

# Fake News and Cyberbullying in the Modern Era

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**Abstract**—The right to freedom of expression is a very crucial element to form democratic, non polarized societies, and as much as it is fundamental to establish a genuine democracy, it can throw it off the track. The widespread growth of different types of online media and other Internet-based communication technologies, has caused real struggles in identifying the limits for freedom of expression. The dangerous products of current atmosphere are cyberbullying and fake news that turned the Internet into a cyber-weapon. Yet, there is little done to enact enforceable legislation to address this issue. In this paper we characterize fake news and cyberbullying among adults, study real incidents and related laws, and discuss how the two are connected and what are the implications if they are not tackled against properly.

**Index Terms**—Cyber Warfare, Cyberbullying, Cyberharassment, Fake News

## I. INTRODUCTION

Cyberbullying is the act of deliberately and repetitively harming or hurting someone through digital devices such as mobile phones and online platforms, including text messages, emails, blogs, social media, listservs, and others [1]–[3]. Cyberbullying perpetration takes place in various ways, such as sending threatening emails and spreading rumors. Unlike traditional bullying which involves face-to-face interactions and often physical and verbal in nature, cyberbullying occurs online, and thus enabling one to engage in the heinous act of hurting and humiliating others anonymously. Additionally, it can happen anytime, anywhere, and spreads to a wide audience rapidly [4]–[6].

Cyberbullying prevalence around the world shows that the phenomenon knows no age, affecting young school-going children, to adolescents and adults [4], [5], [7]. Its impact is detrimental in nature, especially among the younger cohorts. Cyberbullying is highly reported to impact the victims' emotional and psychological levels, with the majority experiencing emotional disturbances such as anxiety, nervousness, depression and suicidal ideations [2], [7]–[10]. The type of cyberbullying is a critical factor when it comes to gauging the severity of the impact it creates, for example, cyberbullying perpetration

on the public platforms (e.g. social media platforms) have more severe consequences than those on private platforms (e.g. personal text messages) [11]. Additionally, hurting someone using pictures and videos are more detrimental compared to prank calls or abusive text messages [12], [13].

Cyberbullying is considered a complicated issue due to its various forms, for example, flaming (i.e. brief online fights using profanities), impersonation, and outing (i.e. tricking someone into disclosing personal information). One of the common forms of cyberbullying is cyberharassment, a repetitive attack on an individual in a form of offensive, vulgar and disrespectful messages sent through electronic media. It can occur on public platforms such as chat rooms or social media websites, but mostly common through emails and text messages. It is often continuous in nature and spans over a long time [14]. Cyberharassment is also often linked with cyberstalking, a repetitive threatening and harassing to place fear in the mind of an individual. In fact, the phenomenon is so severe that a great proportion of cyberstalking victims had to take drastic measures such as taking time-off, changing or quitting their jobs/schools, avoiding relatives, friends or holiday celebrations, and changing their email addresses compared to victims of traditional stalking [15].

An emerging phenomenon that has received a tremendous amount of attention recently is the fake news [16], [17] and the role of social media in diffusing false information [18], [19]. Fake news is a form of bullying on a larger scale where many people are involved and the goal is to manipulate their minds and consequently their actions. In this bigger picture, we can argue that everyone could be a victim of a wrongful cyber-act, and the common theme among all these unjust online activities is that a) they happen through the channels of technology and the predators use the Internet to perform their wrongdoings, b) there is no systematic approach to tackle these issues since there is no enforceable legislation, and finally c) they are related to the US First Amendment and the fact that everyone has the right to freedom of speech. As a matter of fact, this right is the most misinterpreted right in the history of the

United States, and cyberbullies and fake news generators have been misusing it since the invention of the Internet.

In this paper we discuss cyberbullying in the context of adults, also relate it to fake news in the context of politics. There is a substantial body of work in the area of cyberbullying among students and teenagers and we refer to them where there is a need to argue a fact that is independent of age group (*e.g.*, bullying law). This paper is organized as follows: In Section II we characterize the whole concept of online misbehavior. In principle, we strive to answer general questions in this context as to why and how they happen, and who the targets are. Next, in Section III we explore the existing laws and discuss why there is no enforceable legislation, and finally, we discuss the connection between cyberbullying and fake news and the overarching narrative that put the two phenomena in one context in Section IV.

## II. CHARACTERIZATION OF ONLINE MISBEHAVIOR

### A. Why do bullies bully?

In this subsection, we study the characteristics of the people who commit cyberbullying, and bullying in general, from a psychological and social point of view. Although conventional bullies and cyberbullies may exhibit different characteristics, researchers in [20] found that bullies who reported real-life bullying are more than 2.5 times likely to report bullying others online. This suggests that bullies and cyberbullies share psychological similarities although the medium is different.

Also, we merely seek to find certain personality traits that bullies possess and do not consider different subcategories of people involved in the act which is often observed in the literature. Such studies categorize individuals engaged in bullying as bullies, victims, and bully-victims [21]. However, we only focus on those who commit the act (either being victimized or not). We also avoid investigating physical characteristics of bullies (even though they have a psychological effect on both bullies and victims), because they are not important factors in cyberbullying.

In analyzing bullies' behavior, many reasons have been given as to why bullies show aggressive attitude including drawing attention, anger, retaliation, jealousy, and even having fun. Regarding the last one, it has been shown that some bullies do not realize they are bullying others and usually report their behavior as *having fun*. In a survey of 386 middle school students, only 9 students reported that they bully others (self-reported bully) while the researchers identified 70 more bullies with the peer-nominated method where all students were asked to write down the names of classmates who match a descriptive statement about bullying [22]. This implies that 1) bullies do not acknowledge that their behavior is anti-social (or they know and they lie about it), and 2) self-report survey is not always a reliable method to measure bullying.

There are certain characteristics that are associated with the social-emotional attitude of bullies. For instance, researchers in [23] report that bullies tend to lack *self-control*, and they often show impulsive behavior [24]. As an example, [25] surveyed 1,315 middle school students and found that there is a positive

link between ADHD<sup>1</sup> and bullying. They explain their findings by the relationship between ADHD and low self-control which is the most important determinant of criminality [26].

Studies also found an association between coping strategies and bullying behavior [27]. There are different coping strategies, and problem-solving is one of them that has been argued to be related to aggression. For example, researchers in [28] found that lack of problem-solving skills is an indication of aggressive behavior. Poor problem solving is also reported as a common characteristic among prisoners [29], [30].

All these evidences and observations indicate that there is a correlation between criminal mindset and bullying behavior. In other words, it is reasonable to consider bullies as criminals who should be indicted under the proper legislation.

### B. Who do they target?

As we argued in Section I, while students are considered as the main target of bullying (and cyberbullying) in the literature and the general belief, they are out of focus of this study and we direct our attention towards adults (*e.g.*, university professors) and politicians. Later in Section IV we discuss why this is crucial to opt-out teenagers from this study.

**Academic environment:** One major issue in this matter, that has received much less attention, is cyberbullying in higher education, where bullying is directed toward university professors [31]. While there are many cases where professors have been targeted by bullies who often act anonymously, and such incidents may ruin the reputation of professors (*defamation*), there is no enforceable legislation to prevent such behaviors; unless the cyberbullying act overlaps with another form of crime. For example, in some cases, federal stalking charges can be filed against the offenders, but generally, it would be addressed internally if applicable. However, there are cases where the cyberbully and the victim do not share affiliation which makes it even more complicated to tackle against. For instance, as a victim of an elaborate cyberharassment and cyberbullying, Prof. Hamid R. Arabnia, a co-author of this paper, won a lawsuit with damages awarded to him for a total of \$2.96 Million (includes \$650,000 attorney's cost). This court case was one of the few cases of its kind in the United States, and so the ruling is considered to be important [32]. Since the perpetrator was cyberbullying using numerous aliases (utilizing anonymity technology), it took about one year to identify the perpetrator. The case took an additional 5 years; it involved multiple attorneys specialized in different areas of law (headed by Samira Arabnia, J.D.).

**Politics:** In the case of politics, the issue is more sophisticated. To understand different aspects of this matter we should note that criticizing politicians online is not a form of cyber misbehavior and actually it is a sign of a healthy political digital ecosystem. What should be condemned is the act of individuals who diffuse false information in cyberspace to accomplish their political intentions. Pizzagate is an example of the latter. On December 4, 2016, Edgar Madison Welch, 28, walked into a D.C pizzeria armed with an

<sup>1</sup> Attention-Deficit Hyperactivity Disorder

assault rifle to self-investigate the election-related conspiracy about Democratic presidential nominee Hillary Clinton and the child sex-trafficking ring that she was running, and the false claim that Comet Ping Pong pizzeria was the headquarter of the organization. Prior to the incident, the employees were threatened on social media because of the viral fake stories about the pizzeria that has paintings that were the symbols of pedophilia and that there were underground tunnels, etc. The owner was forced to contact the FBI and Facebook and other social media to take down the false article. Reddit mediators banned the subreddit called Pizzagate from their website as an action. However, it did not stop the harassment. Even the close-by businesses and Washington Post reporter, who was involved in the publishing article about the issue, received threatening online messages.

These examples strongly suggest that there must be an urge in enacting anti-cyberbullying laws not only for schools but also for all settings. However, as we discuss in Section III, little is done to prevent online misbehavior, and most of it attempts to protect students.

### C. How do they bully?

Bullying in the technology era is more complex than traditional bullying, where the strong misused their power to prey on weaker people. However, in cyberbullying, the perpetrator often attacks individuals that he/she considers or perceives to be more successful than him/her. In addition to technology, that provides anonymity and accessibility for the bullies, there are strategies that predators employ to damage the victims and increase the harmful impacts. Here we discuss what these strategies are and why they are notoriously dangerous, and what tools and techniques bullies use to put their intentions into effect.

**Technology:** Use of technology and specifically the Internet and mobile devices has made cyberbullying more widespread and more available. In fact, everyone can perform a bullying act from his or her bedroom without even being identified. In summary, predators can:<sup>2</sup>

- make fake profiles on social media platforms and post wrongful contents and benefit from network effect or virality to disseminate those contents or spread rumors, similar to Pizzagate incident.
- create destructive websites about others in order to defame them. In this case, bullies can take advantage of rank algorithms in search engines and link their website from other websites. This process could be automatic and the rank of the hurtful webpage could surge dramatically to the top within a week.
- use VPNs and/or servers that are located outside the country to add further protection to their identity and complicate the tracking process. This also implies that geographical location is not a limitation for the online bullies and they can target their victims from all over the world.

<sup>2</sup>Note that here the focus is bullying among adults, not high school or college students.

- pretend to be someone else in cyberspace to solicit private information about their victims.

**Half-truth:** A half-truth is a statement that contains some element of truth and it could be partly true or totally true but not the whole truth. A very recent incident that illustrates the half-truth or selective fact strategy is the News about Stacey Abrams, the Democratic nominee for Georgia governor. On October 29, 2018, a post was shared on Facebook claiming that Stacey Abrams burned Georgia's flag during her college years more than 25 years ago. The photo tagged to the post showed her standing and watching three other people burning the flag of Georgia. Although this is a true story and Stacey Abrams was present at the event, "she was involved with a permitted, peaceful protest against the Confederate emblem in the flag," reads the statement by her campaign, and it was not the flag the state flies today and in fact, it was an anti-racism act.

Another form of half-truth is a well-known strategy that is often used by some news agencies. There is a false claim or a rumor among people and they desire to hear about it. Once the news is published, perhaps accompanied with a compelling photo, it becomes a piece of fact for many audiences. In a recent study, the researchers found that people are much more likely to believe stories that favor their preferred candidate [16]. The following example demonstrates the above strategy during the 2016 presidential election.

In 2016, an individual created a fake news website<sup>3</sup> during the presidential election campaign and made up compelling stories out of hoaxes that were already available in the social media. Just in one case the headline "BREAKING: Tens of thousands of fraudulent Clinton votes found in Ohio warehouse," was clicked more than 6 million times (September 30, 2016). This was impactful since there was an evidence related to this story out there. A few weeks earlier, presidential nominee, Donald Trump, claimed that the election was rigged in a rally in Columbus, Ohio, and it had created a demand for which this headline was a supply.

For further information regarding the economics of the fake news and how it is consumed by people refer to [16].

## III. CYBERBULLYING LAW

In this section, we explore different consequences of cyberbullying and study why there is a lack of enforcing legislation in this area which has caused tremendous troubles for those who are victims and want to prosecute the bully and avoid further harassment.

### A. Prohibitive law

Although there are some innovative and/or obligatory ways to address the cyberbullying issue, currently there is no federal enforcing legislation that prohibits it. Here, we review several approaches that have been adopted to deal with cyberbullying:

**Federal law:** The Megan Meier Cyberbullying Prevention Act was proposed in 2009. According to this act "Whoever

<sup>3</sup>The website, namely <http://christiantimesnewspaper.com>, is not operational at the time of writing (October 2018)

transmits in interstate or foreign commerce any communication, with the intent to coerce, intimidate, harass, or cause substantial emotional distress to a person, using electronic means to support severe, repeated, and hostile behavior, shall be fined under this title or imprisoned not more than two years, or both". The goal of this act is to amend title 18, United States Code, with respect to cyberbullying. Unfortunately, this act is still pending legislation.

**State laws:** All 50 states but two include "cyberbullying" or "Electronic Harassment" in the law (August 2018). However, only 17 states include off-campus cyberbullying ([33]). Nevertheless, this is insufficient as it is only intended for public schools and requires them to formulate policies to tackle the cyberbullying. For example, in the state of Georgia, there is a pending legislation called "The End to Cyberbullying Act", and it amends the existing anti-bullying law to include the definition of cyberbullying in the school environment [34].

**Overlapping laws:** If cyberbullying act overlaps with another form of crime it can be prosecuted. But the problem is that prosecutors have to establish the reasoning to link the abuse to an existing legislation (this is only possible if the bully is already identified since many cyberbullying incidents happen anonymously). For example in the suicide case of Tyler Clementi - a Rutgers University student - where his roommate filmed and broadcast his gay sexual encounter on Twitter, the jury found Dharun Ravi - Tyler's roommate - guilty of privacy violation [35], because there is enforceable legislation for privacy invasion while there is none for cyber-misbehavior.

**Within organization policies:** When cyberbullying happens inside an organization, the organization's authorities have policies and obligations to take action against cyberbullying. For example, under Title IV of the Civil Rights Act of 1964, public and federally funded schools, colleges, and universities have legal obligations to prevent, address, and remedy harassment and this can expand to include cyberharassment as well, in other words, to address the cyberbullying issue in an organization, they just update their bullying/harassment policies by appending "and by electronic means" which is not enough according to cyberbullying Research Center co-director and Professor of Criminal Justice at University of Wisconsin-Eau Claire, Justin W. Patchin [36].

**Social media policies:** Indeed, social media is one of the main platforms for cyberbullying and fake news and it has played host to bullies and harassers. The flow of information that propagates through social media and is exposed to the mass audience makes a significant difference in the impact of cyberbullying compared to traditional bullying. Hence, many online social websites define abusive behavior in their terms of services and provide relevant recommendations and actions. For example, Facebook explicitly defines cyberbullying and states that they "will remove content that purposefully targets private individuals with the intention of degrading or shaming them". Even though, their policy does not apply to public figures.

Twitter also addresses this issue in its Rules and Policies website [37]. The policy reads: "You may not promote vio-

lence against or directly attack or threaten other people on the basis of race, ethnicity, national origin, sexual orientation, gender, gender identity, religious affiliation, age, disability, or serious disease". Twitter does not apply this policy to military or government entities meaning that they are exempt from the website policy about harmful content. That is why a lot of hateful content is generated in such platforms and the only action that will be taken is that users who create false information are reported by other users and at most their account gets suspended.

#### B. Why is there no enforceable legislation?

As we discussed in the previous subsection, despite the damaging effect of cyberbullying and existence of very dramatic cases, none of the approaches prohibits online misbehavior completely and successfully and they have been proved to be ineffective and the cyberbullying trend is actually increasing. The main reason as to why it is complicated to legislate enforcing law is that some wrongly claim that such behaviors, including cyberbullying; hate speech; and fake news, fall under the category of freedom of speech which is the main part of the United States First Amendment and any attempt to address this issue is accused of restricting the rights of individuals to speak freely and is prevented at early stages. For example, in one case the court was deciding whether or not a School District could suspend a student for creating a MySpace profile page with vulgar content, six judges dissented and five judges concurred and decided that since the offender engaged in an activity at home on a Sunday evening, the suspension violated J.S.'s (the bully) First Amendment rights [38].

There are also privacy concerns when investigating the cyberbullying. Internet Service Providers (*e.g.*, AT&T, Comcast, etc.) as well as Social Media websites (*e.g.*, Facebook, Twitter, etc.) might be requested to provide personal information which is a violation of privacy except when they are provided with a court order and obtaining a court order requires filing a case against them.

## IV. DISCUSSION AND CONCLUDING REMARKS

There is a saying, popularized by Mark Twain that reads: "There are three kinds of lies: lies, damned lies, and statistics". While this is applicable in this context, in the previous sections we articulated that fake news is far more detrimental than lies and downright lies in online social media from which %68 of American adults seek news [39]. Lies might be easy to reveal but when combined with an element of truth (half-truth) it would be more conceivable and this is the damaging strategy that modern cyberbullies adopt to target their victims, and some politicians pursue to harm their rival party.

In this age where online cyberspace is dominating our social and emotional lives and shaping our political ideologies and actions, deciphering fake from truth is a challenge, and confusion is the outcome of such an atmosphere which is the most dangerous impact of political bullying. In the old days, bullying was limited to a small setting and parents and school authorities would address it. However, nowadays with the

widespread presence of the Internet, demoralized politicians are the new bullies and everyone could be the victims, and what is more concerning is that authorities are not on track to amend this situation. As we discussed in Section III, it is almost impossible to take any enforceable legislative action to address the issue in a broad sense, and social media strategies designed to tackle online wrongdoings are limited to human reports or a few third parties fact checkers [40].

Cyber Warfare is considered to be an important and new dimension of warfare and an element of national security. Generally, it includes the battle space use and targeting of computers and networks in warfare. Cyber Warfare strategies include both offensive and defensive operations (See [41]–[44]), pertaining to the threat of cyber attacks and publishing deliberate misinformation (fake news and fabricated news) spread via traditional media and online social media with the intent to mislead in order to disrupt the political processes of nations. In recent years, the methods and technologies utilized in Cyber Warfare also include cyberbullying which uses deliberate misinformation spread on the internet about targeted individuals.

In this paper, we examined how politics takes advantage of fake news. Politicians who issue inflammatory statements about immigrants, women, and the opposite party, to gain their supporters' satisfaction evoke strong negative reactions, spread hate, and bully a large group of people through Internet (*mass cyberbully*). For instance, in a recent ad run by a congresswoman, she claimed that “there are gang members, Middle Easterners, and terrorists in the immigrant caravan,” marching from Mexico towards US borders. The sentence associates Middle Easterners with gang members and terrorists which works based fearmongering instead of facts targeting and hurting a large group of people living in the US.

We also discussed cyberbullying in the academic environment as an example to demonstrate the complex and pervasive nature of cyber misbehavior in a large setting where it is normally impractical to traditionally bully others because generally adults are trained to cope with it, and in case of physical threats, there are serious legal consequences. However, prosecuting a hostile online activity is difficult, expensive, and time-consuming. Furthermore, we accounted *defamation* as the main incentive among predators of this type and also the intention of the vast majority of those who distribute fake news. Thus we argue that cyberbullying and fake news share a distinctive and fundamental characteristic when it comes to motive.

Internet was designed to be a permissive foundation with the aim of delivering contents and sharing ideas, and while its spirit contradicts censorship, there should be practices to restrict wrongful activities that are delicate to debate yet inherently harmful such as propagating fake news or cyberbullying. Otherwise, once equipped by adversaries, it would become a fatal weapon that threatens our digital ecosystem and ultimately the democracy.

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