overall). We noticed that several topics in different (and often within the same) subreddits referred to similar themes, and that different subreddits may have different opinions on the same topic. For example, consider the two topics shown in Figure 4.5, that demonstrate a similar topic (*rape*) discussed in both r/MensRights and r/Feminism (albeit, upon our reading, slightly differently).

4.1.4 Themes Extraction

Based on our readings of the topic descriptors and sample posts, we merge similar topics and assign labels to them. After merging, we are left with 25 merged topics, which we

henceforth refer to as *themes*. These themes may be discussed with different perspectives in different gender subreddits.

r/MensRights: rape rapist cultur sex consent fals drunk report teach crime law convict fact campus forc
 r/Feminism: rape victim accus blame rapist report percent violenc porn drunk case consent alleg fals india

Figure 4.5: Similar topics discussed in different subreddits

The process of themes and perspectives discovery is summarized in Figure 4.6.

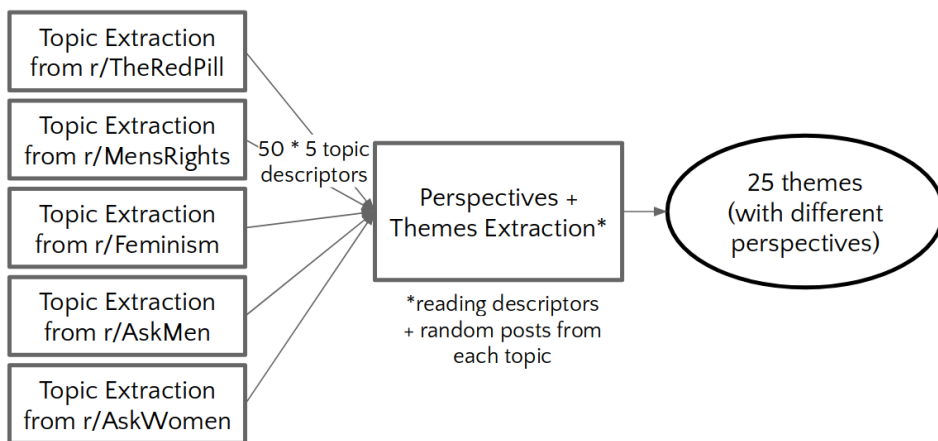


Figure 4.6: Themes & Perspectives Extraction

Choice of topic-modeling algorithm: Popular topic-modeling algorithms used in prior work include Latent Dirichlet Allocation (LDA), Non-negative Matrix Factorization (NMF), and variants thereof [1]. LDA and NMF are considered syntactic – they use tf-idf values and do not account for the contextual meanings of terms. A more recent topic-modeling algorithm, SeaNMF, is semantics assisted – it incorporates the semantic relationships between words and their contexts [84].

To the best of our knowledge, none of these three topic-modeling algorithms have been tested on gender-related corpora. We tested each algorithm on each gender subreddit, aiming to choose the algorithm that produces good quality topics. A good topic is one that makes sense (or seems “coherent”) to a human reader. Prior work has quantified this notion of coherence in the form of various coherence metrics. These metrics measure if the words in the topic descriptors are likely to co-occur in an external corpus (such as Google News), or in the internal corpus from which these topics were extracted. They measure co-occurrence using raw term counts or word embeddings [29, 87]. The coherence value

is higher for topic descriptors whose words are more likely to co-occur in an external or internal corpus. A topic-modeling algorithm that produces topics with higher coherence is assumed to be a better fit for the corpus.

We used three coherence metrics to compare the performance of LDA, NMF, and SeaNMF on the gender subreddits. These metrics used embeddings trained on stemmed and unstemmed versions of external (Twitter) and internal (gender subreddits) corpora to measure the coherence of the topic-models. We observed that none of the three algorithms were consistently more coherent according to all three coherence metrics.

We then relied on empirical observations to determine the best model. First, we observed that many topics produced by LDA were redundant, i.e., several topics were described with the same words (see Figure 4.7). The same observation of redundancy has been made in prior work that compared the performance of LDA and NMF [68]. We further observed that SeaNMF and NMF produced similar topics for the same values of K . Table 4.2 shows a few such similar pairs. However, NMF took no more than 30 minutes to converge when extracting K topics from a subreddit while SeaNMF took more than an hour. Since topic-modeling relies on an interactively built custom stop-list, we prefer topic-models that converge (and hence can be iterated over) faster. We therefore chose NMF to extract the topics discussed by gender subreddits.

1: youtub field fix five fit first fire fine find financi final film file figur fight feminist factor
2: sick youtub feminin fit first fire fine find financi final film file figur fight field
17: black white youtub field five fit first fire fine find financi final film file fig
24: gay youtub feminist five fit first fire fine find financi final film file figur
37: movi film charact speech section watch hate train file final youtub fight financi find fine
...

Figure 4.7: Redundancy in topics extracted by LDA from r/MensRights

Choice of K : NMF requires the number of topics (K) as input. We do not know K apriori for any of our subreddits¹. If we assume too few topics, we may segment r/MensRights into topics that are too broad. On the other hand, choosing a high value of K may result in the over-clustering of r/MensRights into many small, highly similar topics (although each cluster of posts may be more consistent in theme). We tested different values of K – 10, 50, 100, 200, 300, and 400, and read the topic descriptors produced with each K . We sought a value of K that did not overlook nuanced topics (found with higher values of K), even if some topics were redundant. $K = 50$ satisfied this requirement for

¹We only know that all of the r/MensRights posts are pertinent to Men’s Rights. However, we do not know the specific topic discussed by a post or even how many are discussed across the subreddit.

Table 4.2: Similar pairs of topics extracted by NMF and SeaNMF from r/MensRights. Only the top few words are shown because of space constraints.

NMF	SeaNMF
0: men women man societi woman right issu masculin	3: women men feminist femin right equal woman white
1: like get would know go guy want one feel think say	4: like want would feminist peopl feel think know get femin
3: rape accus fals sexual assault victim alleg case crime evid	8: rape savag caller epidem segment radio nightmar vile
2: number year percent time old date age month report day	2: number rape percent year report sexual woman time

all of the gender subreddits. As a result, we chose to extract 50 topics from each gender subreddit.

4.2 Keyword Extraction for Themes & Perspectives

A word is said to be a keyword for a particular domain if it is commonly used in that domain but not as commonly used in other, unrelated text. The keywords of a domain describe what is special or “niche” about that domain. For example, “bipolar disorder” is a keyword used by the mental health domain.

To identify different perspectives on the same theme, we seek the different keywords used by each gender subreddit when discussing the same themes. Therefore, for each subreddit, we examine the topics categorized under each theme and extract lists of keywords that are common in those topics.

For example, we examine the topics from r/Feminism categorized under *Health / Abuse*. Assume that there are three such topics, one discussing rape, another discussing emotional abuse, and a third discussing other health issues. We extract the keywords used by r/Feminism posts discussing each of these topics, producing three keyword lists. These keyword lists reflect the various matters r/Feminism discusses within *Health / Abuse*. We then combine these three keyword lists to produce a single list of keywords used by r/Feminism when it discusses *Health / Abuse*. We repeat this process of topic-wise keyword extraction

for each theme and each subreddit. Extracting keywords separately from each subreddit allows us to characterize each subreddit’s perspective.

Extracting keywords, say, used by r/Feminism posts to discuss a topic categorized under *Health / Abuse*, say, rape, is non-trivial. We describe our keyword extraction approach below.

We use a transfer learning approach implemented in prior work to identify the keywords used in mental health discussions on Reddit [79, 80]. We use the same terminology as in prior work for consistency. In the rest of this section, we describe extracting the keywords used by r/Feminism when it discusses the topic of rape (which was categorized under the theme *Health / Abuse*). We refer to the r/Feminism posts that discuss rape as D_G . We compare D_G to posts from control subreddits that are unrelated to gender, referred to as D_C ². The control subreddits we use are shown in Table 4.3. We ensured they were unrelated to gender by reading random samples of the subreddits, in addition to their descriptions. This list overlaps with control subreddits used by prior work [80].

Table 4.3: Control subreddits used for Keyword Extraction. D_C consists of posts sampled from these subreddits.

r/AskProgramming, r/AskReddit, r/Clairvoyantreadings, r/DecidingToBeBetter, r/ElectricalEngineering, r/food, r/ImmigrationCanada, r/HealthAnxiety, r/sleep, r/RBI, r/christmas, r/zen, r/worldnews, r/Blackops4, r/resumes
--

Here, we remove only the standard stop-words from the posts in D_G and D_C , and do not stem them. Then, we extract all n -grams ($n = 1, 2, 3$) from D_G and D_C , along with their tf-idf scores. We discard n -grams that occur in fewer than 1% (too rare) or more than 95% (too popular) of the posts in both D_G and D_C . We rank the remaining n -grams in increasing order of their Log Likelihood Ratios (LLRs). The LLR of an n -gram is determined by calculating the logarithm (base 2) of the ratio of its probability of occurrence in D_G and D_C , following add-1 smoothing. For example, Equation 4.1 calculates the LLR of the bigram “sexual assault”, with respect to D_G and D_C . If “sexual assault” is comparably frequent in both, $LLR(\text{“sexual assault”}, D_G, D_C)$ is close to 0. $LLR(\text{“sexual assault”}, D_G, D_C)$ is < 0 when “sexual assault” is more frequent in D_G ,

²Some control subreddits have more posts than others (for example, r/Clairvoyantreadings has fewer posts than r/worldnews). To limit over-representing one control subreddit over another, we used stratified random sampling, considering each control subreddit as a stratum. In other words, to build D_C , we select random samples of posts from the control subreddits, such that a post from each control subreddit is equally likely to be selected. Additionally, we select only as many posts as in D_G .

and > 0 otherwise. We select the n -grams with $LLR < 0$ and examine those with the most negative values. These are the most distinguishing n -grams across D_G and D_C . We manually examine the first 100-200 n -grams thus extracted by LLR from r/Feminism posts on rape (shown in Figure 4.8). Although all of these n -grams are pertinent to rape, there are a few such as “bollywood” and “accusation” that could refer to other subjects such as movies or theft accusations, respectively (especially if mentioned independently of the context of rape or *Health / Abuse*). We discard such imprecise n -grams³. We retain the rest as the keywords used by r/Feminism when discussing rape. We repeat this procedure on the other r/Feminism topics categorized under *Health / Abuse*, and collect all the keywords into a single list of keywords that are used by r/Feminism when discussing *Health / Abuse*.

unigrams	bigrams	trigrams
rape	rape culture	anti rape education
raped	sexual assault	culture victim blaming
rapes	victim blaming	false rape allegations
rapist	violence women	example anti rape
raping	anti rape	somebody got raped
byu	rape victim	considered reported rapes
roosh	reported rapes	rape sexual assault
madi	rape victims	women participate rape
bollywood	marital rape	rape violence women
schumer	false rape	prosecuted rapes jailed
jamilia	sexual violence	participate rape culture
mdaniel	rape allegations	county attorney buhman
mvg	get raped	fuck judge persky
broek	getting raped	brock turner rape
buhman	false accusations	last night turkey
ronaldo	problem rape	free ride party
hemmer	got raped	madi police report
turner	man rape	fuck religious ideologies
heather	rape case	police report byu
victims	women raped	girls need prince
feminism	rape sexual	conservative talk radio
feminist	rape education	religious ideologies say
savage	sexually assaulted	donald trump accused
accusation	boys rape	blame rape culture
feminists	blame rape	could imagine like
islamist	korea men	canadian teacher facing
rapists	brock turner	facing nightmare south
allegations	amy schumer	former business colleague
jailed	report byu	fuck culture breeds

Figure 4.8: n -grams with most negative LLR values in *Health / Abuse* discussions in r/Feminism. n -grams crossed out were deemed imprecise, the remainder are declared keywords.

$$LLR(\text{“sexual assault”}, D_G, D_C) = \log_2 \left[\frac{P(\text{“sexual assault” in } D_G)}{P(\text{“sexual assault” in } D_C)} \right] \quad (4.1)$$

³We essentially choose precision over recall in keyword extraction, choosing only the n -grams that seem most characteristic of how rape is discussed by r/Feminism.

where $P(\text{"sexual assault" in } D_G) = \frac{\# \text{ posts in } D_G \text{ where "sexual assault" occurs}}{\text{total } \# \text{ posts in } D_G}$

In this manner, we extract a list of keywords for each subreddit-theme pair representing the subreddit’s perspectives on the theme, as summarized in Algorithm 1.

Algorithm 1 Keyword extraction for the themes and perspectives discussed by each gender subreddit

```
1: for every gender subreddit  $G$  do
2:   for every  $theme$  do
3:     for every  $topic$  in  $G$  categorized under  $theme$  do
4:        $D_G \leftarrow$  posts in  $G$  discussing  $topic$ 
5:        $keywords \leftarrow$  EXTRACT_KEYWORDS( $D_G$ )
6:     end for
7:   end for
8: end for
```

We also extract the hashtags used by each gender subreddit. Since hashtags are not frequently used on Reddit, we do not separately find the hashtags used for each theme, but extract the hashtags used across the entire subreddit.

4.3 People Involved with Gender Movements

Recall that Reddit contains over a million forums apart from the gender subreddits and that its users do not provide personal information. In this section, we understand the people involved with r/TheRedPill, r/MensRights, r/Feminism using the content of their conversations (Section 4.3.1) and the other interest-groups in which they comment (Section 4.3.2).

4.3.1 Textual Similarity of Comments

If the content of a subreddit, say, r/MensRights, is similar to the content of another subreddit, say, r/arts, the user base of r/MensRights may be similar to the user base of r/arts (or could potentially be interested in r/arts). Here, the content of r/MensRights is the collection of all (textual) comments on r/MensRights. Textual similarity can be syntactic (Section 4.3.1.1) or semantic (Section 4.3.1.2). Semantic text similarity attempts

Algorithm 2 `extract_keywords(D_G)`

Extracts keywords from gender-related text corpus D_G

- 1: $D_C \leftarrow$ stratified random sample of $|D_G|$ posts from control subreddits
 - 2: $vocab \leftarrow$ all words in $D_G \cup D_C$
 - 3: Remove words that occur in fewer than 1% or more than 95% of the posts in D_G from $vocab$
 - 4: Remove words that occur in fewer than 1% or more than 95% of the posts in D_C from $vocab$
 - 5: $keywords \leftarrow \{\}$
 - 6: **for** n in $[1, 2, 3]$ **do**
 - 7: $llrs \leftarrow \{\}$
 - 8: **for** n -gram in $vocab$ **do**
 - 9: $llrs[n\text{-gram}] \leftarrow \text{LLR}(n\text{-gram}, D_G, D_C)$
 - 10: **end for**
 - 11: Select n -grams with negative value of $llrs$
 - 12: Sort n -grams by llr
 - 13: $keywords[n] \leftarrow$ Manually curate top 100-200 n -grams
 - 14: **end for**
 - 15: return $keywords$
-

to incorporate the *meaning* of each subreddit’s content, as words can be used in different contexts, while syntactic text similarity relies on simple word occurrence counts.

4.3.1.1 Syntactic Text Similarity (subreddit2tfidfvec)

Following previous work that calculated the syntactic text similarity of subreddits, we do not stem or otherwise clean the comments [56]. We express every subreddit as a tf-idf vector of the unigrams of its content, as compared to all other subreddits. The cosine similarity of a pair of subreddit tf-idf vectors quantifies how similar they are in terms of their content.

Specifically, for each gender subreddit, we retrieve the most (syntactically) textually similar subreddits (as measured by cosine similarity).

We provide an intuitive understanding of this subreddit to tf-idf vector conversion and similarity calculation in Figure 4.9. Every word used on Reddit is considered as an axis. For now, assume that “woman” and “man” are the only two words used across Reddit. r/Feminism may have a higher tf-idf score for “woman” and a lower score for “man”. r/MensRights might show the opposite trend. r/AskMen will probably fall somewhere in between, having mentioned “woman” more than r/MensRights (but less than r/Feminism) and “man” more than r/Feminism. The distance between any pair of subreddits, thus expressed as vectors, is the angle between them (measured using cosine similarity) which is (reasonably) higher between r/Feminism and r/MensRights as compared to r/AskMen and r/MensRights. We can extend this example to millions of axes representing all the words used on Reddit.

Figure 4.10 shows the final subreddit to tf-idf vector matrix, where each row represents the tf-idf vector of a subreddit. Here, we only use the words that occur in at least 1% (not too rare) and fewer than 95% (not too popular) of subreddits. Such words are considered more *informative* than words that are used by most subreddits, or by very few.

Similar to Lucy et al. [56], we do not express *all* subreddits as tf-idf vectors but only the largest ones (with more than 50K subscribers). We discard the large subreddits that were also default subreddits. Similar to Lucy et al., we also only use comments made in the most recent year (from December 2017 to December 2018). There were over 706 million such comments. In contrast to Lucy et al., at the time of our analysis, 2037 subreddits satisfied these criteria as compared to their 400.

Drawback: Simple tf-idf vectors do not incorporate the contextual meanings of words. For example, in our analysis, r/TheRedPill was deemed similar to r/IncelTears. r/IncelTears

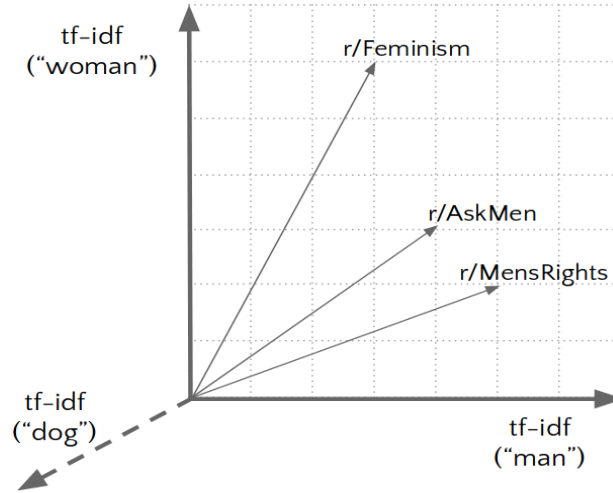


Figure 4.9: Every subreddit can be expressed as a tf-idf vector of the words used on Reddit. Subreddits that are textually more similar have a higher cosine similarity.

		words (> 1%, < 95% of subreddits)			tf-idf		
		man	woman	dog			
subreddits	AskMen	.06	.04	0	...	...	...
	MensRights	.07	.05	.001	...	...	...
	science	.04	.03	.002	...	...	...
	pets	0	.02	.9	...	...	...
	politics	.5	.5	...	...	...	...

(r/AskMen, "dog")

Figure 4.10: Subreddit to tf-idf vector matrix (subreddit2tfidfvec). Using only tf-idf values to represent subreddit content restricts us to syntactic similarity measurements.

is devoted to mocking Red Pill ideologies. Although it mentions Red Pill terminology, it does so in a *negative* context. We attempt to address this disadvantage in the next section using *semantic* textual similarity.

4.3.1.2 Semantic Text Similarity (subreddit2embed)

We use pre-trained word2vec embeddings (with 300 dimensions trained on a Twitter corpus [36]) to find semantic vector representations of subreddits. We express the 2037 subreddits we used in the previous section as unweighted and weighted embeddings, as described below.

Each subreddit’s unweighted embedding is the unweighted average of the word embeddings of its constituent words, resulting in an unweighted subreddit to embedding matrix (2037×300) [22].

The above matrix does not allow a word have a higher importance to one subreddit over another (quantified by tf-idf). Thus, as shown in Figure 4.11, we multiply the tf-idf matrix ($2037 \times \#$ words) used in the previous section with the pre-trained word2vec embeddings ($\#$ words \times 300), to produce a tf-idf weighted subreddit to embedding matrix (2037×300) [22].

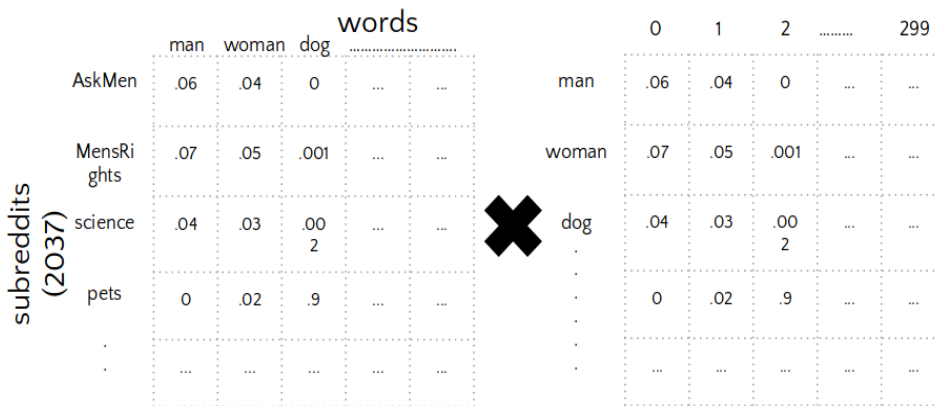


Figure 4.11: We multiply the tf-idf vector matrix from Figure 4.10 with pre-trained word2vec embeddings to produce a (tf-idf weighted) subreddit to embedding matrix. This matrix can be used to measure the semantic similarity between subreddits.

Similar to the previous section, we calculate the cosine similarities between gender subreddits and the 2037 largest subreddits, using both unweighted and weighted subreddit

to embedding (subreddit2embed) matrices. We then retrieve the subreddits most similar to gender subreddits according to both weighted and unweighted representations. The people who comment on gender subreddits are likely to be similar to the users of the retrieved subreddits (or could be interested in their content), while also taking the meanings of their comments into account.

4.3.2 Commenting Activity Similarity (subreddit2interests)

So far, we have expressed subreddits as vectors to evaluate how textually similar they are. We now identify other discussions on Reddit in which these users *explicitly express an interest*. If a person comments on a subreddit, we assume they are interested in its subject matter. Furthermore, if the users of, say, r/MensRights, and the users of r/gardening, express an interest in the same subreddits, then their user bases are said to be similar in terms of their interests [58].

We express each subreddit in terms of how many users (who commented at least once) it has in common with every other subreddit. Consider Figure 4.12. For now, assume that there are only two subreddits, r/pets and r/gardening, apart from the gender subreddits. We calculate the number of users r/Feminism and r/MensRights have in common (also called user overlap) with each of r/pets and r/gardening. Notice that this representation is similar to Figure 4.9, however here the axes represent subreddits rather than words. We can extend this example to a million axes, each representing a Reddit forum.

Figure 4.13 shows the user overlap matrix, where each row represents the user overlap vector of a subreddit. This matrix represents over 2 billion Reddit comments made over three years. Similar to Figure 4.10, we do not use *all* the subreddits as axes but only the informative ones, i.e. those that are not too rare and not too popular. Specifically, we rank subreddits by the number of distinct users⁴ they have and choose the subreddits ranked between the top 200 to 2000. There were 2047 such subreddits. The top 200 subreddits are extremely popular and *every* subreddit has many users in common with them. Conversely, subreddits ranked below 2000 are not as popular and no other subreddit has many users in common with them.

We convert the user overlap between each pair of subreddits into positive pointwise mutual information (PPMI) [66] (analogous to converting term frequencies to tf-idf). For example, converting the user overlap between r/MensRights and r/pets, represented as $uo(r/MensRights, r/pets)$, to PPMI involves normalizing the overlap by the total number

⁴A user of a subreddit is someone who comments on the subreddit.

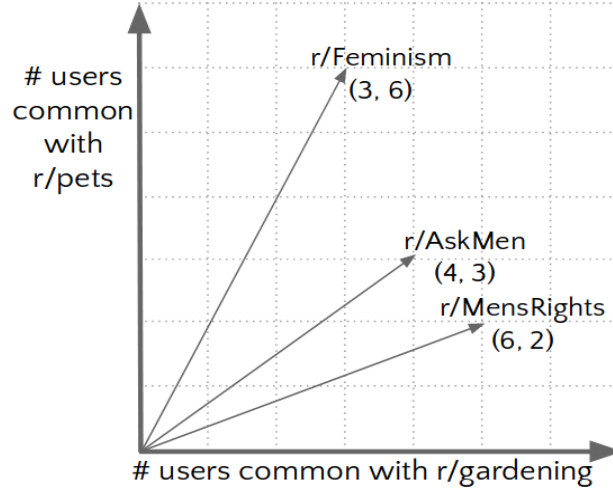


Figure 4.12: Every subreddit can be expressed as a vector of user overlap values (later converted to PPMI) with the top 200-2000 subreddits on Reddit. Subreddits whose users have similar interests will have a higher cosine similarity.

of users *r/MensRights* has in common with other subreddits (horizontal circle in Figure 4.13), and with the total number of users *r/pets* has in common with other subreddits (vertical circle in Figure 4.13). We then find the logarithm (base 2) of this normalized value and we zero out negative values. Equation 4.4 summarizes the conversion of user overlap to PPMI.

$$norm = \sum uo(r/MensRights \text{ with } 2047 \text{ subreddits}) \times \sum uo(r/pets \text{ with all subreddits}) \quad (4.2)$$

where $uo(r/MensRights, r/pets)$ is the user overlap of *r/MensRights* and *r/pets*, i.e. the number of users who comment in both *r/MensRights* and *r/pets*.

$$PMI(r/MensRights, r/pets) = \log_2 \left[\frac{uo(r/MensRights, r/pets)}{norm} \right] \quad (4.3)$$

$$PPMI(r/MensRights, r/pets) = \begin{cases} PMI(r/MensRights, r/pets), & \text{if } PMI(r/MensRights, r/pets) \geq 0 \\ 0, & \text{otherwise} \end{cases} \quad (4.4)$$

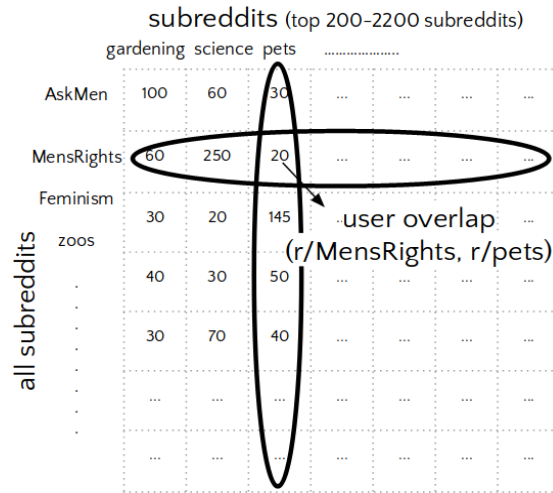


Figure 4.13: Subreddit to user overlap matrix (subreddit2interests). Every cell is further converted into PPMI values (by normalizing it by the sum of its row and column, taking its logarithm, and converting it to 0 if it is negative).

Note that the similarities are not commutative. If r/TheRedPill is most similar to r/arts, it is not necessary that r/arts is most similar to r/TheRedPill (or that r/TheRedPill even appears in its top few similar subreddits).

Our text and user similarity methods are akin to Latent Semantic Analysis (LSA), a natural language processing technique to determine document similarity.

4.4 Limitations and Assumptions

There are several limitations of our methodology.

1. The iterative building of custom stop-lists is subjective.
2. Organizing topics into themes is subjective.
3. To decide whether a theme is popular within a subreddit, we only count the number of posts labelled as belonging to that theme. We do not consider the number of comments, views, upvotes or downvotes.

4. We lack a *true control* subreddit. The ideal control subreddits may be different for each theme whose keywords we are extracting. If we wish to find the keywords used to discuss the theme *Work*, our control subreddits may contain r/worldnews. However, if we wish extract keywords from political themes, we should not include r/worldnews as a control subreddit (since news posts can be political).
5. Manual curation of keyword lists is subjective.
6. Our user analyses involve retrieving subreddits most similar to gender subreddits. Thus, our results *only represent user interests on Reddit*. We cannot ascertain user interests that are not explicitly represented as Reddit forums. For example, if the text in r/MensRights is similar to the text that would be generated by people interested in arts, but there is no subreddit pertinent to arts on Reddit, we would not discover the interest r/MensRights users have in arts.

Chapter 5

Results

This chapter begins with a study of the *content* generated by gender movements. This consists of an analysis of the themes and perspectives discussed by gender movements (Section 5.1) and the niche keywords associated with these discussions (Section 5.2). Finally, we analyze the *people* involved with these movements by examining which other interest groups they are similar to (Section 5.3). Throughout our analysis, we come across gender-related vernacular and subreddits. While readers may be familiar with some of them, we have also described them in an Appendix at the end of this report.

5.1 Themes & Perspectives

First, we provide an overview of the themes that are discussed in gender subreddits (Section 5.1.1). We then expand on the different perspectives that exist on them. (Section 5.1.2).

5.1.1 Themes

We discovered 24 themes discussed across gender subreddits. Our Github page lists the topic descriptors from each subreddit that were merged to form each theme. Table 5.1 lists the themes and the proportion of posts in each subreddit that discuss each theme. Figures 5.1, 5.2, 5.3, 5.4, and 5.5 show how popular these themes are in r/TheRedPill, r/MensRights, r/Feminism, r/AskMen, and r/AskWomen, respectively.

Not all themes are equally discussed by all subreddits. *Gender Movements*, *Political Issues*, *Criminal Justice System*, and *Other Social Issues* were mentioned only by the gender movement subreddits. Other themes were discussed only in the generic subreddits r/AskMen and r/AskWomen. These were *Drinking*, *Cars*, *Other Health Issues*, *Living Concerns*, *Food*, *Age*, and *Hobbies*. Most themes were discussed across several subreddits in different contexts, as explained in the next section.

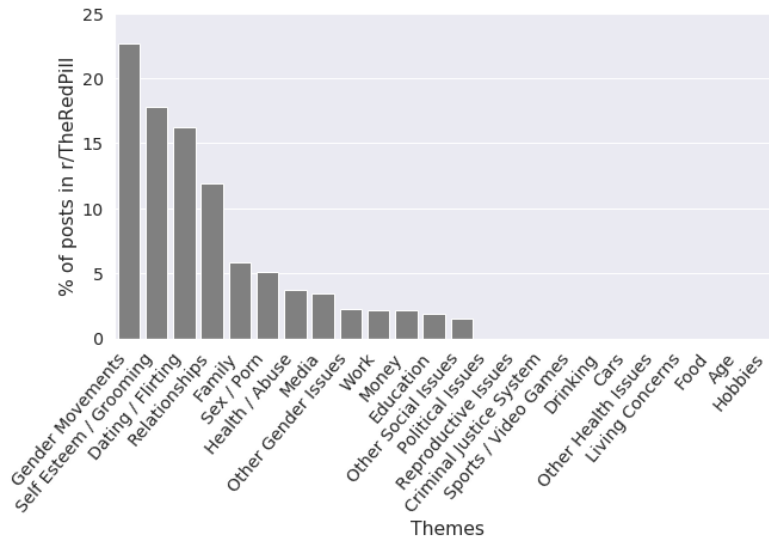


Figure 5.1: Themes distribution in r/TheRedPill

5.1.2 Perspectives

Here, we examine the different contexts in which different subreddits discussed various themes. We extracted these perspectives when we read random samples of posts categorized under each topic in each theme (Section 4.1.3). For each theme, we first examine the perspectives of gender movements, and then the perspectives of generic gender subreddits (if they exist).

5.1.2.1 Health / Abuse (Figure 5.6)

- Posts in both r/Feminism and r/MensRights discuss topics such as rape, harassment, consent, and culture (for example, hookup, sex, or rape culture in society).

Themes	r/AskMen		r/AskWomen		r/TheRedPill		r/MensRights		r/Feminism		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Self Esteem / Grooming	2341	18.40	1305	26.12	1480	21.64	0	0	42	3.02	5168	15.31
Dating / Flirting	2981	23.43	893	17.87	1351	19.76	0	0	28	2.01	5253	15.56
Relationships	2124	16.69	903	18.07	990	14.48	714	9.14	61	4.38	4792	14.19
Work	1175	9.23	563	11.27	180	2.63	384	4.91	87	6.25	2389	7.08
Family	869	6.83	175	3.50	484	7.08	795	10.17	29	2.08	2352	6.97
Sex / Porn	957	7.52	208	4.16	426	6.23	0	0	58	4.17	1649	4.88
Gender Movements	0	0	0	0	1887	27.60	1059	13.55	256	18.39	3202	9.48
Other Gender Issues	0	0	199	3.98	190	2.78	811	10.38	271	19.47	1471	4.36
Media	0	0	168	3.36	288	4.21	876	11.21	138	9.91	1470	4.35
Education	688	5.41	0	0	156	2.28	541	6.92	51	3.66	1436	4.25
Money	412	3.24	149	2.98	180	2.63	178	2.28	0	0	919	2.72
Health / Abuse	575	4.52	569	11.39	314	4.59	1414	18.10	127	9.12	2999	8.88
Political Issues	0	0	0	0	0	0	157	2.01	68	4.89	225	0.67
Reproductive Issues	0	0	139	2.78	0	0	146	1.87	24	1.72	309	0.92
Criminal Justice System	0	0	0	0	0	0	201	2.57	0	0	201	0.60
Sports / Video Games	435	3.42	134	2.68	0	0	0	0	26	1.87	595	1.76
Other Social Issues	0	0	0	0	130	1.90	182	2.33	109	7.83	421	1.25
Drinking	344	2.7	0	0	0	0	0	0	0	0	344	1.02
Cars	275	2.16	0	0	0	0	0	0	0	0	275	0.81
Other Health Issues	0	0	141	2.82	0	0	0	0	0	0	141	0.42
Living Concerns	381	2.99	322	6.45	0	0	0	0	0	0	703	2.08
Food	316	2.48	0	0	0	0	0	0	0	0	316	0.94
Age	288	2.26	137	2.74	0	0	0	0	0	0	425	1.26
Hobbies	249	1.96	134	2.68	0	0	0	0	0	0	383	1.13
Total	14410	38.49	6139	16.40	8056	21.52	7458	19.92	1375	3.67	37438	100
Noisy posts discarded	4363		1588		485		1181		422		8039	

Table 5.1: Themes discussed across gender forums. The % for each subreddit is with respect to the total # of posts in that subreddit. The “Total” % is with respect to the total # of posts in our corpus. Some topics were deemed too noisy and discarded (bottom row)

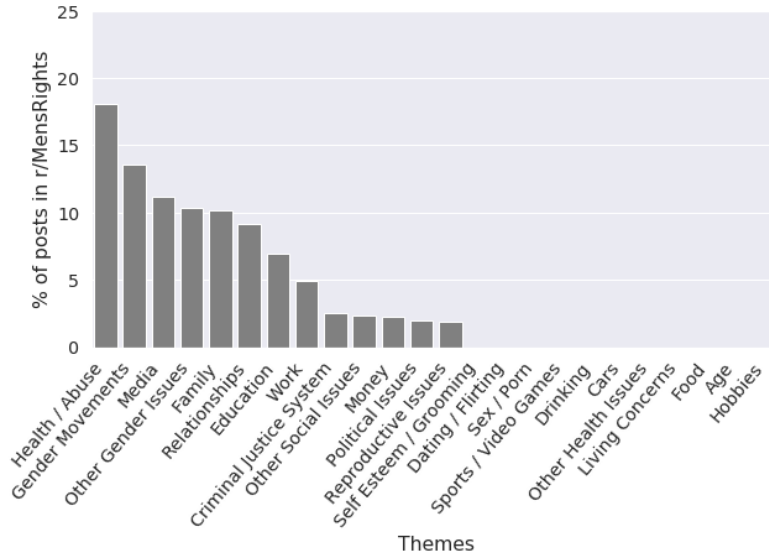


Figure 5.2: Themes distribution in r/MensRights

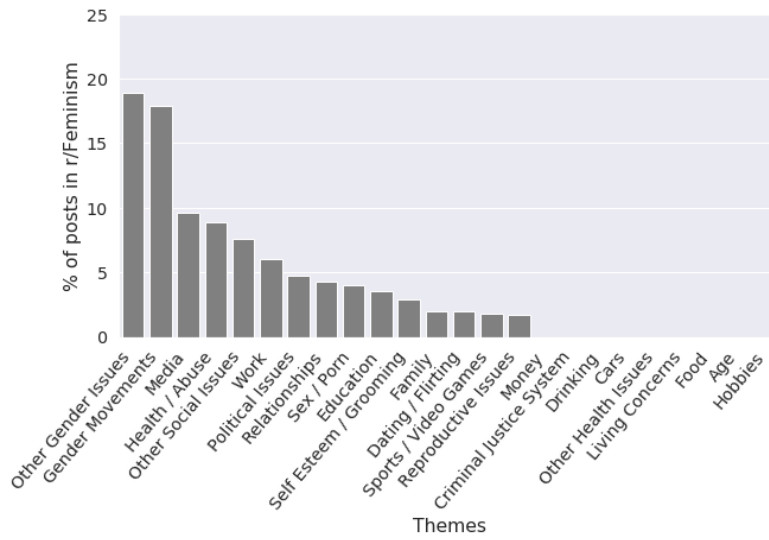


Figure 5.3: Themes distribution in r/Feminism

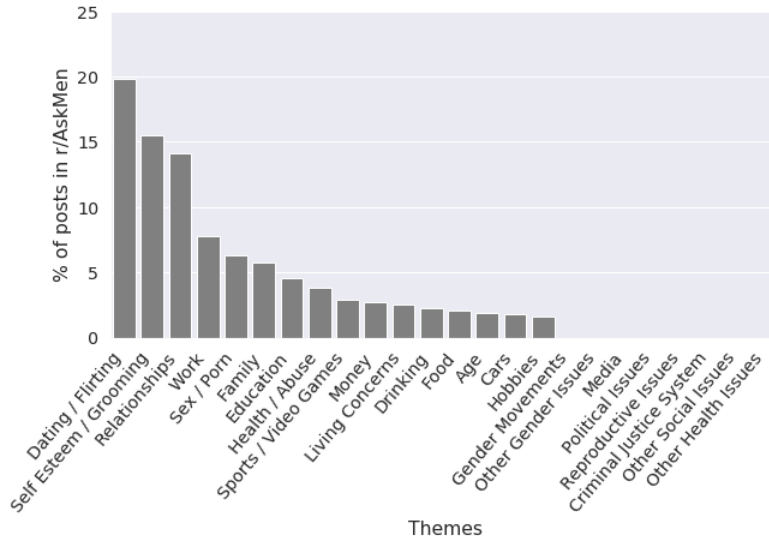


Figure 5.4: Themes distribution in r/AskMen

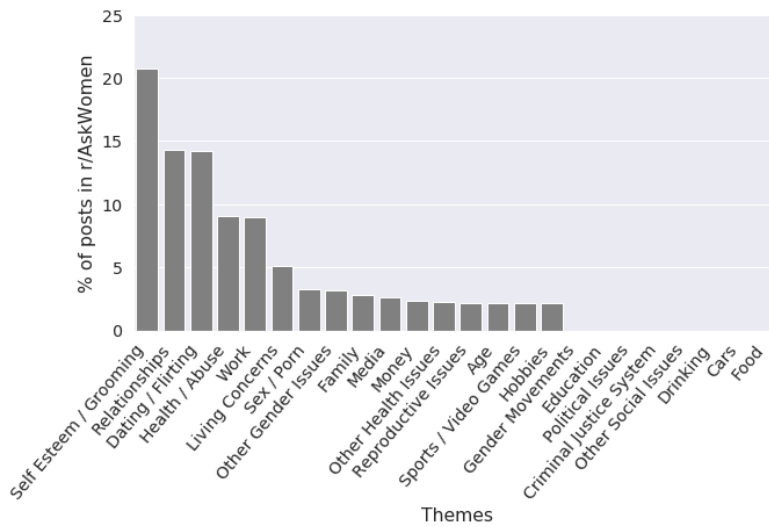


Figure 5.5: Themes distribution in r/AskWomen

- r/Feminism posts seek help for dealing with violence faced in one's life. Posts also mention societal problems such as rape jokes and rape culture.
- r/MensRights posts similarly seek help dealing with violence against men. Posts also discuss repercussions of accusations against men, with topics such as false accusations, due process, and regret after sexual encounters. r/MensRights posts discuss other forms of abuse against men, for example, male genital mutilation (mgm or childhood circumcision) and domestic violence against men. They also discuss health problems such as increasing rates of suicide and mental health issues among men.
- r/TheRedPill posts are noticeably different than r/MensRights and r/Feminism. r/TheRedPill posts discuss rape in the context of false accusations, mentioning how concepts such as feminine imperative, social justice warriors, or Feminism could contribute to women falsely accusing men of rape. r/TheRedPill posts also talk about the emotional manipulation of and by women.
- r/AskMen and r/AskWomen posts are concerned with dealing with emotions, physical abuse, mental health issues, and finding happiness. r/AskWomen posts additionally refer to personal safety and sexual assault.

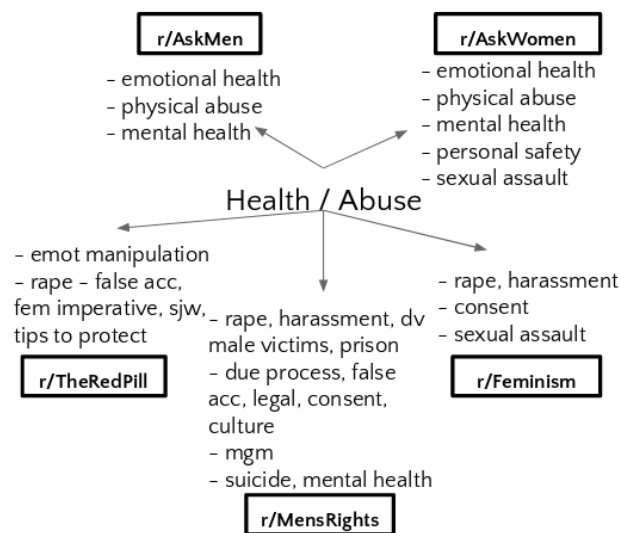


Figure 5.6: Perspectives on *Health / Abuse*.

5.1.2.2 Reproductive Issues (Figure 5.7)

- r/Feminism posts mention reproductive issues such as abortion and birth control. r/MensRights posts discuss related concerns, for example abortion choice and parental rights for men (such as being able to sign them away, including but not limited to when raped).
- r/AskWomen is the only other subreddit that mentions reproductive issues. These posts seek birth control advice, among other common concerns.

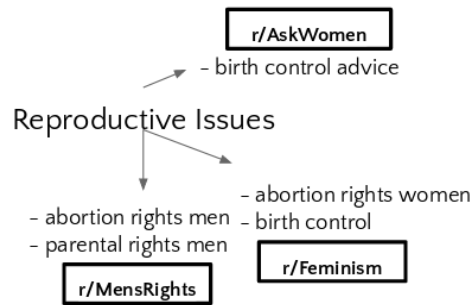


Figure 5.7: Perspectives on *Reproductive Issues*.

5.1.2.3 Criminal Justice System (Figure 5.8)

This theme appears in r/MensRights. Posts reference gender differences in how laws are enforced (in favour of women), how the law or courts may be unfairly taken advantage of (to the detriment of men), due process (or lack thereof), and prison rape (its higher incidence in men’s prisons, and the insensitivity with which it is regarded by society).

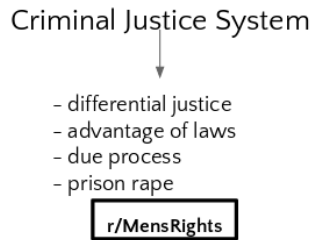


Figure 5.8: Perspectives on *Criminal Justice System*.

5.1.2.4 Other Gender Issues (Figure 5.9)

This theme overlaps with others.

- r/Feminism posts discuss gender differences in societal roles, stereotypes, and expectations, mentioning differences in industries such as sports. The issues they discuss include pink tax, wage gap, toxic masculinity, and sexism in language and culture. r/Feminism posts also discuss gender-related education and research.
- r/MensRights posts discuss gender differences in societal roles and expectations as well. They refer to topics such as pay gap, promotions gap, mandatory military drafts, male genital mutilation, inequity in the treatment of men and women, and the idea of masculinity.
- r/TheRedPill posts frequently discuss ideas of masculinity and femininity. They mention biological or societal differences between men and women.
- The generic gender subreddits do not discuss this theme.

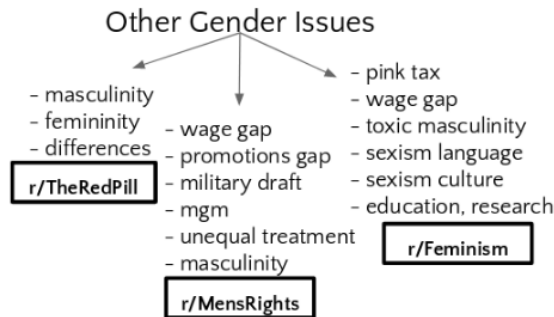


Figure 5.9: Perspectives on *Other Gender Issues*.

5.1.2.5 Other Social Issues (Figure 5.10)

- r/MensRights posts discuss issues such as racial bias in the context of men. These issues include, for example, higher number of rape accusations against black men and racism against non-minority races (such as through quotas for minority races).

- r/Feminism posts refer to race and privilege as well (in the context of women). For example, they mention struggles faced by black women. Posts discuss cultural appropriation, intersectionality, and politics (for instance, the political leanings of white women) as well.
- r/TheRedPill posts are noticeably different from the above. Discussions on social issues are more right-leaning¹. Race is also discussed in the context of femininity (for example, mentioning that black women may be less feminine).

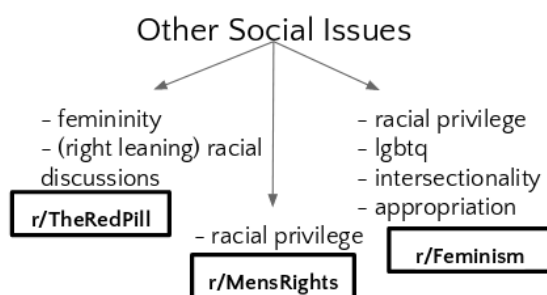


Figure 5.10: Perspectives on *Other Social Issues*.

5.1.2.6 Education (Figure 5.11)

- r/Feminism posts contain stories of sexism in schools at various educational levels, such as sexist teachings and dress codes.
- r/MensRights discusses discontent on educational matters such as boys falling behind in school, the allotment of educational funds in favour of women, the struggles of male teachers, the encouragement of safe spaces on campuses, and educational policies such as Title IX.
- Posts in r/TheRedPill are not specifically about education. They are largely stories from school put into a Red Pill context. For example, a post references one's success or failure in adopting Red Pill recommendations in social interactions while at school.
- r/AskMen posts discuss school in the context of dating or achieving career success.

¹We use phrases such as right-leaning/conservative (or left-leaning/liberal) for lack of a popularly understandable description.

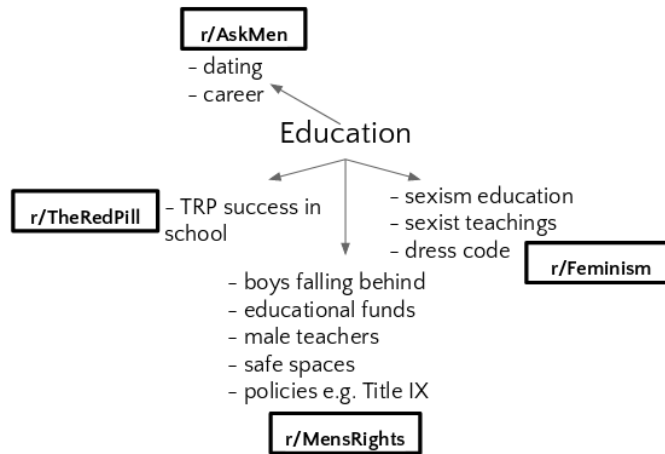


Figure 5.11: Perspectives on *Education*.

5.1.2.7 Political Issues (Figure 5.12)

Political Issues are primarily discussed by r/MensRights and r/Feminism posts.

- Both mention political news (such as elections, political marches, and political figures).
- r/MensRights also discuss mandatory military drafts for men.

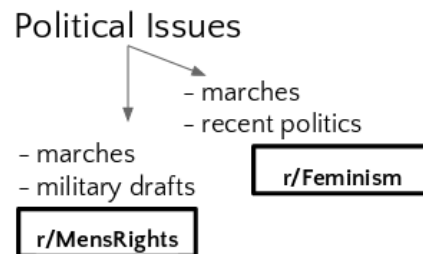


Figure 5.12: Perspectives on *Political Issues*.

5.1.2.8 Self Esteem / Grooming (Figure 5.13)

r/TheRedPill, r/AskMen, and r/AskWomen posts are the most engaged in conversations around self image and grooming.

- Posts in r/TheRedPill mention Red Pill ideologies focused on self improvement, for example, going to the gym as a way to gain alpha male status. Posts are strongly critical of perceived un-attractiveness (in posters themselves and others). Some posts present self improvement as a goal to work towards *rather* than working towards “getting” women, while other posts mention self improvement will result in one being irresistible to or holding sway over women.
- r/Feminism posts discuss dressing-related to topics such as how one’s dressing affects how they are perceived, double standards and freedom in dressing, and objectification. For example, posts mention being compelled to dress in a certain way at the workplace (such as a certain kind of swimsuit during work trips or being fired for not wearing heels).
- r/AskMen and r/AskWomen posts both show concerns such as dressing, hair, personal hygiene, self esteem, and anxiety issues. r/AskMen posts are more focused on working out in gyms, often associating it with attracting the opposite sex. r/AskWomen posts also discuss topics such as weight, diet, body image, and makeup.

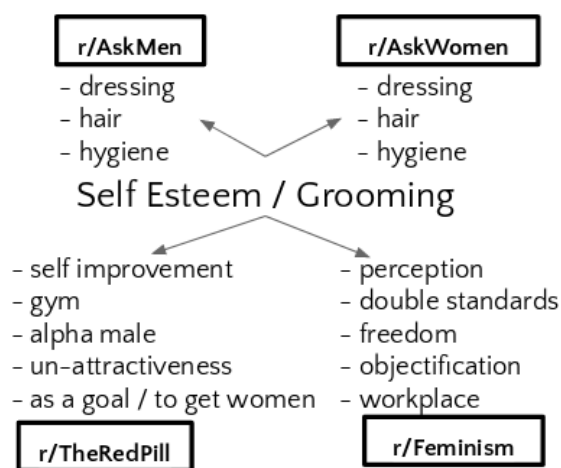


Figure 5.13: Perspectives on *Self Esteem / Grooming*.

5.1.2.9 Dating / Flirting (Figure 5.14)

The patterns displayed here are similar to those displayed in *Self Esteem / Grooming* (Section 5.1.2.8).

- r/Feminism and r/MensRights posts discuss dating-related concerns such as consent detailed in Sections 5.1.2.1.
- r/Feminism posts also reference dating in the context of Feminism. For example, posters discuss women’s role in dating, and their experiences with dating as a Feminist.
- r/TheRedPill posts focus on, for lack of a better term, dating games. They provide advice on attaining women, dominance in relationships, online dating, and dating philosophies using specific terminology (such as kino, sexual market value, and hot babe (HB) rating).
- r/AskMen and r/AskWomen posts discuss online dating as well. r/AskMen posts seek advice on communication, dating etiquette, and attracting women (in a manner not as focused on dominance as r/TheRedPill). r/AskWomen posts contain similar content in addition to posts that seek advice on saying no to people who approach them.

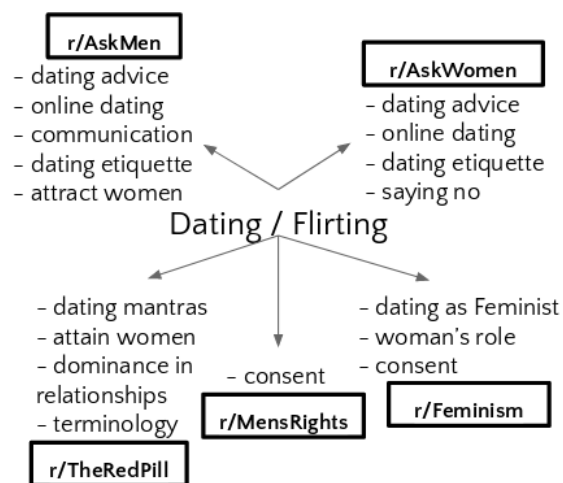


Figure 5.14: Perspectives on *Dating / Flirting*.

5.1.2.10 Relationships (Figure 5.15)

This theme includes discussions of relationships of a non-romantic nature such as friendships and parental relationships, in addition to romantic ones.

- r/TheRedPill posts discuss friendships, marriage, divorce, and cheating or lying partners. For example, posts discuss the disadvantages of engaging in long-term relationships or LTRs (such as women feeling secure and not inclined to having sex), being committed to a single partner, and mentions that women cannot be loyal, are disgusted by weak men, and do not empathize with men’s world views. They discuss how divorces are more detrimental for men than women, and offer breakup advice (for instance, on how not to give their partner the ability to charge them with domestic abuse).
- r/MensRights posts discuss the struggles posters have faced in their relationships, such as violence from their wife or parent, emotional and physical abuse, divorce, alimony (for example, paying for and tolerating ex-wife’s life and new partner), and touch on male disposability in marriage. They discuss laws that influence marriage and divorce (such as Canadian marriage laws and Indian penal code). They also refer to the influence of Men’s Rights and Feminism on their relationships (expanded on in Section 5.1.2.14).
- r/Feminism posts discuss the influence of Feminism on their relationships as well (expanded on in Section 5.1.2.14). They discuss topics such as changing names after marriage.
- In r/AskMen, posts discuss friendship-related questions such as friendships with the opposite sex, being taken advantage of because of being nice, friend zones, how to stay close to friends who have moved apart, to become friends with someone without coming off as “creepy”, and why it is not acceptable for men to hug friends. They discuss various romantic relationship topics, for instance, monogamy, polyamory, public displays of affection, LTRs, communication, bedroom mishaps, loyalty, jealousy, dealing with their girlfriend’s families, and breakups.
- r/AskWomen posts seek advice on maintaining successful and healthy relationships, dealing with family reactions to relationships, successfully saying no, and fidelity problems posters have faced from partners. Posts discuss marriage issues such as engagements, rings, weddings, and changing one’s name after marriage as well.

5.1.2.11 Work (Figure 5.16)

- Both r/MensRights and r/Feminism posts discuss discrimination, sexism, and harassment one faces at work (mostly towards men and women, respectively). Both discuss

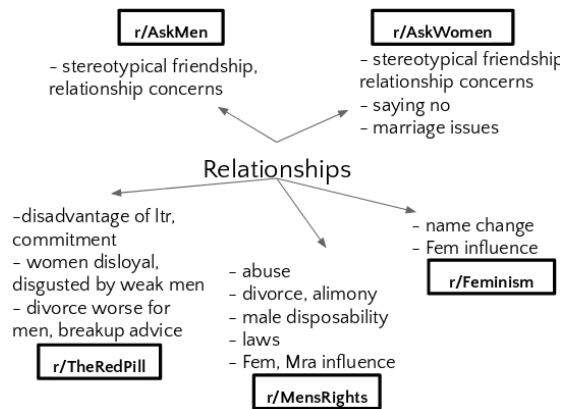


Figure 5.15: Perspectives on *Relationships*.

the wage gap, with posts in r/MensRights being more skeptical of it than posts in r/Feminism. r/MensRights posts also mention topics such as repercussions of false harassment charges at work, retirement gap, and dangers and fatalities associated with jobs held by men.

- r/TheRedPill discussions of work are distinct from the above. Posts associate career success with being the alpha (or dominant) in life, mention problems one faces with women at their workplace, or with working women in general.
- r/AskMen and r/AskWomen posts refer to common work concerns such as job search and interviews. r/AskWomen posts additionally discuss topics such as navigating sexism at work or male dominated workplaces.

5.1.2.12 Family (Figure 5.17)

- r/Feminism posts discuss parenting concerns. For instance, posts seek advice on protecting children from violence, or raising children whose parents have been victims of domestic violence.
- r/MensRights posts also mention parenting concerns such as protecting children, father's rights, and roles of father figures. Posts further discuss matters such as parental rights, repercussions of divorce, child support, child custody or visitation rights, paternity leave, and parental alienation. Posters mention the appreciation (or lack of) fathers receive from society as compared to mothers.

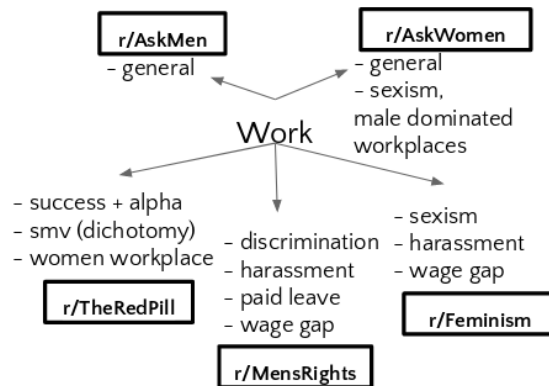


Figure 5.16: Perspectives on *Work*.

- r/TheRedPill posts demonstrate a dichotomy in attitudes towards long-term relationships (LTRs). On the one hand, posts advise readers not to engage in LTRs and instead engage in multiple relationships at the same time (“spinning plates”). At the same time, some posts advise on how to practise Red Pill philosophies while in an LTR (for instance, to maintain dominance over one’s household or wife). r/TheRedPill posts also comment on topics such as divorce rape.
- The topics discussed in r/AskMen and r/AskWomen posts are similar. r/AskMen posts seek advice on divorce, families, dating women with children, or other aspects of married life. r/AskWomen posts seek advice on families as well, but more often related to children. They discuss abortion, family planning, parenting tips, and concerns for children’s safety.

5.1.2.13 Sex / Pornography (Figure 5.18)

- Sex, consent, and related topics such as sexual assault (detailed in Section 5.1.2.1) are discussed by both r/MensRights and r/Feminism posts.
- r/TheRedPill posts describe posters’ sexual encounters in various contexts, for example to demonstrate how “good” or powerful they are.
- r/AskMen and r/AskWomen posts contain a variety of stereotypical sex-related concerns.

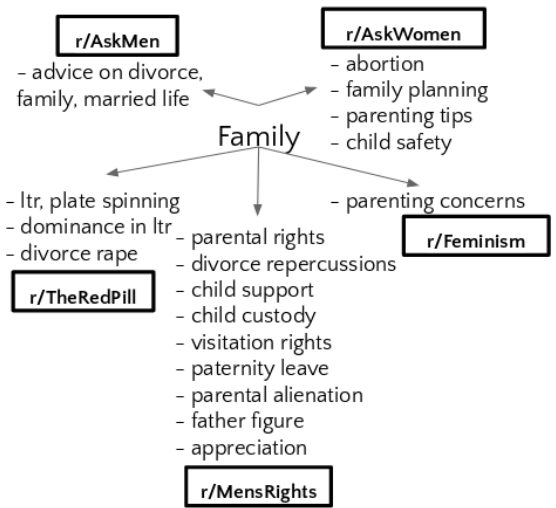


Figure 5.17: Perspectives on *Family*.

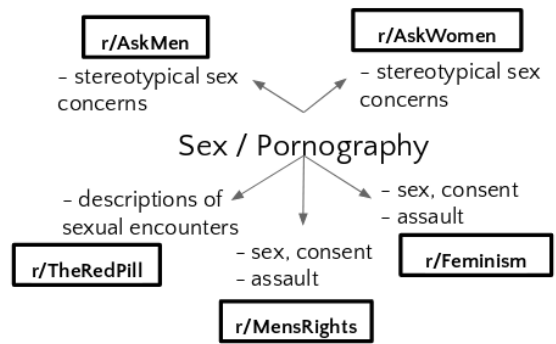


Figure 5.18: Perspectives on *Sex / Pornography*.

5.1.2.14 Gender Movements (Figure 5.19)

Each of r/TheRedPill, r/MensRights, and r/Feminism posts discuss the movement they are aligned with.

- r/Feminism posts contain general discussions on Feminism, for example, discussing different waves of the Feminist movement and its presence in politics and media. They mention that Feminism is often perceived negatively on Reddit, advertise Feminism-related support groups, and discuss friendships and relationships in the context of Feminism. For example, posts seek advice on dealing with friends who are sexist or have been accused of assault.
- r/MensRights and r/TheRedPill posts regard Feminism in a negative light. Both subreddits discuss negative ways Feminism impacts their friendships, relationships, environments, or politics.
- r/MensRights posts additionally mention movements such as The Red Pill, Men Going Their Own Way (MGTOW), and Incels. They also advertise Men’s Rights support groups.
- r/TheRedPill posts discuss various Red Pill philosophies, for instance Game (detailed in the Appendix).

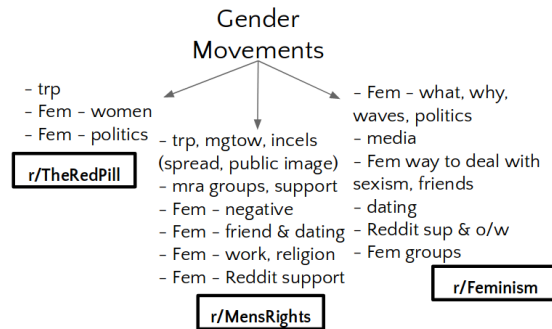


Figure 5.19: Perspectives on *Gender Movements*.

5.1.2.15 Media (Figure 5.20)

Posts in all three movement subreddits recommend authors, books, videos, and other sources that are relevant to the movement.

- Both r/MensRights and r/Feminism posts debate over the portrayal of their movement or men and women in general in popular media. For example, r/MensRights posts discuss gender-swapped movie remakes and women-only screenings of the movie Wonder Woman. r/Feminism posts similarly discuss gender-swapped movie remakes, sexist character archetypes, or the Bechdel Test.
- r/AskWomen posts ask for media recommendations and discuss books and television. They also discuss media in the context of women, such as the representation of women in media.

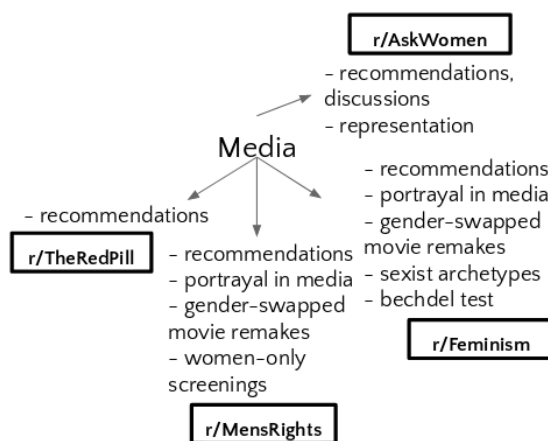


Figure 5.20: Perspectives on *Media*.

5.1.2.16 Money (Figure 5.21)

- Money is mentioned in a variety of contexts in r/MensRights posts. For instance, posts mention the unfairness of funding allotment (such as towards women only charities, preference to support breast cancer), alimony payments, or higher car insurance payments.
- r/TheRedPill posts discuss alimony as well. They also debate on money in (or versus) relationships. Posts discuss using money as a tool to increase success (in order to get women), or remind readers to guard their financial freedom against entities such as gold-digging women.
- r/AskMen and r/AskWomen posts are both concerned with affordability and saving money (for instance, for retirement).

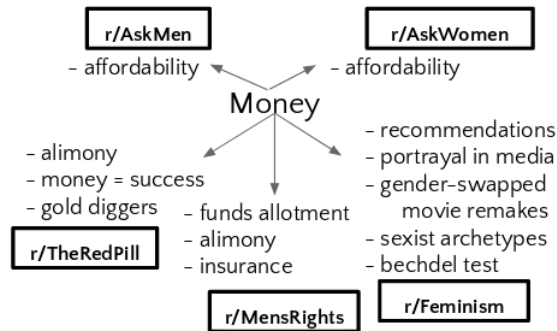


Figure 5.21: Perspectives on *Money*.

5.1.2.17 Sports / Video Games (Figure 5.22)

- r/Feminism posts mention topics such as toxic cultures in gaming, representation of women in video games, or discuss playing sports or games as women.
- Both r/AskMen and r/AskWomen posts contain neutral content pertinent to sports and video games.

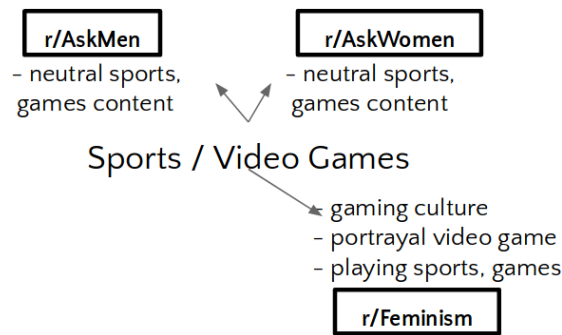


Figure 5.22: Perspectives on *Sports / Video Games*.

Drinking, Cars, Other Health Issues, Living Concerns (for instance, roommates, affordable housing), Food, Age, and Hobbies were discussed only by the generic subreddits, and in similar contexts. Examples of these themes, and others we have not examined in detail above can be found on our Github page.

5.2 Keywords Associated with Themes & Perspectives

We seek keywords that *precisely* describe the themes we discovered, in a manner that *reflects the different perspectives* by different subreddits on the same themes.

To reflect perspectives, we created keyword lists from each subreddit’s topics. The keywords that were extracted from the topics that were later categorized into a certain theme, were considered the keywords reflective of the subreddit’s perspectives on that theme.

Not all keywords produced by LLR are precise. For instance, LLR produced “accusation” as a keyword used by r/Feminism when discussing *Health / Abuse*. Although it is unsurprising that “accusation” occurs frequently in a *Health / Abuse* domain, on its own, “accusation” could refer to domains other than *Health / Abuse*. For example, a person can face a theft “accusation”. Thus, we choose to exclude “accusation”, and other such less precise words, from our final list of keywords.

Tables 5.2, 5.3, and 5.4 list the theme-wise keywords we extracted for r/TheRedPill, r/MensRights, and r/Feminism, respectively. Because of space constraints, we have included at most the first 15 keywords from each list (after alphabetically sorting the list). There is naturally some subjectivity involved in the filtering of LLR results to produce these lists. Readers may view the complete LLR lists on our Github page.

Notice the distinctly different keywords used by r/MensRights when it discusses *Reproductive Issues*, than when r/Feminism discusses it. These keywords reflect the higher attention paid by r/MensRights to father’s rights, in comparison to r/Feminism. Similar differences can be observed in the keywords used to discuss *Health / Abuse*, *Other Gender Issues*, and the hashtags they use.

In comparison, the hashtags used by r/TheRedPill overlap with the hashtags used by r/MensRights more often.

Table 5.2: r/TheRedPill keywords used to discuss each theme

Theme	Keywords
Dating / Flirting	abundance mentality, aftsov, anti slut defense, awalt, beta slave, betabux, chad, cuckold, friend zone, hypergamy

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Table 5.2 – *Continued from previous page*

Theme	Keywords
Self Esteem / Grooming	alpha fucks, alpha male, alpha provider, alpha widow, beefpuff, beta bucks, beta male, gona, halo effect, man boobs
Relationships	awalt, cheating whore, chode, elin nordegren, ltr, fwb, hamstering, hb8, hypergamy, ioi
Gender Movements	Various terms related to TheRedPill, Feminism
Health / Abuse	affirmative consent, anthony de mello, brock turner, duke lacrosse, emotional programming, fake rape, false rape, gregory elliot, harvey weinstein, jian ghomeshi
Work	post wall, wage gap, women work
Family	babydaddy, child support laws, daddy issues, divorce rape, father figures, male role models, mommy issues, negging, parental effects, still paying alimony
Sex / Porn	bakira porn life, cuckoldry, cum, feminine imperative, fnl, fuckbuddies, fwb, hamstering, hypergamy, libido
Other Gender Issues	female hysteria, feminine polarity, male spaces, masculine polarity
Media	andrew private, ayn rand, christopher voss, ferriss podcast, hazlitt, jocko willink, jordan peterson, lise bourbeau, martin van creveld, matthew santoro
Education	boy scouts, dear colleague letter, debbie vice, greek life, jenny mellor, title ix
Money	alimony, divorce rape, gender pay gap, gold digger, marissa mayer, panama papers
Other Social Issues	black lives matter, globalist tyranny, gringo, white nationalists

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Table 5.2 – *Continued from previous page*

Theme	Keywords
Hashtags	blackwomenmatter, bluepillstrap, cockcarousel, deardaddy, delayingGratification, fathers4justice, fmp, freekesha, freemilo, fuckwymyn, heterosexualprideday, howiwillchange, itsneverokay, ladycoralina, lessons learned, madridsinmanspreading, maybehedoesnthityou, metoo, mgtow, mgtow4life, mstow, neversettle, nomore, olympicgamesofpatriarchy, oneitis, rapefugees, redpill, sharetheload, singleisin, smv, wastehistime2016, whywomendontreport

Table 5.3: r/MensRights keywords used to discuss each theme

Theme	Keywords
Relationships	alimony child support, alimony divorce laws, common law marriage, family court system, indian penal code, mandatory paternity tests, pay child support
Gender Movements	Various terms related to movements like Mens Rights, The Red Pill, Men Going Their Own Way and Feminism
Health / Abuse	ban infant circumcision, benjamin roebuck, brendon marotta director, brock turner, child genital mutilation, christine blasey ford, date rape, david shackleton author, domestic violence shelters
Work	dress code, earnings gap, gender pay gap, gender wage gap, parental leave, paternity leave, sexual harassment work, wage gap myth
Family	alimony payments, attorney general kathleen, canadian family law, child support, custody agreement, david fincher series, dead beat dad, divorce custody battle, fact finding hearing
Other Gender Issues	aboriginal men boys, athena swan, biological differences sexes, damore, effeminate, equal death day, equal parental rights, female gender role, femtrapment, fragile masculinity, gender based violence

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Table 5.3 – *Continued from previous page*

Theme	Keywords
Media	alexander offworld, anton hill, bettina arndt, brian banks, cassie jaye, earl silverman, hannah wallen, jenny mcdermott, jessica valenti, jordan peterson, karen straughan, kate smurthwaite
Education	affirmative action, boys feminarchy, boys girls club, cultural sensitivity class, female teachers, feminist club, feminization education system, girls boy scouts, male disposability
Money	Keywords not precise enough
Other Social Issues	black lives matter, black men, black women, male lives matter, male privilege, non white males, racism, racist, white gay guys, white male, white male power, white male privilege, white men
Reproductive Issues	body choice, droit du seigneur, family law section, father right movement, father rights, financial abortion, legal abortion, male birth control, men reproductive rights, mras pro lifers
Political Issues	chelsea clinton feminist, conservative party, donald trump, hillary clinton, karen straughan, labour party, mandatory military service, minister justin Trudeau, women vote
Criminal Justice System	abby honold act, brian banks convicted, brock turner case, willie mccall decorated

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Table 5.3 – Continued from previous page

Theme	Keywords
Hashtags	banbossy, beardedboycott, believewomen, believingvictims, BlackLivesMatter, blackwomenmatter, BoycottTheThree, ChildAbuse, ChildrenNeedBothParents, childsupport, dueprocess, EqualPay, EqualTime4EqualCrime, falseaccusations, FalseAllegations, Familycourt, FatherlessDayRally, Fathers4Justice, FathersLivesMatter, fathersrghs, fathersrights, FemalePriviledge, FeminismIsAwful, FireJackDorsey, FreeTheNipple, GamerGate, genderbias, genderdiversity, GenderLifeGap, GenderPayGap, HerVoiceIsMyVoice, himtoo, ibelieveher, IMarchWithLinda, JeSuisCharlie, JeSuisMilo, Killallmen, KillAllWhiteMen, KillAlMen, killmiddag, LikeAGirl, MaleLivesMatter, MalePrivilege, maletears, mansplain, manspreading, MarchForOurLives, Masculinitysofragile, menaretrash, meninist, mensrights, MensRights2018, mentoo, misandry, MMIW, MRA, NiUnaMenos, notagenderedissue, notAllFeminists, notallmen, notallwomen, NotMe, NotYourShield, oursonsmatter, ParentalAlienation, patriarchy, playlikeagirl, positivemasculinity, SafeSpace, sexism, ShePersisted, shetoo, SPJAirplay, StopTheWarOnFathers, themtoo, TheTriggering, TimesUp, topplethepatriarchy, ToxicFemininity, VAWA, violenceisviolence, wastehertime2016, wastehistime2016, WhiteRibbonUK, WomenFailingMen, YesAllMen, yesallwomen, youtoo, maybeshedoesnthityou, WomenAgainstFeminism, EverythingIsSexist, BringBackOurMen, TitleIX, domesticviolence

Table 5.4: r/Feminism keywords used to discuss each theme

Theme	Keywords
Dating / Flirting	Keywords not precise enough
Self Esteem / Grooming	corsets, dress code, wear hijab, women wear short

Continued on next page

Table 5.4 – *Continued from previous page*

Theme	Keywords
Relationships	friendzone
Gender Movements	Various terms related to Feminism
Health / Abuse	abuse domestic, anti rape education, attorney buhman, betty boop, brock turner, child abuse sexual, christine blasey ford, chuck berry, false accusations, judge persky, marital rape, online harassment
Work	business women, female coworker, male coworker, maternity leave, wage gap, women tech, women working
Family	Keywords not precise enough
Sex / Porn	camile paglia, ched evans, consensual sex, drunk sex, legal sex, legalizing prostitution, pressured sex, sex objects, sexual partners, simone de beauvoir, slut shaming
Other Gender Issues	emasculating, equal rights amendment, femaleness, feminine figures, femininity, gender constructs, gender differences, gender identity, gender inequality, gender neutral, gender roles
Media	bechdel test, black panther, buffy vampire slayer, captain marvel, casting couch, deadpool, ditzzy blonde, female directed film, female hero, female led films, feminist book, feminist character
Education	boy scouts, dress code, female students, feminist club, girls like apples
Sports / Video Games	ana navarro, female game, women soccer, women video games
Other Social Issues	black men, black people, black sisters, black women, cis women, cultural appropriation, gender social construct, intersectional feminist, intersectionality, male privilege, old white guy, pay gap white
Reproductive Issues	abortion, anti choice, bodily autonomy, cost abortion, funds abortions, ireland hold referendum, planned parenthood, pro abortion, pro life, women health clinic

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Table 5.4 – *Continued from previous page*

Theme	Keywords
Political Issues	clinton feminist, donald trump groper, first female president, juanita broderick, liberal women, margaret thatcher, men march, nasty woman, trump president, women march
Hashtags	BelieveWomen, blacklivesmatter, bodypositivity, ConsentCulture, DalitWomenFight, FeminineNotFemale, freethenipple, herworld, JusticeForNoura, makelovenotpornstar, MaritalRape, MasculineNotMale, metoo, nomakeup, notallmen, OwnYourOwnVoice, plussize, Rape, realworldsex, timesup, tweetyourperiod, ustoo, wearesurvivors, WomenRockMoney, WomensEqualityDay

5.3 People Involved with Gender Movements

In this section, we discuss the people involved in gender movements. We examine the subreddits that are most similar to `r/TheRedPill`, `r/MensRights`, and `r/Feminism` in terms of their users. Specifically, in Section 5.3.1 we analyze the subreddits they are similar to due to the content of their comments. In Section 5.3.2, we study the subreddits they are similar to due to where they comment (i.e., where they express an interest).

5.3.1 Textual Similarity of Comments

In this section, we extract the subreddits that are textually similar to gender movement subreddits using syntactic (Section 5.3.1.1) and semantic text similarity (Section 5.3.1.2).

5.3.1.1 Syntactic Text Similarity (`subreddit2tfidfvec`)

We express each subreddit as a tf-idf vector of the unigrams of its content. Table 5.5 lists the subreddits similar to the gender subreddits at a threshold of 0.37. Following are some notable patterns.

- Both `r/TheRedPill` and `r/MensRights` are similar to the movement `r/MGTOW` (Men Going Their Own Way).

- r/TheRedPill is similar to subreddits centered on relationship advice (including r/AskMen which also contains many posts on relationships).
- r/MensRights is similar to political subreddits (for example, r/Libertarians, r/politics, r/The_Donald, and r/PoliticalHumor).
- r/MensRights is also similar to subreddits known to contain sexist or racist content (r/KotakuInAction and r/CringeAnarchy).
- No subreddit is similar to r/Feminism.
- r/AskMen and r/AskWomen are both most similar to each other. They have many similar subreddits in common as well, for example those related to relationships and politics.

Some results are potentially noisy and an artifact of the methodology calculating *syntactic* text similarity with no regard to meaning. For instance, one could argue that r/AskMen and r/relationship_advice ought not to be deemed similar to r/TheRedPill, since r/TheRedPill opinions on *Relationships* are noticeably different from those offered by r/AskMen. Furthermore, both r/TheRedPill and r/MensRights are similar to r/IncelTears, a subreddit that *does* mention ideologies similar to r/TheRedPill but in a *negative* context. Another potentially noisy subreddit as to which r/MensRights is similar is r/canada (perhaps because of r/MensRights posts about Canadian political figures, social conventions, Men’s Centres, and the Toronto van attack).

5.3.1.2 Semantic Text Similarity (subreddit2embed)

In this section, we express the semantics (meaning) of each subreddit in two ways: (a) as a simple unweighted average of its word embeddings, (b) as the weighted average of its word embeddings (where each embedding is weighted by its tf-idf in the subreddit). Table 5.6 shows the lists of subreddits whose content is semantically similar to the content of gender subreddits as per (a). The insights from (b) were comparable to (a) and we do not discuss them separately here.

We observe that semantic text similarity retains key insights from syntactic text similarity and often *refines* them; perhaps elaborating on key insights or removing some noisy ones. Following are the key insights.

Table 5.5: Subreddits similar to gender subreddits (using syntactic text similarity and a threshold of .37)

Subreddit	Similar subreddits
r/TheRedPill	MGTOW, IncelTears, AskMen, relationship_advice
r/MensRights	changemyview, MGTOW, Libertarian, politics, ukpolitics, The_Donald, KotakuInAction, atheism, CringeAnarchy, IncelTears, TumblrInAction, Conservative, conspiracy, TrueReddit, PoliticalHumor, canada
r/Feminism	No subreddits similar enough
r/AskMen	AskWomen, relationships, NoStupidQuestions, BlackPeopleTwitter, MGTOW, CasualConversation, The_Donald, politics, sex, askgaybros, trashy, nfl, relationship_advice, WTF, starterpacks, AdviceAnimals, JUSTNOMIL, nba, IncelTears, changemyview, confession, CringeAnarchy, OkCupid, teenagers, insanepeoplefacebook, SquaredCircle, Advice, TrollXChromosomes, childfree, TooAfraidToAsk, WhitePeopleTwitter, AskRedditAfterDark, TumblrInAction, exmormon, SubredditDrama, trees, ChoosingBeggars, interestingasfuck, fatlogic, Tinder, canada, antiMLM, MurderedByWords, AMA, raisedbynarcissists, CasualUK, KotakuInAction, TheRedPill, MMA, conspiracy, niceguys, asktransgender, Parenting
r/AskWomen	AskMen, relationships, JUSTNOMIL, TrollXChromosomes, CasualConversation, NoStupidQuestions, childfree, antiMLM, askgaybros, BlackPeopleTwitter, sex, fatlogic, BabyBumps, OkCupid, femalefashionadvice, relationship_advice, trashy, Parenting, raisedbynarcissists, MGTOW, actuallesbians, politics, starterpacks, The_Donald, Advice, WTF, AdviceAnimals, rupaulsdragrace, asktransgender, weddingplanning, confession, insanepeoplefacebook, IncelTears, exmormon, loseit, TheGirlSurvivalGuide, TooAfraidToAsk, nfl, bestofflegaladvice, TumblrInAction, xxfitness, trees, ChoosingBeggars, CasualUK, changemyview, AskRedditAfterDark, AMA

- r/TheRedPill and r/MensRights are similar to each other although their similarity is close to our cut-off threshold. They are both similar to the political group r/TheMueller and some popular movie subreddits (for example, r/westworld and r/startrek).
- Notably, r/TheRedPill is similar to a more niche relationship-related group than before (r/ForeverAlone) and to a few groups dedicated to sharing content that posters cannot share with the people they know (r/offmychest and r/TrueOffMyChest).
- r/MensRights is similar to political subreddits (e.g., r/Conservative and r/worldpolitics).
- r/MensRights is similar to the legal advice subreddit r/bestoflegaladvice.
- r/MensRights is also similar to subreddits such as r/beholdthemasterrace (humor at the expense of white supremacist logic).
- r/Feminism users are similar to politically less right-leaning subreddits (r/MarchAgainstTrump).
- r/Feminism is similar to subreddits dedicated to minority groups (r/ainbow).
- r/Feminism users are also similar to forums that point out various -isms (such as sexism, racism) on other areas of Reddit (r/ShitRedditSays).
- Notably, there is no overlap between the subreddits as to which r/MensRights and r/Feminism are similar, nor are they similar to each other.
- The generic subreddits are similar to each other.

Many noisy subreddits seen in the previous section are not seen here. Some whose similarity is still not obvious include r/occult and r/AskScienceFiction. We will observe a further refinement of similarity results in the next section.

5.3.2 Commenting Activity Similarity (subreddit2interests)

In the previous section, we obtained interesting signals about the potential interests of the people involved in gender movements. However, as explained in Section 4.3.2, we can also investigate the commenting activity of these users on other subreddits. In this section, the user bases of two subreddits are similar to each other if they tend to comment on discussions in the same subreddits. The groups who are most similar to the people involved in gender subreddits are shown in Table 5.7. Following are the key insights.

Table 5.6: Subreddits similar to gender subreddits (using semantic text similarity with unweighted averages and a threshold of .9991)

Subreddit	Similar subreddits
r/TheRedPill	TrueOffMyChest, startrek, ForeverAlone, offmychest, Psychonaut, occult, westworld, dankchristianmemes, asoiaf, The_Mueller, MensRights
r/MensRights	Conservative, TopMindsOfReddit, LateStageCapitalism, worldpolitics, The_Mueller, bestof, OutOfTheLoop, forwardsfromgrandma, startrek, asoiaf, Firearms, writing, AskScienceFiction, rpg, beholdthemasterrace, China, bestoflegaladvice, TheRedPill
r/Feminism	ainbow, QuotesPorn, ShitRedditSays, MarchAgainstTrump
r/AskMen	AskWomen, CasualConversation, starterpacks, MGTOW, DnD, interestingasfuck, JUSTNOMIL, WhitePeopleTwitter, insanepeoplefacebook, trashy, askgaybros, AdviceAnimals, NoStupidQuestions, Whatcouldgowrong, PoliticalHumor, StarWars, Drama, mildlyinfuriating, Games, KotakuInAction, trees, CasualUK, oddlysatisfying, PublicFreakout, LivestreamFail, PS4, marvelstudios
r/AskWomen	AskMen, CasualConversation, starterpacks, JUSTNOMIL, WhitePeopleTwitter, askgaybros, insanepeoplefacebook, interestingasfuck, oddlysatisfying, trashy, AdviceAnimals, CasualUK, MGTOW, DnD

- The user bases of r/TheRedPill and r/MensRights are similar to each other.
- r/TheRedPill users are similar to those interested in r/seduction, r/steroids, r/NoFap (for abstaining from pornography and masturbation, often to the benefit of one's social life), other movements related to red pill theories (such as r/marriedredpill, r/PurplePillDebate, r/RedPillWomen, and r/askMRP), and some social movements associated with men (for example, r/MGTOW, r/MensRights, and r/Incels).
- r/TheRedPill users are also similar to the user base of r/DarkEnlightenment, a subreddit that is anti-liberal, anti-democratic, and anti-egalitarianism (in terms of both gender and race).
- r/TheRedPill is similar to a subreddit dedicated to the work of psychologist Jordan Peterson.
- r/MensRights users are similar to the users of subreddits that are politically more right-leaning (for example, r/HillaryForPrison, r/HillaryMeltdown, r/Ask_The_Donald, r/Conservative, r/Libertarian, and r/altright).
- r/MensRights is similar to r/MGTOW users.
- r/MensRights users are also similar to the user bases of r/KotakuInAction and r/CringeAnarchy, known to contain racist and sexist content. They are further similar to people who discuss social justice warriors and their faults (r/SRSsucks and r/SocialJusticeInAction).
- In contrast, the users of r/Feminism are similar to people with a positive attitude towards social justice (r/socialjustice101 and r/SRSDiscussion). They are also similar to the user bases of minority groups (for example, r/genderqueer, r/bisexual, and r/blackladies).
- Other groups r/Feminism is similar to include disabilities (for example, r/ADHD, r/disability, and r/aspergirls), gaming (r/GirlGamers), rape counseling, and a forum to share emotional issues that cannot be shared with anyone else (r/offmychest).
- r/Feminism users are also similar to an interest-group against r/MensRights (r/againstmensrights).
- There are no interest-groups as to which both r/MensRights and r/Feminism are similar, nor are they similar to each other at our chosen threshold of 0.60.

- The user bases of the neutral subreddits are similar to many others and only the top 15-20 most similar subreddits are shown in Table 5.7. Consistent with previous sections, the user bases of r/AskMen and r/AskWomen are similar to each other. They are similar to those interested in relationships, dating, divorce, sex, jobs, and other general advice. The subreddits that r/AskMen is similar to but r/AskWomen is not are: r/asktrp (ask the red pill), r/PurplePillDebate (neutral discussion of sex and gender), r/socialskills, r/seduction, and a few others pertaining to looks (r/amiugly and r/tall). Subreddits similar to r/AskWomen but not r/AskMen are related to health (often women's), parenting, self-grooming, legal advice, etc.

Table 5.7: Subreddits similar to gender subreddits (in terms of commenting activity, with a threshold of .60).

Subreddit	Similar subreddits
r/TheRedPill	asktrp, MGTOW, seduction, marriedredpill, PurplePillDebate, WhereAreAllTheGoodMen, askMRP, JordanPeterson, NoFap, DarkEnlightenment, RedPillWomen, Incels, MensRights, steroids
r/MensRights	uncensorednews, sjwhate, pussypassdenied, SocialJusticeInAction, SRSsucks, PussyPass, HillaryForPrison, HillaryMeltdown, WhereAreAllTheGoodMen, subredditcancer, ShitPoliticsSays, ImGoingToHellForThis, conspiracy, OffensiveSpeech, AskThe_Donald, Libertarian, TumblrInAction, atheism, Bad_Cop_No_Donut, alright, undelete, Documentaries, Drama, The_Donald, FeMRADebates, antifa, KotakuInAction, worldpolitics, AskTrumpSupporters, Conservative, MGTOW, TheRedPill, Shitstatistssay, DebateAltRight, nottheonion, rage, CringeAnarchy
r/Feminism	FemmeThoughts, badwomensanatomy, GirlGamers, GenderCynical, genderqueer, feminisms, bisexual, AskTrollX, againstmensrights, disability, BodyAcceptance, ADHD, blackladies, women, vegetarian, TwoXChromosomes, asexuality, TheBluePill, TransSpace, childfree, SRSDiscussion, MensLib, AskFeminists, Lgbt, transgender, raisedbyborderlines, AskWomenOver30, TrollXChromosomes, aspergirls, vegan, AskWomen, GenderCritical, pagan, socialjustice101, polyamory, offmychest, ainbow, exchristian, LesbianActually, actuallesbians, TheGirlSurvivalGuide, raisedbynarcissists, rapecounseling
r/AskMen	OkCupid, dating_advice, relationship_advice, AskMenOver30, datingoverthirty, dating, relationships, Advice, AskWomen, askwomenadvice, sex, offmychest, socialskills, confession, PurplePillDebate, CasualConversation, ... 16 more subreddits
r/AskWomen	relationships, TheGirlSurvivalGuide, TwoXChromosomes, TrollXChromosomes, askwomenadvice, offmychest, childfree, raisedbynarcissists, SkincareAddiction, femalefashionadvice, AskWomenOver30, birthcontrol, ... 380 more subreddits

Chapter 6

Discussion

We begin with a summary of each subreddit, paying particular attention to what makes each of them distinctive. We distinguish between a subreddit's content (from which we derive its Themes and Perspectives) and the people involved. We use our analysis of the people to reason about their perspectives on the themes.

r/MensRights, **r/Feminism** represent gender movements that discuss gender-related, often political, *issues* such as abuse, reproductive rights, racial issues, and gender roles. They show *varied perspectives* when discussing many of the same issues. The people involved with these two movements are not similar to each other, and have *contrasting takes on many other subjects* (such as on political identity, social justice, and minorities). In fact, r/MensRights users are more similar to r/TheRedPill users than those in r/Feminism.

r/TheRedPill also represents a gender movement, but appears to be a more cohesive *community* than r/MensRights and r/Feminism. It discusses a limited number of topics (mostly related to *daily life*, such as dating) and adopts a *distinct vernacular* (using terms such as AF/BB, HB, SMV, Alpha, Frame, Game, and Spinning Plates) when discussing them. These discussions revolve around The Red Pill *mantras*, which are life philosophies based on the idolization of *power* and the *distrust of women*. The topics r/TheRedPill discusses are *similar to those discussed by r/AskMen and r/AskWomen* (such as dating, self esteem, and grooming), but its *perspectives are markedly different*. The people involved with r/TheRedPill have *similar interests* in men's movements, such as *r/MensRights* (although they do not discuss many common issues on r/MensRights and r/TheRedPill themselves), and to those who *do not believe in egalitarianism of race or gender*.

We now discuss our results in detail.

r/TheRedPill Themes: r/TheRedPill has not been as extensively investigated in prior work as the Men’s Rights and Feminism movements. We therefore rely on popular media commentary, in addition to limited scholarly work, to contextualize our results on r/TheRedPill. In our analysis, r/TheRedPill appears to be a community focused on issues of dating and sex. They use distinctive Red Pill ideologies and terminology to frame their discussions. Prior work has verified the existence of such a collective identity among Red Pill users [27].

r/TheRedPill People: We observed that the people involved with r/TheRedPill are similar to communities associated with men, such as Men Going Their Own Way (MGTOW), Incels, and Men’s Rights. A reason these communities are similar could be the common metaphor of red / blue / black pills they use to describe their beliefs. Broadly speaking, a person who accepts the red pill (over the blue pill) has realized the (gynocentric) injustice in the world (see Appendix for details) [53, 95]. We also observed that r/TheRedPill users are similar to communities who reject egalitarianism of race and gender. [Moreover, they are similar to the people who are interested in r/JordanPeterson. Jordan Peterson is an influential psychologist in Canada, who has called for a return to traditional gender roles and believes that men are victims of gender oppression \[52\].](#) This could be a reason for (or a result of) their perspectives on relationships and dating (including their discussions on race and femininity).

r/MensRights Themes: In our analysis, r/MensRights is particularly focused on family law (such as child custody, divorce, and alimony). Such issues have been observed to be important among men’s rights groups in the past, where it has been argued that the legal system and family courts discriminate against men [59]. We also discovered that r/MensRights uses keywords such as “parental alienation” in its discourse (which refers to children being alienated from their fathers after a divorce). Some Men’s Rights activists have voiced similar concerns [46], although parental alienation was not found to be an empirically supported syndrome [71]. r/MensRights also discusses other issues, such as higher rates of suicide in men, higher funding allotment for women’s health (for example, towards breast cancer), domestic violence against men (using the keyword DV/IPV), false rape accusations, lack of concern for male circumcision, workplace discrimination and harassment, and mandatory military drafts for men. These concerns have been observed in Men’s Rights groups in the past [39, 64, 3, 2, 61]. The issues of male circumcision and male-only military drafts have achieved some degree of support and success [8, 49, 69], while other issues have been criticized for being inaccurate [82, 85, 62, 54].

r/MensRights People: According to our analysis, r/MensRights users are similar to those of politically right-leaning subreddits, an alt-right community, and a Libertarian subreddit. This result is confirmed by prior observations of Men’s Rights’ conservative

ideologies [60, 9, 20, 102]. They are similar to those who express a dislike for social justice warriors, as echoed by observations in popular media [10]. They are also similar to communities known to have sexist and racist undertones, which may partly explain the accusations of misogyny and racism that have been made against Men’s Rights activists in the past [60, 32]. They are also similar to communities that discuss self-admittedly controversial opinions, which may not be surprising given that Men’s Rights stances are usually considered controversial in mainstream media [95]. They are also similar to an atheism-related group, which falls in line with a prior small-scale survey on r/MensRights where 94% of survey respondents did not subscribe to a religion [102]. It is interesting that although some Men’s Rights activists frame their positions as pro-equality [89, 62], we did not observe their users to have similar interests as traditionally disadvantaged groups.

r/Feminism Themes: We observed that r/Feminism discusses women’s and other social issues. It discusses subjects such as workplace sexism, sexist dress codes, pink tax, toxic masculinity, women’s representation in media, rape, intersectionality, and cultural appropriation. These issues have been observed to be important among other Feminist groups as well [14, 77, 86, 47, 34, 24].

r/Feminism People: r/Feminism users are similar to minority groups spanning race, orientation, and disability. This similarity may be influenced by their similarity with users devoted to social justice, which in principle, requires fair treatment of all members of society [91] (although prior work has noted that espousal of social justice principles does not necessarily translate to conduct that results in social justice [94]). We also discovered that people involved with r/Feminism are similar to those involved with body acceptance subreddits, in line with the finding that exposure to Feminist theories is correlated with positive changes in body image among women [73]. r/Feminism is also similar to r/rapecounseling which provides support to victims of sexual violence. This may be a manifestation of recent Feminist usage of internet tools to help combat sexual violence, among other issues [101]. Finally, we observed that r/Feminism is similar to r/againstmensrights, which is interesting since Men’s Rights has been said to be a reactionary movement to Feminism in prior work [2, 98].

r/TheRedPill versus r/MensRights: The mutual similarity of r/TheRedPill and r/MensRights users is interesting, given that they have little in common in the themes they primarily discuss (the former deals with dating philosophies while the latter talks about gender and political issues). This could be attributed to the interest both subreddits have in conservative politician Donald Trump. We observed r/MensRights to be similar to Donald Trump supporters (r/The_Donald), a similarity also observed in popular media [97]. Additionally, Dignam et al. [27] demonstrated that r/TheRedPill forum contributed to Trump’s election, since forum leaders framed Trump’s ascent as a push back against

Feminism to move them to take political action (although the community is generally apolitical in conversations and is centered on relationship philosophy).

r/MensRights versus r/Feminism: In contrast, r/MensRights and r/Feminism both discuss gender and political issues. However, their users are dissimilar. This could be because of the anti-Feminist roots of the Men’s Rights Movement [2, 98]. Other user characteristics (such as r/MensRights being politically more conservative) could contribute to the different perspectives they have on common topics (such as rape). Some stances taken by Men’s Rights (for instance, discussions of due process, Title IX) are similar to reports from right-leaning media such as Breitbart [11].

Overall, it appears that discussing similar themes in one subreddit is otherwise not a strong indicator of having similar interests. It has been similarly observed in prior work that it is possible for gender subreddits to have little textual overlap but high user overlap (and vice versa) [56].

Finally, we compare movements related to gender with generic subreddits (r/AskMen and r/AskWomen). Understandably, neutral subreddits do not contain much political content. The users of these groups, the themes they discuss, and their perspectives are more similar to each other. The only difference is that r/AskWomen discusses personal safety, assault, reproductive issues, saying no when dating, and sexism.

Chapter 7

Conclusions and Future Work

In this thesis, we presented a data-mining study of social movements related to gender using a large social media corpus. We used text mining methods to understand the issues being discussed by, and the people involved with, these movements. Our main findings are as follows.

1. The Red Pill is a community that discusses a few daily life topics in a shared vernacular. Their conversations revolve around Red Pill mantras on life, dating, power, and women. They are similar to people who do not believe in egalitarianism of race or gender.
2. The Men's Rights movement is political, and discusses issues where it feels men are ignored in comparison to women. These issues include family law, health, money, abuse, relationships, and education where they discuss systems biased in favour of women, money awarded in favour of women, false rape accusations, among other matters. Its participants are politically conservative, associated with sexist, racist, and atheism-related groups, and discuss social justice warriors.
3. The Feminism movement is also political and discusses issues where it feels women and other minorities suffer. These issues include workplace sexism, rape, abuse, pink tax, cultural appropriation, and representation. Its participants are politically less conservative, associated with minority communities (in terms of race, orientation, ability, among others), body positivity groups, rape counseling support, and social justice advocacy groups.

4. People involved with The Red Pill and Men’s Rights movements have similar interests, whereas those involved with Men’s Rights and Feminism are dissimilar.

We emphasize that our results should be used carefully due the following confounding factors.

- a. **Choice of platform:** Over two-thirds of Reddit users are male, and the majority are young adults (64% between the ages of 18 to 29)¹. Our results may be influenced by the users in this demographic. They may also not be representative of people who are involved with gender movements, but do not use Reddit.
- b. **Choice of subreddits:** Our decision to use larger subreddits provides evidence to support our results but also ignores the opinions of smaller groups of people involved with these movements. For example, our results may not be representative of the people who frequent r/RedPillWomen (30,000 subscribers) and r/male_feminists (72 subscribers).
- c. **Choice of users:** We defined users as those who post (to identify issues) or comment (to understand people). Our results are not representative of those who express more passive involvement, such as those who merely read content.

We believe that our findings are relevant to policy decisions regarding men and women. We provide several examples below.

1. **Workplace:** It is important to establish guidelines on acceptable workplace etiquette, communication, and behaviour, in addition to guidelines on what to do if these expectations are not met.
2. **Personal safety:** Our analysis of comments on gender forums indicates that some users do not feel safe in the workplace, in their homes, or on the streets. This suggests that personal safety remains an important issue.
3. **Counseling:** The online support provided by r/rapecounseling highlights the importance of support for victims of rape and violence.
4. **Health:** Governments should investigate systemic health issues, such as mental health problems and suicide, which are frequently mentioned in men’s movement discussions.

¹Reddit demographic estimates are shown [here](#).

5. **Attitudes towards abuse:** Online users who attribute rape (or accusations) to concepts such as feminine imperative could benefit from exposure to different perspectives. This may be accomplished by redesigning social media search engines to return results that include multiple perspectives.
6. **Legal and societal help:** Our analysis demonstrated the need for policy discussion in the context of legal and societal help for gender-oriented issues, such as military drafts, workplace safety, and prison rape.
7. **Gender content flagging:** With the help of our lists of keywords associated with gender issues, it may be possible to detect mentions of gender issues in online discourse.

Naturally, there is more data-driven work that can be done. The goal of gender equity is difficult to achieve if the gender-related issues currently faced by society are not identified. In this thesis, we focused on large subreddits corresponding to social movements. In future work, we will characterize smaller gender groups that have not been examined extensively, such as r/male_feminists and r/womenEngineers. We plan on training text classifiers on gender subreddits to be able to automatically detect gender issues in other online forums. We will also obtain more accurate numbers on the popularity of themes in a subreddit, including the number of views or upvotes associated with posts and comments.

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APPENDICES

Appendix A

Gender Related Terms and Subreddits

A list of terms and subreddits that we refer to in connection with r/TheRedPill, r/MensRights, and r/Feminism.

.1 Gender Related Terms

Here, we describe the gender related terms used in this thesis.

1. **AWALT (all women are like that)** - Assertion that all females are hard-wired to respond to certain situations in a certain way, and if given the opportunity, they will tend to behave as manipulative, abusive, sociopathic, destructive, drama-oriented liars.
2. **Beta male** - Male plugged in to a Feminine Matrix that is today's society. He provides security to a female, commits easily to women, views them as "the prize", and believes women love just like he does, because of his societal conditioning. He does not understand women nor his value to them.
3. **Body image** - Person's perception of the aesthetics or attractiveness of their own body, as compared to societal standards.

4. [Cultural appropriation \(or misappropriation\)](#) - Adoption of elements of one culture by members of another – controversial when the former culture is a disadvantaged minority, and the latter is dominant.
5. [Divorce rape](#) - Situation where a wife uses divorce courts' sexism in favour of women to, for example, take an unfair proportion of her husband's assets or deny him access to their children.
6. [DV / IPV](#) - Domestic Violence / Intimate Partner Violence.
7. [Female \(or feminine\) imperative](#) - Viewpoint which defines a female's core life objective to be to survive, have sex and as many babies as possible with the best men available, and to secure provisioning for herself and her babies.
8. [Game](#) - Rules a man should follow to manage the women in his life. These include advice such as all women are out of their minds and to not use logic to understand them.
9. [Gold digging](#) - Relationship in which people, especially women, engage for money rather than love.
10. [HB](#) - Hot Babe scale used to rate women from 1 to 10.
11. [Intersectionality \(or intersectional Feminism\)](#) - Branch of Feminism which identifies how different aspects of social and political discrimination overlap with gender.
12. [Kino](#) - Flirtatious physical contact with a person of sexual interest.
13. [Male disposability \(or expendability\)](#) - Tendency to be less concerned about the safety and well-being of men than of women.
14. [Parental alienation](#) - Manipulation of a child into showing unwarranted fear, disrespect, or hostility towards a parent and/or other family members.
15. [Retirement gap](#) - Notion that the average man lives fewer years in retirement than the average woman.
16. [SMV \(sexual market value\)](#) - Quantification of the general 'current attractiveness value' of a person to the opposite sex, relative to others of the same sex. [A woman's SMV is based on her age and looks. A man's SMV is far more complicated, and is based on his looks, status, age, wealth etc. A man's SMV is a lot more complicated than a woman's.](#)

17. [Social justice](#) - Concept of fair and just relations between the individual and society. Some criticize it, stating that an objective standard of social justice does not exist.
18. [Social justice warrior \(SJW\)](#) - Pejorative term for an individual who promotes socially progressive views, such as Feminism, civil rights, multiculturalism, and identity politics.
19. [Spinning plates](#) - Doing many things, dating many at once.
20. [Red / blue / black pill metaphors](#) - A blue pill is a person who has not woken up to the fact that society discriminates against males, not females; to blue pill is to do the same. To red pill is to do the opposite, which is associated with movements such as Men's Rights, MGTOW, and The Red Pill. Taking the black pill is coming to the realization that those who lack physical traits will never be attractive to females regardless of techniques used, and should give up. This is associated with Incels.
21. [Title IX](#) - Federal civil rights law in the United States of America said to have impacted aspects of American schools such as athletics, sexual harassment and violence, and transgender students.
22. [Toronto van attack](#) - Attack that occurred on April 23, 2018, in Toronto, Canada in which a van deliberately targeted pedestrians, killing 10 and injuring 16. The man accused identified as an incel - launching a nation-wide conversation about internet culture in Canada.
23. [Toxic masculinity](#) - Societal stereotypes and conditioning of boys, that can result in harm to society or men themselves. Term [originated](#) in a 1980s men's movement.
24. [Wonder Woman](#) - A 2017 movie starring a female superhero that generated controversy when a cinema announced a women-only screening of the film for one night.

.2 Subreddits of Interest

Here, we describe the subreddits mentioned in this thesis.

1. [ADHD](#) - place where people with ADHD and their loved ones can interact with each other. Many users express they 'feel at home' and 'finally found a place where people understand them'.

2. [againstmensrights](#) - intends to expose “toxic misogyny, GSM-phobia, racism” in r/MensRights.
3. [ainbow](#) - discussion of issues facing those who identify as all sexual or non-sexual orientations and/or gender identities.
4. [alright](#) - online coalition of white nationalists, Trump supporters, and fringe conservative groups. Their goals range from harassing anti-Trump protestors to promoting racist, xenophobic, and other white nationalist aims. It is now banned from Reddit due to “proliferation of personal and confidential information”.
5. [amiugly](#) - forum to post pictures and seek other redditors’ opinions on one’s appearance.
6. [AskThe_Donald](#) - Pro-Trump, Pro-administration and MAGA zone to discuss Trump and Conservative subjects.
7. [AskMen](#) - forum to ask strangers for dating advice, but preferably from the male perspective.
8. [askMRP](#) - this subreddit is intended as a softer introduction to its parent subreddit r/marriedredpill.
9. [AskScienceFiction](#) - members pose questions about how fictional universes work.
10. [asktrp](#) - Red Pill discussions for personalized questions about specific situations.
11. [aspergirls](#) - community for autistic women to discuss their experiences. Their environment is centered on positivity, kindness, and personal growth. They are sometimes thought to be less cold and aggressive than r/aspergers.
12. [beholdthemasterrace](#) - dedicated to pointing out flaws in white supremacist logic.
13. [bestofflegaladvice](#) - best content from r/legaladvice, a place to ask simple legal questions, and to have legal concepts explained.
14. [bisexual](#) - discussion and support for anyone who doesn’t fit the binary “straight” and “gay” patterns, such as bisexuals, or who are unsure of where they fit.
15. [blackladies](#) - describes self as “face of Black women on Reddit”. However, there are other subreddits for black women such as r/BlackWomens which distinguishes itself from r/blackladies in ways mentioned [here](#).

16. [Conservative](#) - forum for conservatives on Reddit.
17. [CringeAnarchy](#) - features [politically incorrect content](#), and sometimes mocks people in socially unacceptable ways. Its content has been called [racist, homophobic, and sexist](#). It is now banned from Reddit due to “posting of content that glorifies or encourages violence.”
18. [DarkEnlightenment](#) - discusses the terrible state of the modern world that has resulted from egalitarianism. Section of its description relevant to gender states “Recognition of HBD (human biodiversity) necessitates the rejection of ... egalitarianism. Race and gender are not social constructs and ... not all men or women are created equal ...”. It has been [noted](#) that some elements of this movement are similar to the alt-right, such as racism and misanthropy.
19. [changemyview](#): to post an opinion one accepts may be flawed, in an effort to understand other perspectives on the issue. Users are to “enter with a mindset for conversation, not debate.”
20. [disability](#) - content for individuals with disabilities.
21. [ForeverAlone](#) - for “Forever Alone. lonely depressed sad anxiety”. [Forever Alone](#) is also an alternative term to describe involuntary celibates (Incels).
22. [forwardsfromgrandma](#) - [content is often political, usually conservative](#).
23. [genderqueer](#) - for those who do not fit or question the gender binary.
24. [GirlGamers](#) - forum for ladies to talk about gaming, women in geek culture, experiences that occur as a result of their gender, and game together. All genders and identities are welcome their. They state that “girl gamer” is one of the most controversial, polarizing, and perhaps “cringiest” terms for women who game.
25. [HillaryForPrison](#) - users believe Hillary Clinton should be in prison (and seek help for it), that “crooked Hillary has been fleecing the American public ... [#LockHerUp](#)”.
26. [HillaryMeltdown](#) - to share meltdowns of people who were likely supporters of Hillary Clinton in the 2016 United States presidential election, though the meltdown does not have to be related to the election.
27. Incels: [portmanteau of “involuntary celibates”](#). [Are members of an online subculture who define themselves as unable to find a romantic or sexual partner despite desiring](#)

one. Self-identified incels are largely white, male, and heterosexuals. Discussions are often characterized by resentment, misanthropy, self-pity, self-loathing, misogyny, racism, a sense of entitlement to sex, and the endorsement of violence against sexually active people. At least four mass murders have been committed in North America by men who either self-identified as incels or mentioned incel-related content in their writings. r/Incels is now banned from Reddit due to “violation of ... sitewide rules regarding violent content.”

28. [IncelTears](#) - part-mocking, part-watchdog subreddit for posting screenshots of content created by incels. They “do not condone blanket hatred of virgins or the romantically unsuccessful, only those who self-identify as incel (who) blame women, their genes, attractive men, and society at large for their inability to get dates or sex”.
29. [JordanPeterson](#) - dedicated to work associated with [Jordan Peterson](#), a psychologist and professor at the University of Toronto.
30. [KotakuInAction](#) - hub for discussion of [GamerGate](#), issues in gaming and broader nerd culture. Common topics include social justice as it relates to games and other media, politics in college campuses, and “ethics in games journalism”. It has been reported that many of its moderators also moderate other subreddits intended to degrade, humiliate, mock, and undermine the arguments and appearances of women, Feminists, and social justice warriors.
31. [Libertarians](#) - to discuss libertarianism and related topics. [Libertarianism](#) seeks to maximize political freedom and autonomy, emphasizing freedom of choice, voluntary association, and individual judgment.
32. [MarchAgainstTrump](#) - Marching Against Trump.
33. [marriedredpill](#) - for married men or men in long-term relationships who want to adhere to red pill philosophy of sexual strategy while remaining in that relationship.
34. [MGTOW](#) - for men going their own way, forging their own identities and paths to self-defined success. [These men are cutting women out of their lives](#). To them, the Feminist movement has all but ruined society, and it does not make sense to participate in the dating game because women have been programmed to ruin a man’s life, take their money, and leave them with kids who are not theirs. They are also afraid of false rape accusations. Men’s Rights activists are different from MGTOW. While Men’s Rights activists try to fix their problems through action and activism, members of MGTOW hold self-preservation above all else. Numerous MGTOWs

track their growth over Situational Awareness (“take the red pill” and embrace that gender equality is a lie and propaganda), Rejection of Long-Term and Short-Term Relationships, and finally Economic and Societal Disengagement (stepping away from society).

35. [NoFap](#) - participants abstain from pornography and masturbation for a period of time. Possible [goals](#) include self-control, addiction recovery, social confidence, among others.
36. [occult](#) - for armchair and practicing metaphysical skeptics.
37. [offmychest](#) - mutually supportive community to share deeply emotional things that cannot be shared with the people one knows. Aims to be a safe space.
38. [PurplePillDebate](#) - neutral forum to discuss sex and gender issues, specifically those pertaining to /r/TheBluePill and /r/TheRedPill.
39. [rapecounseling](#) - to emotionally support those who have experienced rape or any type of sexualized violence.
40. [RedPillWomen](#) - [follows](#) the same praxeology of male-female sexual dynamics as The Red Pill. However, the application of sexual strategies is different. They seek commitment from men, and Captains (or strong, competent leaders) as partners. They believe that women are the gatekeepers of sex, while men of commitment.
41. [seduction](#) - primarily for men to help with dating, becoming a pickup artist (PUA), fixing “[Game](#)”, seducing women, and to bring forever alones to having an abundance of women in their life.
42. [ShitRedditSays](#) - social justice league chats. [They point out all the various -isms that Reddit is guilty of. They are known to be a circlejerk or a hyper-sensitive “safe space”.](#)
43. [socialjustice101](#) - to learn about social justice rules.
44. [SocialJusticeInAction](#) - to discuss, engage with, and thwart hateful social justice warriors rhetoric.
45. [socialskills](#) - to share tips, ask for advice, or offer encouragement to others on their social skills journey.
46. [SRSDiscussion](#) - to discuss, educate, debate on social justice issues.

47. [SRSSucks](#) - against subreddit r/SRSDiscussion.
48. [startrek](#) - Star Trek news, discussion, and fiction.
49. [steroids](#) - discuss safe steroids usage except for their sources.
50. [tall](#) - for tall-related topics.
51. [The_Mueller](#) - for memes, discussions and articles about Special Counsel Robert Mueller III, his investigation of the Trump administration's ties to Russia, and any person of interest listed in the Mueller report.
52. [TrueOffMyChest](#) - to vent about unruly life situations. Offshoot of r/Offmychest; which has been [accused](#) of being run by white-knights and SJW's who tend to ban people who post in some right-leaning subs, as well as places such as r/KotakuInAction.
53. [worldpolitics](#) - free speech political subreddit, without an agenda, few rules. They state they do not encourage or incite violence or abuse fellow redditors. [Mainstream and counter-cultural news are welcome.](#)