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## A Gender-Based Study of Discourse Markers in Twitter Comments

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### **Abstract**

Native speakers discourse is marked by the use of a good deal of discourse markers, henceforth DMs. Their use in the spoken as well as the written forms has some connection with the concept of politeness. Besides, the different functions of DMs help to make the discourse more coherent. As such, it is hypothesized that gender differentiation has an impact on the use of DMs. Thus, this study is intended to scrutinize the effect of gender differentiation on the use of DMs in twitter comments. To accomplish this aim, the researcher targeted (21) persons; (10) males and (11) females. She follow up their tweets to see their use of DMs while commenting on twitter. One hundred twenty nine twitter comments have been collected from male and female comments.

The results reveal that female tend to use DMs more frequently than male do. Besides, the elaborative type of DMs are the most frequent in the analyzed data.

Keywords: Cross-gender, discourse markers, twitter comment

### Introduction

In sociolinguistics studies the term sex and gender are used interchangeably although the word 'sex' is a biological given whereas gender is a social acquisition (Miller & Swift 1976:51; cf. Chambers 1995:103). Accordingly, sociolinguists tend to employ the binary biological variable instead of the socio-cultural concept of gender simply because the biological sex of the speaker is readily observable whereas the individual's gender is a multidimensional complex, i.e., hard to be characterized (Eckert 1989:146-247; cf. Chambers1995:104). Milroy & Gordon (2003:100) argue that gender is "rather a continuum where speakers situate themselves socially between two reference poles", which explains that it cannot be interpreted according to its interaction with other social categories.

As such, it can be said that biological sex can be a stereotype for socio-cultural gender. In this respect, Eckert (1989:246-247)

comments "differences in patterns of variation between men and women are a function of gender and only indirectly a function of sex".

Besides, differences between male and female in language use have been proven by number of studies especially those conducted after Lackoff's (1975) work in which she refers to the differences in the use of intensifiers, tag questions, interjections and some other items, where she found that women use these previously referred to items more than men do.

Language includes different items whose usage can be tested or investigated in relation to gender differentiation.

As far as DMs are concerned, there frequent appearance in native speaker's speech is very noticeable due to the different functions and forms they have. For this reason, this study is intended to investigate differences in the use of these markers in twitter comments. The study aims to answer the following questions:

- 1. Is there gender differentiation in the use of DMs?
- 2. What are the types that are frequently used by DMs?
- 3. What are the types that are frequently used by female participants?

In order to find an answer to these questions, the researcher collected (129) twitter comments from 21 person; 10 male and 11 female. The researcher captures their use of the DMs and collected them to be analyzed in this study.

As for the problem of the study, it is noticed that there is a number of studies that have examined the use of DMs by native speakers of a variety of languages. However, relatively few studies, as far as the researcher know, have explored the gender differentiation in the use of DMs in native speaker twitter comments.

DMs is commonly used in native speakers' everyday spoken discourse. This lead to the assumption that they gain a share in twitter comments.

It is hypothesized that:

- 1. There are gender differences in the use of DMs.
- Message related DMs are the most widely used type of DMs by both gender.

### Literature review

DMs have been targeted by different scholar from different perspectives. By investigating different social markers like; 'well', "but", "and", "or", "oh", "because", "so", "now", "I mean" and some others in a thorough study, Schiffrin (1987) argues that these markers maintain coherence, they relate what is being said to what has been already said. Schourup (1999) listed seven aspects which characterizes DMs, namely; connectivity, optionality, weak clause association, non-truth-conditionality initiality, orality, and multicategorially.

On the other hand, descriptive studies of DMs used by non-native speakers were also conducted to see how they apply these markers in both spoken and written form. Müller (2005), for example, conducted a comparative study on non-native American speakers and non-native German speakers. He limits his study to four markers to make it easy to grasp the differences or to conduct the comparison. Accordingly, he identifies the function of the four markers and categorized them into two levels: textual and interactional.

Ziran and Yongping (1999) conducted a cognitive-pragmatic study for DMs. They confirm the importance of these markers in interpreting the utterance. Fraser (1999) studies these markers from syntax perspective.

Gender is said to be of a significant effect on the use of the linguistics features (Escalera, 2006, Matei 2011, Subon, 2013, and Shirzad & Jamali, 2013). Women social status, for example, is said to be reflected by means of the language they use. Pasaribu (2017) studies gender differentiation in the use of DMs when writing academic essays. He uses Fraser's model and he concluded that both male and female tend to use the elaborative markers and that the differences are very few, example of these differences is that female like to support her essays with more example and hence uses the social marker "for example". Rezaee, et al., (2015) studies the effect of lecturers' gender on the use of DMs. They intended to investigate the difference between Iranian and English male vs.

female professors' use of four DMs of 'well', 'OK', 'you know', and 'I mean'. In their conclusion they have noticed that there are substantial quantitative and qualitative differences in the use of DMs and their pragmatic functions between Iranian and English male vs. female professors' lectures.

### **Discourse Markers**

Studies discussing cohesion role in text writing lead consequently to interest in studying DMs and their function in language use. They are assumed to indicate how the speaker the speaker views the connection between two linguistic units (Quirk et al. 1985:631-33). In this respect, Aijmer (2002:2) opines "discourse particles seem to be dispensable elements functioning as sign-posts in the communication facilitating the hearer's interpretation of the utterance on the basis of various contextual clues". Similarly, Crystal (1988:48) sorts out that these markers serve "as the oil which helps us perform the complex task of spontaneous speech production and interaction smoothly and efficiently". Swan (1980:1) explains that DMs can connects a sentence to what comes before or after and indicates a speaker's attitude to what he is saying. He further (ibid) defines DMs as "a word or an expression which shows the connection between what is being said and the wider context". In her part, Schiffrin (2001:54) elucidates that DMs applies to such seemingly semantically empty linguistic units like oh, but, y'know, well. These markers, she adds, function in cognitive, expressive, social, and textual domains and on different planes of discourse, simultaneously fulfilling various discourse functions. Jucker & Ziv (1998:1) name a number of functions to be performed by DMs such as; discourse connection, signaling intimacy and topic switches, turn-taking, confirmation seeking, hesitation marking, boundary marking, filling, prompting, repair marking, hedging, and focusing.

There are different terms that come to be used to refer to these markers, among which are; discourse particles, connectives, pragmatic expressions or pragmatic markers are preferred by some researchers, phrase, for instance a conjunction, adverbial, comment clause, interjection. Redeker (1991: 1168), for example calls them "discourse operators" and defines them as "a word or phrase, for instance a conjunction, adverbial, comment clause, interjection that is uttered with the primary function of bringing to listener's attention a particular kind of the upcoming utterance with the immediate discourse that is uttered with the primary function of bringing to listener's attention a particular kind of the upcoming utterance with the immediate discourse context". Schiffrin (2001:20) "words or short lexicalized phrases". Fraser (1998: 302), on the other hand, calls them linguistic items. Hölker (1991:78-79) lists four basic features of DMs that help to limit and identify them, these are:

- (1) They do not affect the truth conditions of utterances;
- they do not add anything to the propositional content of an utterance;
- (3) they are related to the speech situation and not to the situation talked about; and
- (4) they have an emotive, expressive function rather than a referential, denotative, or cognitive function.

As far as their sociolinguistic and stylistic features of these markers is concerned, the following can best characterize DMs:

are associated with informality and grammatical 'fragmentation' caused by the lack of planning time. Besides, they characterize oral rather than written discourse but this does not mean that they do not occur in written discourse (Östman 1982:170; Fraser 1990:389; Redeker 1990:379);

- (ii) their frequency is higher in oral discourse, sometimes more than one occurring in a single sentence;
- (iii) are stylistically stigmatized and negatively evaluated, especially in written and formal discourse, as they are considered a sign of dysfluency and carelessness;
- (iv) are assumed to be gender-specific and more typical of women's speech. DMs are multifunctional and operate simultaneously on several linguistic levels.

All in all, DMs are linguistic items that come initially in the sentence and help in connecting discourse part to facilitate the interpretation of the discourse.

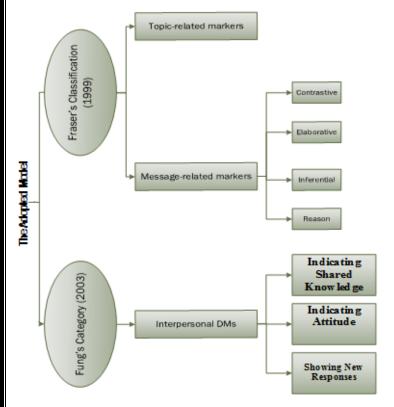
### **Method and Procedures**

#### **Data Collection**

The data is elicited from twitter comments public chats. The researcher targeted (11) female individuals and (10) male individuals. Their comments or tweets (only those contain DMs) have been collected. The collected comments are those written during May, 2019 to May, 2020. The data records (129) comments as a whole; (69) of females and (60) of males. The researcher capture each of these comments and attaches them in the appendices. It is important to mention that the commenter are native speaker mostly American. As for the topics of the tweets, they cover different topics according to the tendencies and occupation of the writers. A final remark is that some of these comments include more than one DMs and this is in fact considered by the researcher in the statistic consideration.

## The Adopted Model

The model adopted in this study is Fraser's (1999) model for its suitability to the aim of the research. In his analysis of DMs, Fraser classifies two types of DMs: a) DMs relating the explicit interpretation exist in the second sentence along with that some aspects in the first sentence (message- related), b) DMs relating topic of the second sentence along with the first sentence (topic- related). He further classifies the first type into four sub- categories, namely: contrastive, elaborative, inferential, and reason DMs. Each of these sub- categories, he explains, is a function. Contrastive markers, for instance, show that there is a contrast between the interpretation of the first sentence and that of the second. Elaborative markers, as a second category, indicate a kind of balancing between sentences. The third category, however, is the inferential markers which indicate that what follow the marker concludes what precedes it. Finally, reason markers where reason for the preceding sentence is mentioned in the second sentence.



Along with this model, the researcher adopts Fung's (2003) account of interpersonal DMs which he divides into: a) marking shared knowledge (involvement markers), b) indicating attitude, and c) showing new responses. To this end the model takes its final shape to be used for the analysis of the data.

## **Data Analysis**

The data are analyzed according to the abovementioned model in which DMs are divided into:

back to my original point. before I forget. by the way. incidentally. with regard to

but, however, in comparison to, on the contrary, conversely, instead, despite, nonetheless, still.

and, besides, furthermore, more to the point, analogously, to cap it all off, correspondingly, otherwise, parenthetically.

so, accordingly, of course, as a consequence, for this/that reason, therefore, thus, in this/that case.

After all, because, since.

After all, because, since.

see, you see, you know, listen, well, really

well, really, I think, obviously, absolutely, basically, actually, exactly, sort of kind of, like, to be frank to be honest, oh, etc.

OK, okay, right, alright, yeah, yes, I see, great, oh great, sure.

### 1. Topic Related Markers

These are DMs that relate the topic of the second sentence with the interpretation of the first one. Examples of these DMs are *back to my original point, before I forget, by the way, incidentally, with regard to.* For example;



According to this thread Kirk is a libertarian, which is like the Tea Party because both parties worship Trump, and he is a hypocrite for citing an article citing a professor when clearly he hates higher ed.

My only point here is don't read Kirk's article and then sniff glue.

Talking about certain article writer, Ashely, the tweet writer, used "my only point here" which is a topic related DM in the sense that it relates what she has already said with what follows the DM.

### 2. Message Related Markers

DMs of this type relate the interpretation of the second sentence with some aspect of the first sentence. DMs that belong to this type can be classified into:

### **Contrastive Marker**

Type of markers where this marker signals a direct or indirect contrast between the first sentence and the second one. DMs of this type includes: but, alternatively, although, contrariwise, contrary to expectations, conversely, despite (this/that), even so, however, in spite of (this/that), in comparison (with this / that), in contrast (to this/that), instead (of this / that), nevertheless, nonetheless, (this/that point), notwithstanding, on the other hand, on the contrary, rather (than this/that), regardless (of this/that), still, though, whereas, yet ...) (Fraser, 2009:300). For example;



Wholeheartedly agree! @PHXSkyHarbor finished first overall in a @WSJ ranking of top major airports. However - Denver should NOT be #2.

In the above tweet, the writer is giving her opinion about the US airport ranking. She announces that the ranking pleases her but she is not satisfied with the airport that comes secondly in the ranking. This means that she is not fully satisfied with the ranking. To show this contrast, she uses the DM "however".

### **Elaborative Markers**

This type of DMs signals an elaboration in the second sentence to the information contained in first sentence, such DMs include and, above all, after all, also, alterna-tively, analogously, besides, by the same token, correspondingly, equally, for exam-ple, for instance, further (more), in addition, in other words, in particular, likewise, more accurately, more importantly, more precisely, more to the point, moreover, on that basis, on top of it all, or, otherwise, rather, similarly (ibid: 301). For example;



In addition to asking what can go wrong with AI, we should also consider what can go right. Nice post by @reidhoffman: msft.social/p1V3ar

7:13 PM - Apr 16, 2019 - Sprinklr Publishing

### **Inferential Markers**

Inferential markers refers to those DMs which signal that the first sentence provides a basis for inferring the second one. Such DMs include: (so, all things considered, as a conclusion, as a

consequence (of this/that), as a result (of this/that), because (of this/that), consequently, for this/that reason, hence, it follows that, accordingly, in this/that/any case, on this/that condition, on these/those grounds, then, therefore, thus) (ibid). For example;



In discussing what is best for trains to be run through, the writer concludes that the surface is the best for running trains supporting his opinion by evidence to contradict his follower's opinion. The DM used here is "therefore" which indicates inferentiality.

### **Reason Markers**

DMs that are followed by reason for the preceding sentence are of this type. The list includes *after all, since, because, as,* for example;



- President @realDonaldTrump

1:43 AM · Apr 4, 2020 · Twitter for iPhone

In this tweet, McEnany, is accusing the Republicans of cheating in the election. She proposes a reason for their insisting on not consider voter's ID is their insistence to cheat in the election. She uses the word "because" to introduce a reason.

### 3. Interpersonal DMs

These markers are used to signal solidarity between interlocutors and might be used to express attitudes towards conveyed messages. Fung (2003: 77) states that DMs of this type "perform a phatic function in the discourse to facilitate closeness between participants for the purpose of establishing roles and relationships between the interlocutors". Aijmer (2002: 51) suggests that they might be used to "show the hearer's understanding of the social relationship between the partners and to keep the conversation going". DMs of this type are divided into:

#### Marking Shared Knowledge (involvement markers)

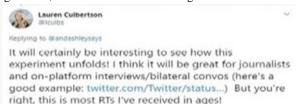
DMs such as *see*, *you see*, *you know*, *listen*, *well*, *really* can be used to maintain relationship between interlocutors. For example;



Talking about ventilators types, the writer corrects what his follower has referred to and he marks his sentence with a DM that indicate shared knowledge, i.e., "you'd think".

## **Indicating Attitude**

There are other DMs such as well, really, I think, obviously, absolutely, basically, actually, exactly, sort of kind of, like, to be frank, to be honest, oh, etc. whose existence in the sentence invoke agreement, conformation or acknowledgements



In the abovementioned tweet, the writer consider her relation to her follower and she uses "I think" to deliver her opinion. She aims to base her opinion on the shared knowledge assuming that her opinion is known to the interlocutor.

#### **Showing New Responses**

The third type of interpersonal DMs includes OK, okay, right, alright, yeah, yes, I see, great, oh great, sure.



Yes. Some light is heavily absorbed by common glass both Infrared & ultraviolet, for example. For visible light, not so much.

10:57 PM - Feb 16, 2020 - TweetDeck

The use of the DM "yes" marks the beginning of new sentence and this is clearly apparent in this tweet where the writer begins a new sentence after this marker.

### The Results

First of all, the data records (129) comments; (69) comment belong to female and (60) to male and they constitute 53.49% and 53.49% respectively. To these, the researcher recounts each comment with more than one DMs with each type they contain. In this way, the final amount of the collected data counts (165) according to the occurrences of DMs in the collected data; (93) belong to female and (72) to male and their ratio is 56.36% and 43.64% respectively. So it is clear that female's use of DMs more than male do. Table (1) shows the frequency and percentage of the collected data according to what has been mentioned.

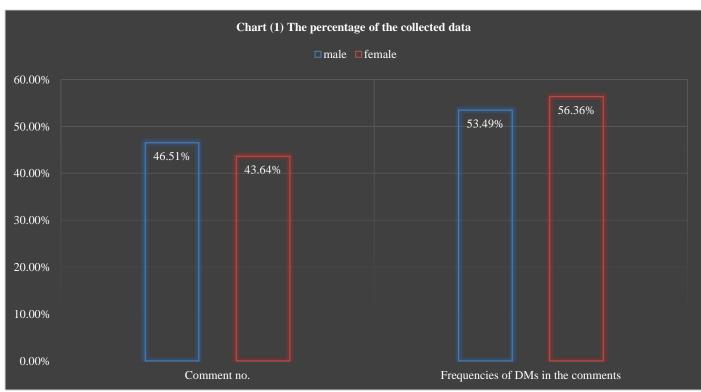
 Gender type
 Comment no.
 Frequencies of DMs in the comments

 Male
 60
 72

 Female
 69
 93

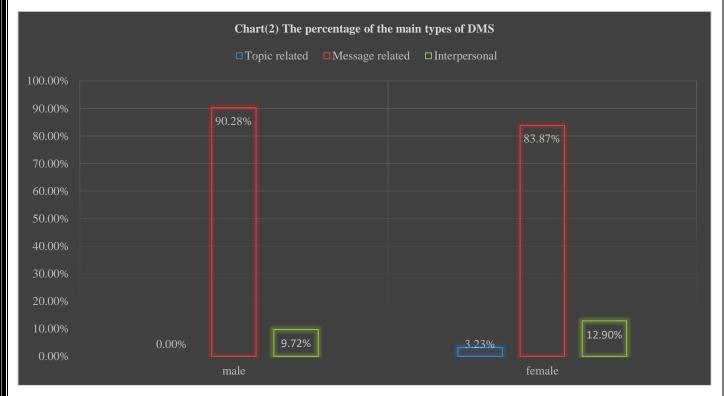
 Total
 129
 165

Table (1) The frequency of the collected data



Basically DMs are classified into three types: topic related, massage related, and interpersonal. Topic related DMs are used to indicate the relation between what follows the DM and the topic of the preceding sentence. This type shows no occurrences in male's comments but it records (3) occurrences with a ratio of 3.23% of the ratio of female's comments. On the other hand, message related DMs is ranked first in the hierarchy of occurrences due to their frequency of appearance in both male's and female's comments. The frequency of this type of DMs in male's comment is (65) which constitutes 90.28% of the ratio of the male's comments and their frequency in female's comments is (78) which constitutes 83.87% of the ratio of the female's comments. The third type of DMs which is the interpersonal DMs come up with (7) times of occurrences and 9.72% percent in male's comments, and (12) times of occurrences and 12.90% percent of the ratio of female's comments.

Table (2) Frequency and percentage of the main types of DMS					
Types of DMs	Male Frequency	Female Frequency			
Topic related		3			
Message related	65	78			
Interpersonal	7	12			
Total	72	93			



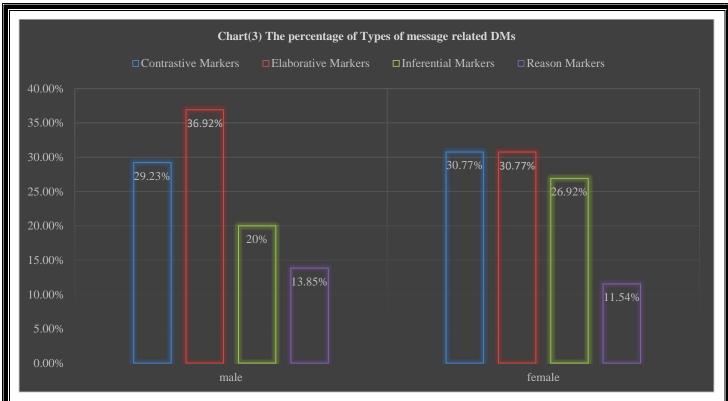
As far as the sub- types of the message related DMs type is concerned, the elaborative markers comes first in both male's and female's comments. They are identified with a frequency of appearance that amounts to (24) and a ratio of 36.92% in male's comments and (24) and a ratio of 30.77% in female's comments.

Contrastive markers follow elaborative markers in the hierarchy in the comments of both gender. It records (19) occurrences and 29.23% percent in male's comments and (24) with 30.77% percent in female's comments. Following the contrastive, there comes the inferential where the occurrence of this type of markers marks that what follows concludes what precedes. In male's comment they constitute 20% of the ratio with frequency of (13) occurrences. In female's comments, however, they constitute 26.92% of the whole ratio and their occurrences is (21) time.

Table (3) Frequency of Types of message related DMs

Type of Message Related DMS	Male Frequency	Female Frequency
Contrastive Markers	19	24
Elaborative Markers	24	24
Inferential Markers	13	21
Reason Markers	9	9
Total	65	78

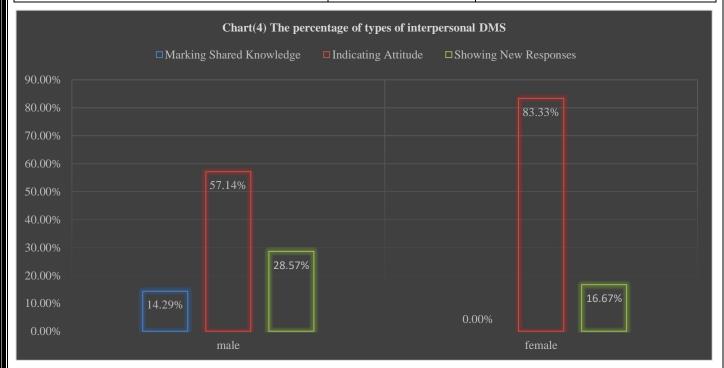
Finally, reason markers tail the order of occurrences as well as the percentage. They appear (9) times with 13.85% percent in male's data and (9) times with 11.54% percent in female's data.



Interpersonal DMs have a share in the collected data. The highest record in male's comments is the type entitled "indicating attitude" which appears (4) times and its ratio is 57.14%. While in female's comments, it comes with (10) occurrences and 83.33% percent. "Showing new response" is the second type of interpersonal DMs that record occurrences in the data.

Table (4) Frequency and percentage of types of interpersonal DMS

Types of interpersonal DMs	Male Frequency	Female Frequency			
Marking Shared Knowledge	1				
Indicating Attitude	4	10			
Showing New Responses	2	2			
Total	7	12			



Male's comments contain (2) occurrences of this type and its ratio reaches to 28.57%. Female's data also record (2) occurrences with 16.67% as a ratio. Besides, the third type of interpersonal DMs is those "marking shared knowledge". This type records (1) occurrence in male's data with 14.29% as a ratio. Conversely, in female's comments, there is no reference to this type.

### **Conclusion and Discussion**

The results reveal that both males and females use DMs in twitter comments but females use them more than males do. In this respect, Matei (2011) cited in Pasaribu, 2017: 76) argues that women tended to use DMs in conversations than men do. The results also reveal that it is the message related type of DMs that is used frequently in the comments of both male and female. This indicates that they pay more attention to the coherence of content of the message they post than referring to interpersonal relationships.

Elaborative DMs is on the top of the pyramid of the frequencies of DMs in the comments of both gender and this, in fact, can show their tendency to provide their followers with more information so as to convey what they want to say. Contrastive, inferential and reason DMs show a considerable amount of the collected data. Their frequencies means that the writers aims to provide people with coherent information by all the possible means; elaborating, contradicting, making inferences and giving reasons.

Although they are used to a limited extent, interpersonal DMs appear in the data but they are more frequent in female's data. This might be explained by what Kim and Kang (2011: 31) claims "women respond more emotionally than men, and use more DMs than them".

## Appendix I

Twitter comment	DM	Type of DM	Sub – Category of DM
Ashley Baker @andashleysays  I'm sure nearly all FedSoc members would admit that judges are lawyers, that some lawyers are conservative, and that those who are are likely to be members of	I'm sure	Interpersonal	Indicating attitude
FedSoc.  Stop pretending that supporting a judicial philosophy is scandalous. Or otherwise take the ABA "head on" as well	Otherwise	Message related	Elaborative
Ashley Baker @andashleysays  Note to the author: When writing an op-ed about your abused dog, it is a truth universally acknowledged that, more puppies and less politics equals happier readers.  Otherwise, Fido is just a vehicle for your anger, and Fido deserves better.  8:35 AM · Jan 29, 2019 · Twitter for iPhone	Otherwise	Message related	Elaborative
Ashley Baker @andashleysays  According to this thread Kirk is a libertarian, which is	According to	Topic related	
like the Tea Party because both parties worship Trump, and he is a hypocrite for citing an article citing a professor when clearly he hates higher ed.	And	Message related	Elaborative
My only point here is don't read Kirk's article and then sniff glue.	My only point here	Topic related	
Ashley Baker @andashleysays  Also of note: "French regulators began investigating Google on May 25 — the day GDPR went into effect."	Also	Message related	Elaborative
Clearly they already knew what the outcome of the investigation would be.  8:59 PM · Jan 21, 2019 · Twitter Web Client	Clearly	Interpersonal	Indicating attitude
Ashley Baker @andashleysays  "It seems, in other words, as though Trump is directing agencies to take exactly the kind of action conservative	In other words	Message related	Elaborative
judges are beginning to combat."  Exactly. Those cheering on both the E.O. and Trump's judicial nominees need to learn more about both.	Exactly	Interpersonal	Indicating attitude

## **Appendix II**

Appendix 11					
Twitter comment	DM	Type of DM	Sub – Category of DM		
Christina Sandefur @cmsandefur  Recently went to USPS to send a package. Crowded, barely anyone wearing masks (even employees), everyone on top of each other. So I tried UPS. Employees were all wearing masks and enforcing occupancy limits and proper distancing. Who says the free market can't do this better?  1:47 AM · May 19, 2020 · Twitter Web App	So	Massage related	Inferential		
Christina Sandefur @cmsandefur  Trying to get my package delivered by @FedEx has been a bureaucratized nightmare, w/ horrible customer service. Whereas @amazon's app is now so customeroriented that it tells me HOW MANY STOPS before my package will be delivered & gives me a picture when delivery is confirmed.  10:23 PM · Apr 27, 2018 · Twitter Web Client	Whereas	Message related	Contrastive		
Christina Sandefur @cmsandefur	Wholeheartedly Agree	Interpersonal	Showing New Responses		
Wholeheartedly agree! @PHXSkyHarbor finished first overall in a @WSJ ranking of top major airports.  However - Denver should NOT be #2.	However	Message related	Contrastive		
Christina Sandefur  ©cmsandefur  Arizona Attorney General says Sedona city officials can't impose rules on short-term rentals that are not also imposed on long-term rentals, but instead must treat all homeowners equally. This is a big victory for property rights! indefenseofliberty.blog/2018/05/08/vic #homesharing	But	Message related	Contrastive		
Christina Sandefur  During this emergency, states are allowing nurse practitioners to practice at the top of their license. If these unwise laws are restored, those same NPs won't be able to practice unless a physician, even one w/ less experience, nominally supervises them.	Unless	Message related	Contrastive		
Christina Sandefur  ©cmsandefur  Some argue actors shouldn't portray a marginalized person unless they were oppressed in the same way.	Unless	Message related	Contrastive		
But acting is imitation, it's going to be difficult to tell complicated stories if we demand that the people involved are perfect intersectional matches. reason.com/blog/2018/08/1  11:15 PM - Aug 14, 2018 - Hootsuite Inc.	But	Message related	Contrastive		
Christina Sandefur @cmsandefur Instead of pushing one-size-fits-all agendas, lawmakers can empower women by eliminating unnecessary barriers - like overreaching occupational licensing laws. #WomensDay 4:19 PM · Mar 8, 2020 · Twitter for Android	Instead of	Message related	Contrastive		

# **Appendix III**

Twitter comment	DM	Type of DM	Type of DM
Kayleigh McEnany (a) (a) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	However	Message related	Contrastive
Twitter defended HAMAS when they threatened "retaliation" vs. Israel, saying there's a different set of rules for "violent extremist groups"			
Senate Majority Leader, however, gets suspended for showcasing the violence of the left. HE WAS THE VICTIM!			

Kayleigh McEnany (2) @kayleighmcenany	Likewise	Message related	Elaborative
The NRA does not back down from their principles. It's			
too bad Republicans don't do likewise. #tcot			
1:36 AM · Jan 18, 2013 · Twitter for iPhone			
- Constitution of the Cons	,		
Kayleigh McEnany   © kayleighmcenany	Unless	Message related	Contrastive
"Rich people in smoke-filled rooms will not pick the next President of the United States." - ELIZABETH WARREN			
UNLESS it's corrupt Adam Schiff, Nancy Pelosi, Chuck Schumer overturning a national election.			
#DemDebate 5:27 AM - Dec 20, 2019 - Twitter Web App			
SIGT AM - DOC CO, EVIS - TWILLIAM TO APP			
Kayleigh McEnany   ®kayleighmcenany	Also	Message related	Elaborative
At Harvard Law School, I was heartbroken when Ravi's protege, @NAQureshi, passed away of stomach cancer at the age of 34.			
Nabeel also changed countless lives.			
My heart sunk when I read that Ravi, too, had cancer.			
4:25 AM · May 13, 2020 · Twitter for iPhone			
Kayleigh McEnany    ©kayleighmcenany	Above all else	Massage related	Elaborative
#SOTU: They sacrifice to raise a family. They care for our children at home. They defend our flag abroad. They are strong moms, brave kids. They are firefighters, police, border agents, medics, Marines. Above all else they are Americans. This Capitol, this Nation, belongs to them			
6:34 AM · Jan 31, 2018 · Twitter Web Client			
Kayleigh McEnany © ©kayleighmcenany	Therefore	Massage related	Massage related
How peculiar/convenient - Florida Senator Bill Nelson is losing his voice and therefore can't give his opinion on Judge Kavanaugh. (See below)			
Floridians deserve better!			
Kayleigh McEnany (*)  @kayleighmcenany	Because	Because	Because
SPOT ON!			
"The reason they don't want voter ID is because they intend to cheat!"			
- President @realDonaldTrump			
1:43 AM · Apr 4, 2020 · Twitter for iPhone			

## **Appendix IV**

Twitter comment	DM	Type of DM	Sub – Category of DM
Lauren Culbertson	Certainly	Interpersonal	Indicating attitude
Replying to Wandashleysays  It will certainly be interesting to see how this experiment unfolds! I think it will be great for journalists	I think	Interpersonal	Indicating attitude
and on-platform interviews/bilateral convos (here's a good example: twitter.com/Twitter/status) But you're right, this is most RTs I've received in ages!	nk it will be great for journalists vs/bilateral convos (here's a But m/Twitter/status) But you're	Message related	Contrastive
Lauren Culbertson  @iculbs	For example	Message related	Elaborative
food from @WillRinehart at @AAFAlgorithms are relevant to more industries/orgs than just "tech." They're used in everyday decision-making. For example, algos are helping judges determine bail terms. Should be considered when thinking about regulation or legislation.			

Lauren Culbertson  Placulbs  In addition to hamstringing proactive enforcement for really problematic content and over censorship issues, I wish folks gunning for Google and FB knew that eroding #Section230 only helps the biggest companies stay big and powerful. 230 is key to competition.  #TuesdayThoughts  9:55 PM Jan 21, 2020 · Twitter Web App	In addition	Message related	Elaborative
Lauren Culbertson  @brianfishman notes terrorists tend to present themselves as such whereas foreign state actors tend to present as an engaged citizen. Emphasizes the importance of giving more context and information about the content users interact with. @MegReiss says public education key.  9:10 PM - Mar 13, 2018 from Austin, TX - Twitter for iPhone	Whereas	Message related	Contrastive
Lauren Culbertson @Iculbs  Compliment of the week: "Btw someone had a pic of them eating a hot dog and putting raclette on top and I thought of you guys. Idk if I told you but yours was significantly better than what I had in France."	But	Message related	Contrastive
Lauren Culbertson ©Iculbs  Replying to @POLITICOLive and @SecElaineChao  I have tremendous respect for Sec. Chao and her career. At the same time, if this guy is still here and around, she should speak up. If a powerful woman like Sec. Chao can't speak up, what message does that send to other women who aren't as powerful?  7:51 PM · Dec 5, 2017 · Twitter Web Client	At the same time	Message related	Elaborative

## Appendix V

Twitter comment	DM	Type of DM	Sub – Category of DM
Linnea Dunne ©linneadunne  In Sweden, they say closing schools would mean too many keyworkers in the health care sector would be forced to stay at home. But the school closures are urgent to flatten the curve, specifically to ease the pressure on the health care system. Where's the logic?  12:17 AM · Mar 14, 2020 · Twitter for Android	But	Message related	Contrastive
Linnea Dunne ©linneadunne Replying to @valerieloftus	But	Message related	Contrastive
I'm learning as we speak (am 37) but, ironically, have had to pause it as a result of all this. Can't practise with kids in the car but also can't do lessons because of	Because	Message related	Reason
social distancing, so Passed the theory test back in June.  8:51 PM · Mar 23, 2020 · Twitter for Android	So	Message related	Inferential
Linnea Dunne @linneadunne  To every woman who ever travelled, everyone who needed to but couldn't, everyone who took pills illegally - this is for you. Change, at last. A warmer, slightly more equal Ireland. #together4yes #Repealthe8th  1:30 AM · May 26, 2018 · Twitter for Android	But	Message related	Contrastive

Linnea Dunne  ©linneadunne	Moreover	Message related	Elaborative
Replying to @SwedishChamber			
@SwedishChamber It would seem appropriate then to also invite Fi, considering Sunday's result. Moreover, it doesn't make for a very  1:23 PM · May 29, 2014 - TweetDeck			
Linnea Dunne @linneadunne - Jun 3  Actually hilarious. @dagensnyheter vs @rtenews, based on the same statement. Different agendas? Different audiences to please?	Actually	Interpersonal	Indicating attitude
Linnea Dunne @linneadunne - Jan 23  So both Leo and Micheal agree people can't save because rents are too high,	So	Message related	Elaborative
yet both are talking tax cuts and savings contributions, and neither wants to address the rental market. #WMTVBigDebate #GE20	Because	Message related	Reason
Linnea Dunne @linneadunne	So	Message related	Elaborative
So I've managed to stay away from Transport for London today and, subsequently, will be watching the rugby shortly.	Subsequently	Massage related	Inferential
5:45 PM · Feb 10, 2013 · Twitter Web Client			

# Appendix VI

Twitter comment	DM	Type of DM	Sub – Category o DM
Louise McSharry  @Houisemcsharry  Then I'll be speaking to @ItsEricaCody about protesting in pandemic, Black Lives Matter and more. Music from @MuRliMuRl, @cmatbaby, @perfumegenius and @carlyraejepsen. Join us!  11:02 AM - Jun 6, 2020 - Twitter Web App	Then	Massage related	Inferential
Couise McSharry  On @rte2fm in a minute, starting with the wonderful  @ellenmcoyne who'll break down the news for us, then we'll be chatting to the founder of @loststock_, a genius initiative, in How to Be an Adult @ciaraobrien will school us on how to really keep your info and money safe online  11:00 AM Jun 6, 2020 · Twitter Web App	Then	Massage related	Inferential
Louise McSharry   © WoulsemcSharry	So		Inferential
(I'm at home alone with a baby and toddler and it has been a LONG day so I'm in no mood to confront anyone hence I'm coming on here to complain about it instead of going over there. Also, what would I say? I	Hence		Inferential
think you have my food? Which they've probably already started eating?)  11:27 PM - Sep 23, 2019 - Twitter Web App	Instead of	Message related	Contrastive
	Also	Message related	Elaborative
Louise McSharry Delouisemcsharry  Replying to @JenMorrisie  The physics is the music of Beyonce gives more energy and power to anyone who's listening to it, therefore, any athlete enjoying it while athleting is automatically winning.  3:42 AM · Mar 1, 2020 · Twitter for iPhone	Therefore	Massage related	Inferential
Louise McSharry Quisiemcsharry Quisi	Therefore	Massage related	Inferential

Louise McSharry © @louisemcsharry	~	So	Massage related	Inferential
The problem with threatening people who are flouting the lockdown rules with an extension of lockdown is that those people clearly don't care about rules imposed on them via lockdown so it'll make no difference to them.  10:06 PM · Apr 24, 2020 · Twitter for iPhone	3			
Louise McSharry Olouisemcsharry	V	In addition to	Message related	Elaborative
Replying to @niccoocoole  It's non-stop and absolutely exhausting. Expecting many of us to work in addition to it is demented.  /:05 PM - Apr 10, 2020 - Twitter Web App				
Louise McSharry Plouisemcsharry Replying to @dublinbusnews  Yes, but the newer buses have space designated for buggies in addition to the wheelchair space. Why if that's empty can it not be used?	~	But	Message related	Contrastive
3:55 PM - May 12, 2017 - Twitter for iPhone  Louise McSharry	~	However	Message related	Contrastive
The first is 'sure children were reared at home for centuries will you ever get over yourselves'. Yes. They were. They were not, however, reared at home with parents attempting to do a separate full time job, without being able to play with local children  11:41 AM - May 15, 2020 - Twitter for iPhone		However	19165Sage Terated	Contrastive

## **Appendix VII**

Twitter comment	DM	Type of DM	Sub – Category of DM
Molly Keane @mollykeanephoto  'It's about safety for women, choice for women, and not shaming women for their decisions. Women who decide what they want to do with their own bodies shouldn't feel any Catholic or moral guilt as a result of someone else's opinions on it.' (HUMANS OF REPEAL, Ferdia) #Repealthe8h	As a result of	Massage related	Inferential
Molly Keane @mollykeanephoto  Replying to @Limitdrop @cp.conlan and @angelascanton  The landlord isn't at fault here; there were 4 of us in the house & the landlord decided to sell & gave us until the end of April to find places, but said we had to move out at the same time & the other 3 ppl got a place & moved out yesterday, so I have to be out in a few days!  9:51 PM - Feb 3, 2019 - Twitter for iPhone	But	Massage related	Contrastive
Molly Keane @mollykeanephoto  "We provide asylum seekers with completely sub par awful living conditions here in Ireland in Dirext Provision which is waaaaay better than people getting shot by police in the US so that means Ireland isn't racist" " " " " "	So that	Massage related	Inferential
Molly Keane @mollykeanephoto  The judges were tough for sure, Darcy in particular. She's an amazing photographer in her own right 2:02 PM · Jun 9, 2017 · Twitter for Android	For sure	Interpersonal	Indicating attitude
Molly Keane @mollykeanephoto  Hello, so I've been put in a really shite situation with my accommodation and told I have to move out	So	Massage related	Inferential

	So	Massage related	Inferential
Append	dix VIII		
Twitter comment	DM	Type of DM	Sub – Category of DM
Rachel Hollis @ @msrachelhollis  MIL told me I look sickly and thin all I heard was "thin" and therefore its the nicest thing she's ever said to me.  8:37 PM · May 10, 2013 · Twitter Web Client	Therefore	Massage related	Inferential
Rachel Hollis @ @msrachelhollis  Chic Offices will be on location tomorrow, away from our ACTUAL offices which are by Staples, and therefore, will probably burn in MJ Riots.  7:07 AM - Jul 7, 2009 - Twitter Web Client	Therefore	Massage related	Inferential
Rachel Hollis @msrachelhollis  Apparently the shoe thing is gang related can't be true for all. For instance, shoes hanging outside Canters on Fairfax, must be confused!  8:49 AM - Jul 23, 2009 - Twitter Web Client	For instance	Message related	Elaborative
Rachel Hollis omeracheholis  I spent my afternoon sipping wine on a boat on an Argentinian river amazing, spectacular, beautiful, and above all, so so blessed!  11:28 PM · Apr 5, 2013 · Twitter Web Client	Above all	Massage related	Inferential
Rachel Hollis @msrachelhollis  My shirt says Hot Mess Express because A: I'm equally obsessed with both @whippycake and instagram.com/p/7tlyycF-Zu/ 3:55 AM - Sep 17, 2015 - Instagram	Because	Message related	Reason

## **Appendix IX**

Twitter comment	DM	Type of DM	Sub – Category of DM
Sarah Kendzior  © Sarah Kendzior  Replying to @sarahkendzior and @BetsyShiller  Furthermore, the treatment of Omar reflects a broader wave of attacks on Muslims, and the mainstreaming of extremist rhetoric. It's essential that representatives show they will defend ethnic and religious minorities from threats, especially when one source of threats is POTUS.  12-41 AM - Apr 15, 2019 - Twitter for Android	Furthermore	Message related	Elaborative
Sarah Kendzior Sarah Kendzior Sarah Kendzior Sarah Kendzior Reptying to @1Sunshynedir11  I was thinking of how ahead of the game was Cummings was on Flynn. He sent the early warning and got it in writing in 2016. He was similarly adept at identifying other major threats to national security, and no one seems to have picked up where he left off after his sudden death.  8:48 PM · May 10, 2020 · Twitter for Android	And	Message related	Elaborative
Sarah Kendzior Septying to Selecytei  In terms of general corruption, yes, but Kissinger was mentor to a discrete group of still-active assholes, along with the similarly influential Roy Cohn.  4:52 AM - Sep 25, 2019 - I Witter tor Android	In terms of	Topic related	
Sarah Kendzior ©sarahkendzior Replying to @flyovertruth and @charlesjaco1 People from out of town are shocked by that because they think of MO as so uncultured. Whereas we're the	Because	Message related	Reason

****	l i	1
Whereas	Message related	Contrastive
And	Message related	Elaborative
But	Message related	Contrastive
!		
For example	Message related	Elaborative
I agree	Interpersonal	Showing New Responses
While	Message related	Contrastive
	But For example I agree	And Message related  But Message related  For example Message related  I agree Interpersonal

# Appendix X

Twitter comment	DM	Type of DM	Sub – Category of DM
Shauna McDaniel @Shauna_McDaniel	So	Massage related	Inferential
So you feel it's better for a woman, like Savita Halappanavar for instance, who may contract blood poisoning from miscarrying her baby & the doctors have to stand by & let her die because they can't abort her miscarried baby?is a womans life not as	For instance	Message related	Elaborative
important? :: 10:03 PM · Apr 24, 2018 · Twitter for iPhone	Because	Message related	Reason
Shauna McDaniel @Shauna_McDaniel	For example	Message related	Elaborative
@kellymeghan running an event for mBank S.A. in Poland on the "modern learner" & how employees can seamlessly slot Linkedin Learning into their day to develop the fast changing skills in the banking industry. For example, digitalization, customer centricilnkd.in/djaikWT 4:34 PM · Sep 5, 2018 · Linkedin			
Shauna McDaniel  @Shauna_McDaniel  Replying to @Ryanair	Then	Massage related	Inferential
I keep requesting a refund & vouchers keep getting shoved at me. Then the links in your email send me on a wild goose chase to further request a refund & the links lead to nowhere but descriptions of the vouchers. Such a scam! Process my refund now please	But	Message related	Contrastive
Shauna McDaniel  @Shauna_McDaniel	But	Message related	Contrastive
@Ryanair hi there 50 my flight was cancelled & i keep requesting a refund but a voucher keeps getting			
pushed on me. I don't want that & it's not clear how I can get my refund! I've tried chatting with support but after waiting a while I stopped. Please assist, thanks!	But	Message related	Contrastive

Shauna McDaniel @Shauna_McDaniel	Although	Message related	Contrastive
LinkedIn helping us feel all the love in work today 🕰			
Thank you Gather & Gather for always providingalthough how anyone is supposed to be on a diet around here I do not know 😂			
#linkedinlife #valentinesday #loveday #caringemployer lnkd.in/dzi8r7z			
4:10 PM · Feb 14, 2020 · LinkedIn			

## **Appendix XI**

Appendix Ai				
Twitter comment	DM	Type of DM	Sub – Category of DM	
Susan Glasser Su	Because	Message related	Reason	
Susan Glasser 🌣	And	Message related	Elaborative	
It's only Monday and Trump has accused Obama of a terrible but unnamed crime. And apparently everyone is going to just shrug because, well, that's what the president now does  5:59 AM · May 12, 2020 · Twitter for iPhone	Because	Message related	Reason	
Susan Glasser Su	Because	Message related	Reason	
Susan Glasser Not sure whether to be relieved or terrified that the federal govt professionals knew exactly how nutty the everything is fixed, states are reopening plan was.	Not sure	Interpersonal	Indicating attitude	
Susan Glasser Susball  The Trump echo chamber has been remarkably effective at creating for some part of Americaan equivalence between the Russian government campaign of election interference and Ukraine somehow not liking Trump and therefore being out to get him. Can facts break through this fog?  6:21 PM - Nov 21, 2019 - TweetDeck	Therefore	Massage related	Inferential	

# **Appendix XII**

Twitter comment	DM	Type of DM	Sub – Category of DM
Brad Smith @  @BradSmi	In addition	Message related	Elaborative
In addition to asking what can go wrong with AI, we should also consider what can go right. Nice post by @reidhoffman: msft.social/p1V3ar 7:13 PM · Apr 16, 2019 · Sprinklr Publishing			

				T
Brad Smith   @RradSmi	£	Because	Message related	Reason
Cross-sector collaboration will be key for #COVID19 recovery. Our plans need to include environmental goals, because what's good for the planet is good for humanity. Today, we are signing @pcanfin's #GreenRecovery call to action.				
Brad Smith @ @BradSmi	ž.	But	Message related	Contrastive
COVID-19 has sped up the digitization of our economy – we're seeing two years of progress in just two months. But for this transition to benefit everyone, we must prioritize reskilling. Insights from @wef:	_			
Brad Smith @ @BradSmi - 22h  We know that continued change for companies need to come within our four walls, but also needs to extend to every community in America. It will require great leaders and partners, like @civilrightsorg. We're committed to continued criminal justice reform. #BlackLivesMatter	<b>v</b>	But	Message related	Contrastive
Brad Smith ❖  © BiradSmi	tur.	But	Message related	Contrastive
People are at the heart of any digital transformation. But those transformations can't happen unless we close the digital skills gap. I recommend this read from @HarvardBiz:	4			
Brad Smith ② @BradSmi · May 13 People are at the heart of any digital transformation. But those transformations can't happen unless we close the digital skills gap. I recommend this read from @HarvardBiz:		But	Message related	Contrastive
Brad Smith	**	And	Message related	Elaborative
Our book is available today! @CarolAnnBrowne and I wrote this book to make today's tech issues more accessible to more people and broaden the conversation. We are so excited to finally share it with you! msft.social/NkGa3N				
3:51 PM · Sep 10, 2019 · Sprinklr Publishing				1

## **Appendix XIII**

Twitter comment	DM	Type of DM	Sub – Category of DM
Brad Williamson @Brad_Williamson Replying to @gplewis Saying social media is more "alive" and, as a result,	As a result	Message related	Inferential
more exciting than books, thanks to comments and notifications, just blew my mind a bit. It's so true. I've never thought about it like that.  12:15 AM · Nov 11, 2019 · Twitter Web App	And	Message related	Elaborative
	It is so true	Interpersonal	Showing New Responses
Brad Williamson  @Brad_Williamson	As a result of	Message related	Inferential
Hey, @TexasRangers. As a die-hard fan of 32 years, I want you to know I've officially lost all respect for you, as result of you making so many money-hungry, selfish, and just flat-out illogical decisions in regards to how you position the team in front of its fanbase. #Rangers 2:56 AM · Sep 30, 2019 · Twitter for Android	And	Message related	Elaborative
Brad Williamson  @Brad_Williamson  Replying to @CroftWriting @gplewis and @losapala  For real tho. She's super cool. Actually, all of us INFJs are—which is something I'm finally realizing now that I've discovered so many of us here on the twitter machine.  6:02 PM - Nov 7, 2019 - Twitter Web App	Actually	Interpersonal	Indicating attitude

## **Appendix XIV**

Appendix ATV					
Twitter comment	DM	Type of DM	Sub – Category of DM		
Carl Miller Carl Carl Miller Carl Carl Carl Carl Carl Carl Carl Car	Likewise	Message related	Elaborative		
Carl Miller Carly	Likewise	Message related	Elaborative		
Carl Miller Carljackmiller Replying to @Zachlnglis @Marged and 2 others Facebook has thousands of information security	And	Message related	Elaborative		
professionals, Google likewise. And the underlying issue in my eyes is the same, whatever the actual use. It's incredibly difficult to tell who someone is online, and to detect impersonation. I could buy millions of fake accts 6:18 PM · Mar 23, 2019 · Twitter Web Client	And	Message related	Elaborative		
Carl Miller Carly	Likewise	Message related	Elaborative		
Carl Miller © ©carljackmiller  But we are drawn back to it again and again. After Cambridge Analytica, or any big scandal,	But	Message related	Contrastive		
#DeleteFacebook trends. Then the next week it's the most downloaded app in the store. We've learned that however big our concerns, the penalties for checking out are equally huge	Then	Massage related	Inferential		
Carl Miller @ @carljackmiller · Jun 6 Big development.  Hasn't been officially announced as far as I can tell, but Twitter is now putting a flag around *all* tweets mentioning 5G Corona.  Search for it. Part of a confrontation with disinformation that's been hotting up over the past few weeks.	But	Message related	Contrastive		
Carl Miller © @carljackmiller · May 29  I've written a quick piece for @Telegraph on Twitter's action against Trump today -	But	Message related	Contrastive		
Trump haters will love it. Trump lovers will hate it. But it is perhaps the bravest and riskiest thing a tech giant has ever done					

## Appendix XV

Twitter comment	DM	Type of DM	Sub – Category of DM
dave magee @DaveLaFaro  I bought no bitcoins in 2011 when they were only \$2.78	Therefore	Massage related	Inferential
each. I will therefore not pick 50 random people who retweet this to give one to each of you because I have none. Merry Christmas #Bitcoin \$\beta\$ 6:29 AM · Dec 9, 2017 · Twitter Web Client	Because	Message related	Reason

dave magee @DaveLaFaro	But	Message related	Contrastive
The MacBook I use for recording has now been in @MaxBurns_ie waiting to get repaired for over a month. Sigh.			
They did a good job with my iPhone screen in the past but I now have SO MANY guitar parts waiting to be recorded for various projects			
Second, much longer sigh. 1:02 PM - Jan 21, 2019 from Dublin City, Ireland · Twitter for iPhone			
dave magee @DaveLaFaro · May 10  We had some great times and some crushing lows but I remember most of it very fondly. I always loved the shows and really miss playing those riffs	But	Message related	Contrastive

# **Appendix XVI**

Twitter comment	DM	Type of DM	Sub Cotogowy of
1 witter comment	DM	Type of DM	Sub – Category of DM
Elon Musk © @elonmusk	Moreover	Message related	Elaborative
Replying to @TeslaTested and @LegendaryEnergy  Absolutely. Moreover, they don't even need to be tested for covid, just need "covid-like symptoms", which is a long list, including "feeling weakness". Hard to die			
*without* feeling weakness!  11:23 PM · May 10, 2020 · Twitter for iPhone			
Elon Musk © @clonmusk	Moreover	Message related	Elaborative
Pentying to Otherdrowtesia of Tesia and 3 others I'm not messing around. Absurd & medically irrational behavior in violation of constitutional civil liberties, moreover by *unelected* county officials with no accountability, needs to stop.  2:1/ AM + May 10, 2020 +   Witter for IPhone			
Elon Musk ♥  @elonmusk	Moreover	Message related	Elaborative
Replying to @28delayslater and @thirdrowtesla  Exactly. Moreover, all hospitals were given exact specifications of Resmed & Philips ventilators before delivery & all confirmed they would be critical.  10:50 PM - Apr 2, 2020 - Twitter for iPhone			
Elon Musk 🌣 @elonmusk	Moreover	Message related	Elaborative
Replying to @RobertGaristo  @RobertGaristo V much agree. Moreover, there is risk of severe non-linearities in feedback loops causing sudden warming.  12:35 AM · May 27, 2013 · Twitter Web Client			
Eton Musk   Spelconnusk  Replying to @SamTalksTesla @floriby and 2 others  Sigmoid (S-curve) is how all physical and mental viruses behave, regardless of containment. Containment reduces asymptote of S-curve. At this point, we have strict containment in US/Europe & should expect similarly reduced asymptote to China.  8:26 PM - Mar 21, 2020 - Twitter for IPhone	At this point	Message related	Elaborative
Replying to @flenhyy You'd think they'd at least be Wikipedia-level informed about ventilators! It clearly articulates the difference between invasive & non-invasive. It's very misleading to the public to claim that only the invasive type are "real ventilators".  en.m.wikipedia.org/wiki/Ventilator  3:08 AM - Apr 19, 2020 - Twitter for iPhone	You'd think	Interpersonal	Mark shared knowledge
Elon Musk 💸	Moreover	Message related	Elaborative
Onboard vehicle logs show Autopilot was turned off in Pennsylvania crash. Moreover, crash would not have occurred if it was on.			
12:17 AM · Jul 15, 2016 · Twitter for iPhone			

Elon Musk	Opposite is true	Message related	Contrastive
Replying to @quayran			
Opposite is true: you can have 100's of layers of tunnels, but only one layer on surface (to first approximation), therefore trains should be on surface, cars below 11:35 PM · May 24, 2019 · Twitter for iPhone	Therefore	Massage related	Inferential
Elon Musk © ~ @elonmusk	For	Message related	Reason
Replying to @DJSnM			
Exactly. For reusable heatshield, minimize peak heating. For ablative/expendable, minimize total heat. Therefore reusable like Starship wants lift during high Mach	For	Message related	Reason
reentry for lower peak, but higher total heat. 9:10 PM - Sep 24, 2019 - Twitter for iPhone	Therefore	Massage related	Inferential

## **Appendix XVII**

Twitter comment	DM	Type of DM	Sub – Category o DM
Josh Hammer (9) (9)osh hammer	But	Message related	Contrastive
The U.S. Constitution, as @haivry recently reminded us at @AmericanAffrs, is best understood not in terms of abstract universalist Enlightenment theorizing, but as a restoration of the centuries-long Anglo-American constitutional tradition.  americanaffairsjournal.org/2020/02/americ  8:59 PM · Mar 8, 2020 · TweetDeck			
Josh Hammer ♥  ⑤josh_hammer	And	Message related	Elaborative
ICYMI, my rebuttal in an ongoing @pairagraph debate about the Israeli-Palestinian conflict and the merits of the Trump administration's recently unveiled peace plan.  5:56 PM · Feb 11, 2020 · Twitter for iPhone			
Josh Hammer O  @josh_hammer	This is why	Message related	Reason
"This is why we shouldn't rush into sanctioning countries."			
Except Israel, obviously, amirite 4:51 AM · Nov 1, 2019 · Twitter Web App			
Josh Hammer © ©josh_hammer	And	Message related	Elaborative
Liberal SCOTUS bloc always votes in unison. So-called "conservative" bloc rarely does — whether it's Roberts, Kavanaugh, or Gorsuch, it's always someone defecting (except for Thomas).			
Stop pretending like we'll ever win the "long game" and save the Court. We will not do so.			
7:35 PM · Jun 27, 2019 · TweetDeck			
Josh Hammer Ogjosh hammer	However	Message related	Contrastive
Interesting study (h/t @RyanGirdusky):			
"We show that in religious cultural contexts, religious people lived 2.2 years longer than did nonreligious people. In nonreligious cultural contexts, however, religiosity conferred no such longevity benefits." psycnet.apa.org/doiLanding?doi  11:52 PM · Mar 22, 2020 · TweetDeck			
Josh Hammer Ogosh_hammer	However	Message related	Contrastive
"The prospect of tyranny may not grab the headlines the way vivid stories of gun crime routinely do However improbable these contingencies may seem today, facing them unprepared is a mistake a free people get to make only once." – Judge Kozinski, 2003 keepandbeararms.com/silveira/enban			
9:37 PM · Jan 20, 2020 · TweetDeck			

Josh Hammer ©  @josh_hammer	~	But	Message related	Contrastive
It pains me to say it, but if (1) Netanyahu's indictment proceeds (no matter how much of a sham it is, on the merits) and (2) Israel indeed heads for a third national election, then (3) Bibi should strongly consider bowing out and stepping aside for a new Likud leader.  8:21 PM · Nov 21, 2019 · TweetDeck				

# Appendix XVIII

Twitter comment	DM	Type of DM	Sub – Category o DM
Neil deGrasse Tyson © ©neiltyson  Maybe one day the country will gather to hear the US President give an annual address titled "Union of States" in addition to (or rather than) "State of the Union".  10:04 PM - Feb 5, 2020 - TweetDeck	In addition to	Message related	Elaborative
Neil deGrasse Tyson © @neilityson  Replying to @ColinSchaefer @elonmusk and @poisontoxic21  To be totally accurate	To be totally accurate	Interpersonal	Indicating attitude
I was gifted the shirt during my last visit to SpaceX HQ. Hence my confusion that it differed from Musk's banner.  5:51 PM · Mar 14, 2020 · Twitter Web App	Hence	Massage related	Inferential
Neil deGrasse Tyson © @neiltyson Replying to @NeerajKA Thanks. Hence that question mark.  10:02 PM · Nov 15, 2017 · TweetDeck	Hence	Massage related	Inferential
Neil deGrasse Tyson (a) which it is neityson  Good Luck to @elonmusk and the @SpaceX crew.  Though it's rocket science, rocket launches can still use a little bit of luck.  5:56 AM · May 27, 2020 · Twitter for iPhone	Though	Message related	Contrastive
Neil deGrasse Tyson Penelityson Replying to @NisLox and @wearimage Yes. Some light is heavily absorbed by common glass -	Yes	Interpersonal	Showing New Responses
both Infrared & ultraviolet, for example. For visible light, not so much.  10:57 PM · Feb 16, 2020 · TweetDeck	For example	Message related	Elaborative
Neil deGrasse Tyson © @neiltyson Coneiltyson Coneiltys Coneiltyson Coneiltys Coneiltyson Coneiltyson Coneiltyson Coneiltyson Coneiltyson C	But	Message related	Contrastive
Neil deGrasse Tyson on eneiltyson  Just an FYI: Easter on the Gregorian Calendar contains a double astronomical reference: The first Sunday after the first Full Moon after the Vernal (Spring) Equinox. Eclipses, which occur only during new or full moons, can therefore never happen on Easter Sunday.	Therefore	Massage related	Inferential

Appendix XIX					
Twitter comment		DM	Type of DM	Sub – Category of DM	
Trevor Mundel @trevormundel	~	Because	Message related	Reason	
"The choices we and our leaders make now will have at enormous impact on how soon case numbers start to go down, how long the economy remains shut down and how many Americans will have to bury a loved one because of covid-19."  4:30 AM · Apr 1, 2020 · Twitter Web App					
Trevor Mundel @trevormundel	~	But	Message related	Contrastive	
"Pathogens are mindless but relentless. But science is relentless too."					
This is a captivating narrative of vaccines' centurieslong history. 5:30 PM · May 26, 2020 · Khoros Marketing					
Trevor Mundel @trevormundel	~	For example	Message related	Elaborative	
Replying to @trevormundel @MosesSupercharg and 4 others			I		
Izukanji Sikazwe of @CIDRZambia: Socializing what we're going to be doing is essential. For example, we will be conducting information sessions with 50 frontline workers from across the continent at this year's #ICASA in #Rwanda.					
12:26 PM · Oct 30, 2019 · Twitter Web App					
Trevor Mundel @trevormundel	~	This is why	Message related	Reason	
Great paper in The Lancet on why we need an AIDS vaccine and the tremendous strides that research has taken in the past decade. Many distinguished authors including the foundation's own Peggy Johnston and Nina Russell. This is why we fight.  9:57 PM · Dec 4, 2019 · Twitter Web App					
Trevor Mundel @trevormundel	~	Because	Message related	Reason	
It's unacceptable that science moves slower because research isn't available immediately. The faster we move, the more lives we save. Thank you for shining a light on this critical issue, @rrichardh 3:38 AM · Feb 27, 2018 · Twitter Web Client	i				
Trevor Mundel @trevormundel	~	Another	Message related	Elaborative	
Medical experts are right: immediate physical distancing is critical to slow the spread of #COVID19.  Another critical step to stop transmission & restart our economies is expanded access to testing. Thanks	r				
Donald McNeil for sharing these important steps. 8:00 PM · Mar 25, 2020 · Khoros Marketing			_		

# Appendix XX

Twitter comment	DM	Type of DM	Sub – Category of DM
Bill Nyc @  @BillNye	Hence	Message related	Inferential
Edward of Planet Earth nicholaseftimiades.com/pages/edward-o comes right at you and takes you into a weird world centuries hence. Open it up , and hang on. 1:34 AM - Oct 30, 2012 - TweetDeck			

Bill Nye ©  @BillNye	~	Unless	Message related	Contrastive
Greetings everyone a day late, but yesterday was Asteroid Day! 30 June 1908 there was an enormous "airburst" event over Tunguska, Siberia. Chance of another impact: 100%, unless we prepare. We can explore space. We can save the world! courses.planetary.org/p/asteroid-def 7:51 PM - Jul 1, 2019 - Twitter for iPhone				
Bill Nye @ @BillNye	~	Hence	Message related	Inferential
We can do more with less. Hence the few words of this tweet. online.wsj.com/article/SB1000	COO			
9:09 PM · Dec 7, 2012 · TweetDeck				

## **Appendix XXI**

Twitter comment	DM	Type of DM	Sub – Category of DM
James Felton  © JimMFelton  Replying to ©hansmollman  Ah mate I had that during my graduation ceremony. I was given a hat and put it on, then the hat fitter looked at it and shook his head and made the hat fitter's assistant go off and fetch a bigger hat. I was thinking about it the whole time I graduated.  2:11 AM - May 27, 2020 - Twitter for iPhone	Then	Message related	Inferential
James Felton  One of them introduced a photo of actual Thatcher and demanded to know whether that does anything for the class. The popular opinion appears to be that that's the actual Thatcher Thatcher, and thus irrelevant to further discourse.	Thus	Message related	Inferential
James Felton Signim Melton Replying to Sellismuzicchild	And also	Message related	Elaborative
Shut up Christopher. Stop trying to excuse the racist with a long history of racism for doing something racist. And also learn how to reply to a tweet rather than whatever this is. But mainly, shut up Christopher.	But	Message related	Contrastive
James Felton  © JimMFelton  Been trying to keep it light lately but Jesus Christ. Any of you callous Brexity cunts still pushing for a no deal Brexit are doing so in the full knowledge that people could die as a result of your actions.	So	Message related	Elaborative
R number has gone up. Clearly some of you reckless dickheads have been meeting with two parents at the same time rather than staying alert by making them form a queue.  7:19 PM - Mey 15, 2020 - Twitter Web App	Clearly	Interpersonal	Indicating attitude
James Felton  Toilet update: I just went to a different toilet and three of us went to the sinks at the same time and without exchanging words became embroiled in a contest to wash our hands for longer than the other two. I think we're going to be ok.	I think	Interpersonal	Indicating attitude
All these people could have been at home and safe and voting on a computer screen. Instead they were in parliament with one confirmed case and very possibly getting infected themselves because Johnson needed a few cheers behind him during his shit performances at PMQs.	Because	Message related	Reason

James Felton ②  @ JimMFelton	Other wise	Message related	Elaborative
Replying to @grantjrobson			
Lol, I turn off notifications if a tweet gets any attention tbh, otherwise before you know it you soon find yourself being hounded by Brett Kavanaugh stans of all people.			

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