Master Thesis

Trial by Tweet: Exploring the Influence of Social Media Information on Memory and Sentencing of Criminal Cases

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Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet requirements for

an award at this or any other higher education institution. To the best of my knowledge, the

thesis contains no material previously published or written by another person except where

due reference was made.

Signed:_____

Date:_____

Dedication

I have many people to thank for me sitting down and writing this last section of my master's thesis. It is a great honor and pleasure to conclude this chapter of my life surrounded by so many loving people.

I dedicate this thesis to my loving parents; both of great inspiration to never let go and never doubt my personal abilities while navigating the difficulties of life, and for showing me that I can anything I want. I thank them for supporting me every single day, from close and afar, and never doubting my abilities and allowing me to see what great potentials I have.

I dedicate this thesis to my siblings, David, and Stella, for having shown me what relying on family really means and for being great partners in crime. Thank you for your patience.

 As odd as it may sound, I would like to dedicate this piece of work to my cats, Pacha and Hailey, for having taught me what eternal, silent and unconditional love is. I wouldn't be here without you both.

I would like to dedicate this thesis to all the wonderful friends I have met in Holland, but most importantly I would like to dedicate it to two wonderful friends who have shown me what ambitious and unstoppable women are really made of: Lysanne de Muynck and Romana Černáková.

I would like to dedicate this to Holland, the country which has helped me believe in myself. I would like to dedicate this to my grandfather, who always called me "piccina". I wouldn't have graduated if he hadn't so stubbornly taught me math as a child. Finally, I would like to dedicate this thesis to the Universe, for having guided me on the right path and having brought people into my life who reminded me to always "trust the process".

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Abstract

In this study, we tested the impact of exposure to Twitter on people's ability to deliver the right to a fair trail. The ability to deliver a fair trial was categorized as the ability to provide a fair and unbiased sentencing, based on concrete information provided in court. All participants (N = 105) received a case description, after which they were randomly allocated to one of four conditions: Control (n = 23); Positive tweets (n = 28); Negative tweets (n = 29), and mixed Tweets group (n = 25). Participants in the tweet groups were presented with tweets containing cues about the crime case and alleged criminal, whereas the control group was not presented with additional stimuli. All participants were then given a task to complete the Questionnaire of Memory and Attitude towards Criminals, purposely created for the present study. Although previous research provided reason to hypothesize that exposure to Twitter would impact both memory accuracy of the crime case and attitude towards the criminal case, our results did not confirm that. Thus, providing hope for the legal arena to be less volatile to social media exposure.

Keywords: Exposure to Twitter, exposure to social media, memory accuracy, attitude towards criminal, legal field, right to a fair trial.

Introduction

Criminal sentencing has the crucial role of maintaining societal safety and balance. Its purpose is to punish those committing unlawful or illegal acts to maintain societal functioning (Rassin, 2016). The purpose of providing punishment to those committing wrongdoings is to also provide "retribution or crime prevention through deterrence, incapacitation, rehabilitation and moral education" (Tonry, 2006, p. 6). Thus, criminal sentencing is vital for society's functioning. Consequently, the delivery of an *adequate* sentence is of just as much importance.

In legal terms, adequacy is fulfilled when sentencing is fair. Thus, adequate sentencing consists in respecting an individual's right to a fair trial. Article 6 of the European Convention on Human Rights (ECHR) states for "everyone [to be] entitled to a fair and public hearing […] by an independent and impartial tribunal established by law" (European Court of Human Rights, 2020, p. 6). A fair trial is a complex right to deliver by the justice system, as it does not consist of simple guidelines, rather fairness depends on many factors that are unique to each case (European Court of Human Rights, 2020). Thus, a single definition cannot be provided. The most common requirements for the right to a fair trial to be delivered are for conclusions to be reached by unbiased members, and for conclusions to be induced "only by evidence and argument in open court" (St. Eve, et al., 2012, p. 9). Therefore, highlighting the importance of unbiased decision makers in the trial. Yet, sentencing decisions can be stunted by several factors, one of such being social media.

Current society is experiencing the growing impact and increasing presence of social media. Due to the ongoing transition from hard copy outlets to digital media, society is increasingly relying on new forms of sources to inform themselves. Thus, shifting from relying on traditional media to relying on digital media, including online social media platforms, such as Facebook, Twitter (Bourne et al., 2020), Instagram and Reddit. Key differences between traditional media and social media are its speed, accuracy, veracity, and verifiability of information. Social media has been shown to "lack credibility and reliability when used as medium to obtain news content" (Miller, 2013, p. 8). This is due to social media allowing anyone to share information and opinions, enabling the spread of both unverified news and of harmful opinions (Miller, 2013). Hence, making social media of low reliability when used for informing oneself. The population's increased relying on social media to inform themselves inevitably leads to an enormous impact on the quality and truthfulness of information that circulates. Such unverified and false information impacts many fields, including the legal one.

Exposure to social media's information can bias those participating in the decision-making of sentencing (Birhanu, 2017). This threatens the objectivity and influences the quality of the decisions taken regarding a trial's outcome (e.g., one's guilt or innocence), by basing the sentencing on possibly unfounded, false, or altered information. This might be especially relevant for the countries that implement a jury system, or a mixed tribunal, which highly rely on jurors being well informed and unbiased. For instance, countries like the United States, United Kingdom, Australia, and Canada, that implement a jury system (i.e., the participation of civilians in the decision of the outcome of a legal case), or countries like Japan, France, Germany, and Argentina, that rely on a mixed tribunal (i.e., "mix of professional judges and laypersons"), highly depend on their jurors being well informed and unbiased (Marder, 2011, p. 456). In such instances, the spread of fictitious information can alter the jurors' opinions and memories of the case, leading to an unfair and biased trial (Bogaard et al., 2013). Consequently, risking the violation of the right to a fair trial because the judgment of members involved in the trial is contaminated by biased information.

Social Media's Impact on the Legal System

Social media can impact the fairness of a trial in many ways. Mainly by biasing individual's opinions or altering their memory of the case. A shocking example of a U.S. juror who conducted a Facebook poll about how she should vote during deliberations, further attesting to the impact social media can have on fairness of trials. Other examples of social media use by jurors are the following: conducting social media-based investigations of the participants of the trial (i.e., judges, jurors, lawyers and accused), informing themselves further on the case via social media use, sharing information that has the purpose of altering other jurors' opinions, and releasing information of the trial itself (St. Eve, et al., 2012). Such examples clearly indicate the power social media hold in the legal field.

Social media movements are also a very strong influence in legal decision-making. For instance, movements such as #metoo, created by Tarana Burke in 2016, advocate for the increasing impact that social media has on criminal sentencing. The #metoo movement was born as a social media hashtag that had the purpose of exposing those responsible for sexual violence, harassment, assault, and exposing the shame victims experience. However, this movement with time also became an online sentencing outlet (Mendes et al., 2018). The movement aided in exposing sexual assault and harassment cases such as those of Harvey Weinstein, John Lasseter, Kevin Spacey, Chef Mario Batali and many more. Thus, has provided a safe space where victims can report violence to a wide audience. In addition, by

exposing such cases it has increased the probability of perpetrators being held responsible for their actions and having legal consequences. However, the impact of the #metoo movement has not been solely positive. Whereas movements, such as the aforementioned, had the positive and needed effect of increasing accountability of sexual offenders, it can also have the negative effect of resulting in biasing opinions (Tippet, 2018). Examples such as those of actor Kevin Spacey and film producer Harvey Weinstein, show the impact social media can have. Whether guilty of the alleged acts or not, both Spacey and Weinstein lost their jobs prior to any court ruling. As the loss of their jobs was consequent to the media coverage and media pressure, it illustrates the power that social media had on their lives. Furthermore, it attests the decision-making power it has. A power that was exerted before a fair trial was provided, stripping them of the right to a fair trial. Additionally, by publicly exposing cases and starting to share opinions on social media, such cases stand a low chance of having unbiased participants to the trial.

Social media's influence on fairness of trials does not solely consist in prematurely exposing details of criminal cases. Its impact on the legal system extends to many other means, such as Gatekeeping. Gatekeeping is performed by both professional journalists and reporters that post on social media. Such principle consists in willingly filtering or framing content to present biased information resulting in the conscious manipulation of information. This is a phenomenon to which traditional media does not fall victim to because adheres to specific journalistic standards (Miller, 2013). Gatekeeping results in the spread of biased information. Additionally, social media utilizes a "crime master narrative, which understands criminal behavior in purely individualistic terms, as the product of the perpetrators' innate badness and their free and autonomous choice to do harm, largely or wholly devoid of social context" (Bakhshay, 2018, p. 2). Thus, providing a pre-formed opinion to readers, yet not providing them with the full story, with the purpose of increasing the criminal's fault. The same principle is applied when considering non-professional social media users when expressing their opinions on cases. Such biased information is often read by those involved in trials, biasing their opinions on the case.

Moreover, social media utilizes the principle of agenda cueing which consists in presenting precisely shaped and thought content to solicit specific feelings, thoughts, or reactions (Segesten et al., 2020). Additionally, such cued information already indicates to people what is important and not. Cueing is defined as the action of prompting. Therefore, directing someone or something towards a specific goal. Social media has great cueing powers and was defined as "stunningly successful in telling its readers what to think"

(Stoycheff et al., 2018, p. 182). Social media, especially online media, designs its posts through the sharing of pictures, captions, hashtags and more that will foster and solicit a certain orientation. Additionally, the well-designed platform facilitates memory, capture one's attention, and appeal to attitude change. Thus, shaping a specific story and providing only the relevant information, to confirm what the publisher wants to highlight. This results in a source that is lacking, not only revision and verification of the shared information, but that is also lacking fact-based information (Segesten et al., 2020). Therefore, leading to the spreading of information based on personal opinions with the agenda of stirring public opinion in a specific direction.

Twitter's Impact on the Legal System

As previously mentioned, online platforms are increasingly relied upon by the general population for self-information (Segesten et al., 2020), creating a worrisome scenario for truth to be shared. Twitter is among the most popular social online platforms used for news sharing. Twitter is an online platform used for a form of communication known as microblogging. One can share anything on Twitter, from personal life updates to opinions and important current news. Twitter enables users to create posts under which other users can comment and respond to. Hence, it enables users to take an active participation in spreading information and become actively involved in the matter that is being discussed or shared. Furthermore, through the options of following someone it is possible to view everything that person shares (Kwak et al., 2010). Twitter enables concepts such as confirmation bias and allows for those of likeminded opinions to interact more easily. Bakhshary et al. (2018) explains how exposure to pre-trial information or to information that is external to the trial itself, affects jurors by "[coloring] their processing and evaluation of subsequent information […] leading them to regard information that is consistent with what they already think they know as more credible, and to dismiss information that contradicts their own "knowledge" as less credible" (p.4). Research confirming these social media influences showed that Twitter has several cueing effects on its users. Particularly, Twitter was found to cue importance of news and to prompt judgment (Stoycheff et al., 2018). Thus, playing a major role in shaping individual's opinions on what is important and not, and in enabling judgment more than naturally prone to. Furthermore, Twitter was found to enable its users to be further involved and invested in news through its following, reposting, and commenting options (Segesten et al., 2020), suggesting that Twitter has a high influence on individual's opinions. Hence, it is

reasonable to expect that Twitter-based information could have a major influence on sentencing abilities of jury members.

Memory, Attitude and Twitter

The impact that Twitter has on judgment (i.e., sentencing) is done by influencing memory. Once individuals are exposed to social media the information gathered is encoded and stored in one's memory. This leads to both the alteration of memory and to the formation of attitude that is consequent and congruent to the information seen on social media. In fact, both memory and attitude play major roles in the formation of sentencing decisions. When considering the legal scenario sentencing is an expressed form of attitude. Therefore, the present study considers sentencing as attitude for nomenclature and quantification purposes.

Memory plays a crucial role when it comes to remembering information, as the act of remembering is the ability to retrieve encoded information one was exposed to. Contrary to common belief memory is not static and unchanged. Memory is an ever-changing phenomenon that is subject to a malleable nature. Furthermore, memory can be changed through the exposure to new or different information, and through retrieval (Lacy et al., 2013). Thus, social media information can have a strong impact on one's memory of an event and can even overwrite it. Research confirming such impact shows that exposure to false information distorts the originally possessed memory of events (Fenn et al., 2014). Information of a specific event is changed after the exposure to new information due to the addition or subtraction of information, or due to the alteration of the original information. Hence, memory can be easily shaped and manipulated (Lacy et al., 2013). Individuals are not aware of such distortion of memory. That is because source memory – the ability to recall where one has learned specific information, key to distinguishing between reliable and non-reliable information – is weak. Studies found for most fake news to be remembered as real news (Bourne, et al., 2020). This confirms that jurors exposed to false news would hardly be able to differentiate between information provided in court and information read on social media. Thus, concluding their decisions on both court-provided information and fictitious information. This principle can be extended to false or unverified information found on social media altering, not only the jury's memory of information provided in court, but also the memory of eyewitnesses and victims. Leading to the possible reporting of unreliable information.

Research shows that content derived by social media, such as Twitter, is better remembered than content taken by news sources of other formats (Bourne, et al., 2020).

Hence, altering, not only the jury's memory of information provided in court, but also the memory of eyewitnesses and victims. Such finding can indicate that jurors exposed to unverified, or untrue information, will retain social media information more than the information on which they should base their verdict on (i.e., information provided in the trial). Furthermore, the comparison of young and older adults in their ability to recall both information given by news sources and social media revealed for older adults to rely more on prior knowledge than young adults. Young adults, thus, rely more on social media-based information. If predictions of social media taking over news media in future generations are correct (Bakhshay et al., 2018), this finding can reveal a worrisome impact of social media on the fairness of trials.

Memory has an additional crucial role; that of affecting attitude, and therefore affecting sentencing. As a result of memory change one's attitude also inevitably changes. Attitude is defined as a "person's overall evaluation of persons (including oneself), objects and issues" (Petty et al., 2010, p. 1). Therefore, how positively or negatively they view a certain person, topic or matter. Attitudes are similar to opinions, or judgments when considering the court.

Research shows for the exposure to new information to alter said attitude and to provoke a consequent action. Such action, in the legal field, is known as sentencing. Furthermore, attitude just as memory, is malleable and subject to updates. Said updates, known as attitude change, occur through either the integration of new information to the old, or through new information overriding the old (Petty et al., 2010). Therefore, those involved in the trial will have an altered attitude and consequent judgment (i.e., sentencing) when exposed to fictitious information. This is particularly true when considering the weakness of source memory. Thus, whether the information is objective and provided by the court, or fictitious and accessed on social media, will establish the consequent judgment. However, considering that memory is not perfectly reliable the chances of attitude relying on objective information is small.

Attitude is also subject to biases, such as the negativity bias and confirmation bias. The negativity bias consists in "negative information [being] given more weight than equally extreme positive information" (Petty et al., 2010, p. 9). Confirmation bias consists in individuals giving more attention to information that confirms what they previously believed (Bakhshay et al, 2018). Hence, as attitude is based on memory and on personal experiences, it is likely that one's attitude will not be objective, rather based on what one already conceived as right and wrong. Such concept illustrates the difficulty in which individuals, such as those

participating in trials, have in being unbiased due to the nature of attitude in itself. Said attitude in the courtroom results in judgment and consequent sentencing. Thus, one can only imagine the difficulty in achieving an unbiased sentencing when influenced by social media.

The Study

Considering the enormous impact of social media on the fundamental right to a fair trial the present study investigated what such influence was. Furthermore, the influence of social media on the legal field exposes the need for research on the topic as it is a new reality that the legal system is facing. Thus, in the present project, we explored the relationship between social media and sentencing, by considering individuals' memory of criminal cases and evaluating their consequent attitude, after being exposed to Twitter. Specifically, we investigated the relationship between information provided via Twitter and fairness of trials (i.e., sentencing measured through attitude). Twitter was chosen as the source of social media because it is one of the main sources used nowadays for gathering and spreading news (Bourne et al., 2020). Additionally, it was chosen for the involvement found in its users due to its design including likes, comments, and retweets (Segesten et al., 2020).
It is believed that investigating memory of criminal cases and attitude towards criminal cases after being exposed to Twitter, could reveal findings that enable better understanding of their role in delivering fair trials.

The study consisted in providing participants a fictitious criminal case, specifically created for this project, and evaluating their memory of the case and consequent attitude. The criminal case being the murder of a young woman. The questionnaire was also created for the purpose of the present study and considered the quantitative evaluation of both memory of the fictitious case and attitude towards the criminal. Additionally, three conditions were created to reveal a difference in attitude post-exposure to social media. Three groups were exposed to different cueing Twitter posts, such being positive attitude cueing, negative attitude cueing, and a mixed condition, which included both positive and negative attitude cueing. To further differentiate the effects of social media on sentencing a control group was included where no social media was presented.

Memory, considered as reported memory, was numerically quantified according to how accurately participants remembered the criminal case presented to them at the beginning of the study. This was done by creating a questionnaire that included a section verifying what participants remembered of the crime. Such quantification was done by summing the correct answers. Criminal sentencing, considered as participants' attitude towards criminals

(negative, neutral, or positive) was quantified by asking subjects to rate factors such as the criminal's guilt, severity of the committed crime and the believed appropriate sentencing of the criminal.

Research Question and Hypotheses

The present thesis dissertation formulated one main research question. The research question concerned whether the exposure to Twitter impacts the legal system by altering individuals' ability to sentence in a fair and unbiased matter. Thus, it investigated whether the exposure to Twitter impacts individuals' memory of criminal cases and individual's attitude towards criminal cases.

It is expected for Twitter to impact the legal system by influencing sentencing abilities. Thus, to impact the right to a fair trial. It is hypothesized for exposure to Tweets to impact the legal system by altering memory. Such impact should be seen in how participants remember the fictitious criminal case shown to them in the study. More specifically, when the criminal case and Tweets provide contrasting information, it is expected for individuals to better remember the information provided by Twitter (Fenn et al., 2014). Hence, for the Tweets to alter the subject's original memory of the criminal case and for Twitter based information to be recalled more easily.

Additionally, Tweets are expected to impact the legal system by also altering attitude. Tweets will influence individual's attitude (i.e., sentencing) through their cued content (Stoycheff et al., 2018). Meaning that individuals who have been exposed to Tweets will sentence more or less harshly, according to the Tweets they have been exposed to. Additionally, the comparison of groups exposed to tweets and the control group is expected to reveal for the individuals exposed to Tweets to have a higher attitude change.

The results of this study could provide guidelines in reducing social media's impact on legal proceedings. Hence, it has the hope of yielding findings that can help reshape the legal system in being less influenced by social media. Further, this study hopes to provide ground theories that can be expanded to high-profile criminal cases, as they are under even higher social media influence and pressure than low-profile criminal cases.

Methodology

To investigate the relationship between the main two factors of interest – exposure to Twitter and fairness of trials – the present study has conducted a quantitative analysis. The data was collected by means of questionnaire, on both male and female participants.

Participants

Our initial sample consisted of 154 participants. After eliminating participants who had not completed the study (40 participants), those who did not provide consent to sharing their data (4 participants) and those who did not meet out inclusion criteria we had 105 participants whose data could be used for the study. The two exclusion criteria we adopted were: a) being underaged participants (i.e., under the age of 18), and b) suffering, or being diagnosed with, memory related disorders. Based on our exclusion criteria 6 of participants were excluded ($n1 = 1$ and $n2 = 5$). Hence, the final sample consisted of 105 participants.

The a priori G*power analysis indicated that for our study to find a large effect (i.e., $f = .40$ and above, with $\alpha = .05$ and $p = .95$), between our variables, each condition required a minimum of 24 participants. As we had 105 participants in total that resulted in our four conditions to have an average of 25 participants per condition. However, the sensitivity G*power analysis indicated for our study to have a small effect size (i.e., $f = .18$ with $\alpha = .05$ and $p = .95$).

The majority (67.6%) were female, and the average age of the total sample was 23.40 ($SD = 6.41$; range 18-61). Additionally, regarding the gender 2 participants did not want to disclose their gender and 1 indicated their gender as non-binary. Table 1 illustrates the group division, along with an overview of the study's demographic information, such as the age, gender, and educational level of participants.

Table 1. *Frequency Table Representing the Demographic Information of the four Groups*

Groups	N	Age		Gender			Level of Education		
Total	105	Minimum	Maximum	Female	Male	Other	Bachelor	Master	Other
Control	23	18	61	15	7	1	17	4	2
Negative	29	19	35	24	5	0	18	9	2
Positive	28	18	33	17	10	1	13	12	3
Mixed	25	18	45	15	9	1	15	10	0

Lastly, the English proficiency level of the sample was overall high ($M = 11.37$, $SD = 0.62$).

Participants were either recruited using the Erasmus University Rotterdam (EUR) platforms ($n = 71$), or via social media platforms, such as Instagram and Facebook ($n = 83$). The two samples differed in terms of age ($M = 21.56$, $SD = 3.78$, and $M = 32.14$, $SD = 38.75$, respectively), $t(104) = 43.60$, $p < .001$, Cohen's $d = 5.63$.

Participants were randomly selected and assigned to one of the four conditions of the study: i) control group ($n = 23$); ii) negative tweets ($n = 29$); iii) positive tweets ($n = 28$); and iv) mixed tweets ($n = 25$).

Materials

Tweets

Each of the four conditions received six tweets that contained different information regarding the criminal case participants were presented at the beginning of the study. The tweets were created specifically for this study. Each tweet was carefully created through the use of an online Tweet generator, known as "tweetgen.com". This generator was chosen because it provided the possibility to create tweets that resembled real ones by allowing to include information such as the number of likes, retweets, fake username, and relevant hashtags. Such information was included to increase the credibility of the fake tweets and to resemble real tweets.

The tweets contained either negative, positive, or a mix of negative and positive, content regarding the criminal himself and the crime case. This was done to re-create the natural cueing ability that tweets have in real life. The mixed tweets condition was created by choosing 3 positive, and 3 negative, tweets that were thought to leave the most impact on participants. The tweets were created with the purpose of altering and affecting individual's memories of the case and consequent attitude towards them. Words such as "empathize" in positive tweets, and "astonishing" for negative tweets, were chosen to solicit positive or negative feelings towards the criminal case. Thus, to simulate the affect tweets have on real life users. Please refer to Appendixes A through C for the tweets used in this study.

Case

The main stimulus used in the study was a fictitious criminal case created for the purpose of the present study. The criminal case describes the murder of a young woman, Jessy Stallions. The criminal case alludes for the alleged murder to have been committed by Mr. Lucky Boxter. Additionally, it provides details such as where Ms. Stallions' body was found, and the physical evidence of struggle found on the body. The case was carefully written in neutral language to avoid for further solicitation of emotions, in participants, than a murder case might naturally provoke. The original criminal case can be found in Appendix D.

Questionnaire

The Questionnaire of Memory and Attitude towards Criminals (QMAC), created by the student investigator for the purpose of this study, has a total of 20 questions. The completion of the QMAC took approximately 15 to 20 minutes. The QMAC contains two sections. Participants answered to all 20 questions in the questionnaire, with exception to those who answered "guilty" to question 4, of the attitude section. Such participants were asked to answer an additional question asking them to rate, from 0 to 100, how guilty they found the criminal to be. Please refer to Appendix E for the QMAC.

One section was dedicated to evaluating the accuracy of participant's memory of the criminal case. The purpose of this section was to evaluate how much participants remembered from the criminal case they read at the beginning of the study. Thus, yielding information on whether exposure to Twitter had an impact on memory. The term memory, in the present study, refers to the evaluation of the reported memory of participants on the presented criminal case. Hence, it had the purpose of quantifying memory in terms of accuracy. Quantification was done by recoding all correct answers as 1, in the Statistical Package for Social Sciences (SPSS), and all incorrect answers as 0. This allowed for the quantification of memory to be done by summing all correct answers. Resulting total scores ranging from 0-13, with 0 being extremely inaccurate memory and 13 being extremely accurate memory of the case. A low scoring in memory (low accuracy) was considered as revealing high influence by the tweets' exposure and high scoring in memory (high accuracy) was considered as revealing low influence by the tweets exposure.
This section had a total of 13 questions. Seven of which were in true or false format, and 6 multiple choice questions regarding the crime case.

The second section evaluated individuals' attitude towards the criminal case. Said section was comprised of 7 questions – 3 multiple-choice, one of which allowed to fill in a number, 1 percentage question and 3 Likert scale – that had the purpose of evaluating the influence of social media on individuals' attitudes and consequent sentencing towards criminals. Thus, attitude was measured by considering the harshness of sentencing provided by participants. To do so the likelihood of guilt in percentage, the severity of sentencing and more, were quantified by adding the total points provided by participants. The attitude scores ranged from 0 to 125. The overall attitude score indicated how much influence the condition they were assigned to had on participant's attitude. Any score ranging from 0-40 was considered as a positive attitude (i.e., mild sentencing), 41-80 as neutral attitude (i.e., moderate sentencing), and 81-125 as negative attitude (i.e., severe sentencing). Higher scores

indicated a more negative attitude towards the criminal. Mild sentencing was considered as a possible low impact by negative tweets, but high impact by positive tweets; moderate sentencing was considered as no impact from social media exposure; severe sentencing was considered as high impact by negative tweets and low impact by positive tweets. Such interpretations were used according to which group was analyzed.

Question 4 of the attitude section allowed to choose between several criminal punishments for participants to express what. they considered to be the most appropriate. The punishments provided were community service, prison sentence, life in prison, death penalty and other. By choosing the "prison sentence" or "other" participants could express, respectively, the years the criminal should spend in prison or what other penalty they found was more fitting. Because both options yielded additional answers pertinent only to the participants that had chosen such options they were analyzed separately. Furthermore, because the "prison sentence" option had no numerical limit it was analyzed separately to avoid skewing the whole sample. The prison sentence results were categorized by using the same method explain above. Thus, considering scores ranging from 0-13 as mild sentencing, 14-26 as moderate and 27-40 as severe sentencing. The written answers yielded from choosing "other" were categorized according to the sentence participants suggested or their main meaning. Such categorization of the answers resulted in 6 main categories: "innocent until proven guilty", "prison + treatment", "treatment only", "40 years in prison", and "cannot answers". The original answers of participants can be found in Appendix F.

Questions 8 was not included in the final score for attitude as it measured the amount of responsibility participants thought the victim had for her own murder. Thus, quantifying victim blaming and was analyzed separately.

Procedure

The study was conducted using Qualtrics. Once participants were invited to take part in the study, they received the link to participate. Participants were asked to provide consent to participate. The consent form only partially disclosed the real purpose of the study. Deception was found necessary to preserve the authenticity of the study and to avoid participants being influenced by knowing the aim of the study while answering the questions. As the focus of the study was to find the influence that social media has on participants when considering criminal cases (also known as context effect – an effect that occurs subconsciously) it was necessary for participants to be unaware of goal of the study for such effect to be revealed.

After participants provided consent, they were asked to fill out demographic questions (age, gender, English proficiency etc.), and to indicate whether they suffer from any memory-related issues. Participants who indicated "no" to being affected by memory related issues/disorders were granted access to the study. Those who reported being affected by memory related issues/disorders were redirected to the end of the study, thanked for their time, and informed why they could not be included in the study. Such participants, if EUR students, were still rewarded credits for their interest in participating to the study. These participant's information was discarded entirely form the study.

Participants who did not experience memory related issues were granted access to the study. Thus, were presented the fictitious crime case to which all groups were exposed to. Once read the case individuals were unknowingly assigned to one of the 4 conditions of the study. The random selection for the conditions was automated through the randomizer option on Qualtrics. Such conditions being the control group (no tweets), the positively cued tweets group, the negatively cued tweets group and the mixed group containing both positive and negative tweets.

Participants assigned to the control group were led directly to the questionnaire, whereas participants assigned to one of the three conditions were exposed to the tweets. The questionnaire was programmed for all questions to be compulsory for the completion of the study. Participants were provided unlimited time to read the case and complete the study.

After participants answered all questions, they were provided a debriefing form informing them of the real purpose of the study. Furthermore, they were asked to reconfirm their consent to sharing their data after the real purpose of the study was revealed. Participants were also provided the possibility to create a recognition code (i.e., mother's maiden name + last two digits of their birth year) that allowed them to request for their data to be discarded at any point of the study. Lastly, as the crime case is a murder case and contains graphic descriptions that can create discomfort to participants, participants were provided the email address of the main researcher, Irena Boskovic, and of the student researcher, Elisa Scaliotti. Additionally, EUR participants were informed of how the university's counselling center can be contacted. Participants who were recruited via social media were provided a list of worldwide help centers for them to contact in case the study caused any disturbance.

Planned Data Processing and Statistical Analyses

To statistically verify the influence of social media on memory and attitude an Analyses of Variance (ANOVA) was run. The independent variable was the 4 conditions assigned to participants, and the dependent variables were a) memory performance, and b) attitude. The main analysis used to investigate potential differences between the 4 conditions was Further, to explore the difference between exposure to social media and no exposure to social media, in the 4 conditions, two Factorial ANOVA analyses were conducted. Factorial ANOVAs seemed an appropriate method as the independent variable is a ratio variable – with three levels –, and the dependent variable yielded either nominal or ordinal results. Such analyses were run after having verified both relevant assumptions and the absence of outliers. All analyses were conducted using Statistical Package for Social Sciences (SPSS) software. Lastly, the α used to establish the significance level was .05.

Additionally, correlations were run prior to the main analysis to verify the relationship between the 4 conditions, and memory and attitude. Thus, establishing whether there was an effect to be investigated or not.

Results

Assumptions Testing

A preliminary analysis established for all assumptions to be met. Graphs obtained by the assumption testing are provided in Appendix G-H. Influential cases were found for both memory and attitude that were deemed as high scores, and not outliers. The influential cases for memory being raw scores 1, in the positive tweets condition, 4 and 11 in the control group.

As the normality plots show that attitude is not as normally distributed as memory, the Kolmogorov-Smirnov (K-S) normality test was conduct (Field, 2018). K-S revealed for only the control group, under the memory aspect, to be significantly different from a normal distribution, with $D(23) = 0.25$, $p = 0.001$. To adjust for such findings the ANOVA analyses were conducted with bootstrapping, to render them robust to normality exceptions (Field, 2018). The overall K-S test findings are found in table 2.

Table 2. *Kolmogorov-Smirnov Normality test for Control, Positive tweets, Negative tweets, and Mixed tweets groups.*

Factors	Groups	Statistic	df	Sig.
Memory Accuracy	Control	.25	23	.001
	Negative	.18	29	.018
	Positive	.15	28	.101
	Mixed	.20	25	.013
Attitude towards Criminals	Control	.14	23	.200[*]
	Negative	.15	29	.096
	Positive	.13	28	.200[*]
	Mixed	.16	25	.093

*. This is a lower bound of the true significance

Memory Accuracy and Sentence Attitude

Pearson correlation was conducted to establish whether there is a relationship between exposure to social media, attitude towards criminals and memory accuracy. A non-significant correlation was found between accuracy of memory and attitude towards criminals, $r(105) = .06$, $p = .538$.

Two separate and bootstrapped, factorial ANOVA were conducted to investigate the main effect of memory and the main effect of attitude. Bootstrapping was particularly relevant when looking at memory as the Levene's homogeneity test revealed a significant finding, with $F(3, 101) = 3.64$, $p = .02$. Meaning that the obtained differences between the samples were not due to random sampling (Field, 2018). The same was not relevant for attitude. Regarding the main effect of memory, a non-significant main effect was found for being exposed to tweets, or not, with $F(3, 101) = .68$, $p = .56$, $\eta^2 = .02$. Therefore, being exposed to tweets did not impact how much one remembered of the shown criminal case. Furthermore, the effect for attitude was also found to be non-significant, with $F(3, 101) = .11$, $p = .95$, $\eta^2 = .00$. Meaning that being exposed to tweets did not impact the sentence attitude towards the criminal.

Helmert contrasts were run to verify if any of the conditions (i.e., 4 groups) had any more specific impact on the attitude variable. Helmert contrasts, a form of planned contrast, was chosen among others because it compares the previous groups to the following (i.e., group 1 vs group 2, group 2 vs group 3, group 3 vs group 4). Thus, providing specific contrasts between the 4 conditions. The Helmert contrast revealed no significant differences ($p=.71$) in accuracy of memory between the control group and the positively cued tweets condition. Additionally, negatively cued tweets and positively cued tweets conditions also

exhibited similar memory performance and revealed a non-significant difference (p=.69). The contrast between positively cued tweets and mixed tweets revealed no group differences in accuracy of memory (p=.19).

The contrast run for the attitude towards criminals revealed no significant differences between the control condition and negatively cued tweets group (p=.80). The contrast between negatively cued tweets and positively cued tweets also revealed no difference (p=.64). Lastly, the contrast between positively cued tweets and mixed tweets indicated no difference (p=.78).

Sentencing

We also looked closer into the question 4 of the attitude section of the questionnaire which asked "What sentence does the accused deserve". The frequency, and related percentage, with which the four penalties (i.e., community service, prison sentence, life in prison, death penalty and others) are shown for the four groups in Table 3.

Table 3. *Frequency and percentages of penalties assigned to criminal according to the four group conditions*

Groups	Penalty	Frequency	%
Control	Community service	0	0
	Prison sentence	4	17.4
	Life in prison	13	56.5
	Death penalty	2	8.7
	Other	4	17.4
Negative	Community Service	0	0
	Prison sentence	8	27.6
	Life in prison	14	48.3
	Death penalty	1	3.4
	Other	6	20.7
Positive	Community Service	2	7.1
	Prison sentence	5	17.9
	Life in prison	15	53.6
	Death penalty	2	7.1
	Other	4	14.3
Mixed	Community Service	1	4
	Prison sentence	7	28
	Life in prison	9	32
	Death penalty	0	0
	Other	8	36

The most chosen penalty, across all four groups, was life in prison with a total of 48.6% of votes. Such percentage triggered interest in further investigating the results yielded by this question. However, after running a *Kruskal-Wallis* test and comparing the frequency of responses between the four conditions it became apparent that no significant difference between the four groups was found, $H(3) = .90$, $p = .85$.

Additionally, question 4 was separately and further analyzed for options "prison sentence" and "other". Prison sentence was chosen by 23 participants as the adequate punishment for the committed crime. The years indicated as adequate for the criminal to spend in prison ranged between 2 and 40 years. Table 4 shows the frequency with which participants picked the option of prison sentencing according to the condition they were assigned to.

Table 4. *Frequency of choosing "Prison sentence" as an adequate sentence across the four group conditions*

Groups	N
Control	4
Negative	7
Positive	5
Mixed	7
Total	23

To detect if there was a significant difference among the four groups in terms of years participants thought the criminal should spend in prison the *Kruskal-Wallis* test was performed. Such analysis showed for no significant difference to be found among the four conditions, in terms of assigning higher or lower amount of years to the alleged criminal, $H(3) = 3.10$, $p=.38$.

Twenty-one participants selected the option "other" to question 4. The "other" option allowed participants to put in writing what sentence they deemed most appropriate for the alleged criminal. Because the answers were freely typed by participants it was not possible to run statistical analyses on them. Thus, answers were categorized according to their basic meaning to verify their frequency (refer to table 5).

Table 5. *Frequency of the categorized answers provided by participants according to the four group conditions*

Groups	N	Categorized answers	Frequency
Control	3	More evidence required	1
		Innocent until proven guilty	2
		Prison + treatment	0
		Treatment only	0
		40 years in prison	0
		Cannot answer	0
Negative	6	More evidence required	5
		Innocent until proven guilty	0
		Prison + treatment	0
		Treatment only	0
		40 years in prison	0
		Cannot answer	1
Positive	4	More evidence required	3
		Innocent until proven guilty	0
		Prison + treatment	0
		Treatment only	0
		40 years in prison	1
		Cannot answer	0
Mixed	8	More evidence required	5
		Innocent until proven guilty	0
		Prison + treatment	1
		Treatment only	1
		40 years in prison	0
		Cannot answer	1

The most commonly provided answer was "more evidence required" with 14 votes out of 21. Two participants answered "innocent until proven guilty", two participants answered "prison + treatment", one participant answered "treatment only", one participant answered "40 years in prison", and two answered "cannot answers".

Victim-Blaming

Question 8 asked participants "How much do you think the victim's actions contributed to the killing". This question had the purpose of evaluating how blame was placed on the victim for her own killing. Participants could answer by providing a percentage, with 0 being "not responsible at all" and 100 being "completely responsible – it is her own

fault". The descriptive statistics showing means, maximum and minimum scores and standard deviations can be found in Table 6.

Table 6. *Descriptive Statistics of Victim Blaming of the four Group Conditions*

Group	N	Mean	Std. Deviation	Minimum	Maximum
Control	23	6.70	19.28	0	71
Negative	29	7.62	16.44	0	50
Positive	28	18.18	27.31	0	86
Mixed	25	14.80	30.25	0	96

A preliminary analysis shows for the mixed condition to have the highest scores in terms of victim blaming, with the highest score being 96%. However, upon further investigation through a One-Way ANOVA analysis it was shown that there is no statistically significant difference among the four conditions in terms of victim blaming, $F(3, 104)= 1.44$, $p= .24$. Thus, the difference among victim blaming in percentage was not found to be significant.

Discussion

This study tested whether the exposure to Twitter has an impact on individuals' ability to sentence criminals in a fair an unbiased matter (i.e., right to a fair trial). An unbiased trial was measured by considering two variables; memory accuracy of a presented fictitious criminal case and the attitude individuals had towards the alleged criminal (i.e., sentencing). Therefore, the present section will elaborate on the findings regarding the two variables separately, after having considered the nature of the relationship between the two variables and the exposure to social media (i.e., tweets). Additionally, it will elaborate on the main research question formulated, and further findings.

The correlational analysis, used to investigate the general effect of exposure to social media (i.e., tweets) on memory and attitude, and the relationship between the three variables, showed no relationship. Meaning, that no relationship was found between memory accuracy of the presented case, attitude towards the alleged criminal, and being exposed to details of a crime case by means of twitter. Such results contrasted with the expectation of exposure to social media impacting, in any form, memory and attitude. Furthermore, it contrasted the expectations formulated for the present study. Thus, alluding to the possibility of social media not impacting the legal arena by altering individual's memory of the trial and, or ability to sentence in an unbiased matter. Hence, these results provided a preliminary concept that exposure to tweets containing details about the crime do not influence individuals' ability

to provide a fair trial in terms of the information they remember and, or consequent sentencing (i.e., attitude) to the criminal trialed.

Investigating, solely, the effect of exposure to social media on memory accuracy revealed for tweets to have no impact on one's ability to remember correctly details regarding a criminal case. As being exposed to twitter did not alter the subjects' memory accuracy it can be stated for the right to a fair, and unbiased sentencing, to be unthreatened by Twitter. Thus, it can be assumed for other social media platforms, other than twitter to have a similar impact and for the findings to be relevant for social media in general.

The findings of the present study are in contrast with both previous research on the matter and the expectations formulated for the present thesis. Memory of the fictitious case not being altered by the presented tweets, regardless of the type, can indicate for memory to be less easily manipulated than stated in previous research (Lacy, et al. 2013). Thus, revealing for memory to be more solid and accurate, and less malleable, than thought. According to such results the main hypothesis of exposure to Twitter impacting the legal system by altering individuals' memory accuracy was rejected. Furthermore, the comparison done on the effects of the different types of tweets presented, on memory, revealed for there to be no difference, in terms of memory accuracy, among the four groups. Therefore, individuals who were exposed to tweets containing negative, positive, or mixed words referring to the criminal in question, did not have a lower memory accuracy score than subjects who were not exposed to tweets. Hence, confirming that tweets do not impact individual's memory accuracy. This also contrasted the student researcher's expectations of tweets containing negative terms influencing individuals' memory of the case by lessening its accuracy. This may allude to techniques such as Gatekeeping (Miller, 2013) and cueing (St. Eve, et al., 2012), used by social media journalists to influence individuals' opinions on news, to be much less effective than feared. Therefore, leaving individuals exposed to social media free to form their own opinions on criminal cases. Additionally, the group comparison was also used to verify Bourne's research stating that information provided by social media was better retained than information provided by more reliable sources (et al., 2020). The findings of the three groups exposed to tweets having no difference, in memory accuracy, in comparison to the group who was not exposed to tweets, contrasts Bourne's research (et al., 2020). This suggests for individuals to possess the ability to subconsciously distinguish between the information provided by the case and the information provided by tweets. Additionally, it may indicate for individuals to rely on the information provided by the criminal case, and its objective information, more than on the tweets they were exposed to.

When considering the above stated findings, it seems there might be basis to believe that trials and sentencing may be more objective than feared by the present researcher and previous research. This could be the case, despite social media's effort in altering individual's memory regarding criminal cases. This provides hope for the legal arena to be less biased than feared and for fair trials to be a reality one can still hope for.

The results regarding the investigation on the influence of Twitter on attitude (i.e., sentencing) revealed for there to be no effect. Meaning that being exposed to tweets, of any type, does not impact one's attitude towards the alleged criminal. Thus, the type of news or opinions expressed via social media appear to not impact one's ability to provide an unbiased sentencing that is based on information provided by the case itself. Considering such findings, the present thesis rejected the main research question. The expectation of Twitter influencing the subjects' attitude towards the alleged criminal was not confirmed. The lack of influence on attitude by the exposure to Twitter also contrasts the literature used to base the present thesis. Contrastingly to the findings provided by Petty (et al., 2010) the present findings can indicate for one's attitude to be less flexible and malleable than suggested. Further, it can indicate for attitude to be less vulnerable to biases, such as confirmation bias and negativity bias than originally thought (Petty et al., 2010). Furthermore, it can be implied that attitude towards a criminal may stem from one's personal and original opinion, rather than from externally provided information, such as social media.

When comparing the effect of the four different conditions (control, positive tweets, negative tweets, and mixed tweets) on attitude, no difference among the groups was found. hence, there was no difference between the experimental groups and the control group. Meaning that being exposed to Twitter, whether containing negative, positive, or mixed information regarding the criminal case and the criminal itself, did not alter one's attitude towards the criminal. Resulting in the individuals' ability to provide a fair and unbiased trial to be unchanged. Hence, the expectation of tweets containing negative opinions and information regarding the alleged criminal leading to more severe sentencing was not supported.

To further grasp the influence social media has specifically on the ability to provide sentencing the participants' attitude towards criminals was further investigated. Questions regarding sentencing and victim blaming were further investigated (i.e., questions 4 ("What sentence does the accused deserve"), and question 7 ("How much do you think the victim's actions contributed to the killing?") of the Attitude section of the QMAC) as they indicated most clearly individual's judgment towards the criminal and the victim. The four conditions did not differ in their answers to both questions, thus, being exposed to tweets did not impact

the severity of sentencing nor perception of victims' responsibility. The aforementioned findings contrast the theory of social media exposure biasing those involved in the decision-making of sentencing (Birhanu, 2017). Hence, individuals' objectivity may not be as threatened by social media exposure as many theorize. This could be true despite its inclination in providing information that serves an already formed opinion (Mende et al., 2018).

Overall, the lack of impact of tweets on both memory accuracy and attitude can allude to the possibility of fair trials being more possible than feared. Leading to the rejection of the main hypothesis. Thus, for the legal arena to be less vulnerable to external factors, such as social media, than shown in previous studies. This provides general hope for the accuracy of sentencing and ability to respect individuals' right to a fair trial.

Our results, however, need to be taken with caution as this study includes a few limitations worth mentioning. Firstly, time and the conditions in which the experiment was conducted due to COVID-19 pandemic. The presence of COVID-19 has limited the study to being purely online and not being able to even consider the possibility of conducting it in person and consequently the variable of time. Additionally, the present study subjected participants to the questionnaire right after the exposure to the criminal case and the main stimuli. This could have impacted the results because of the shortness of time passed between the presentation of information and the questioning. Future studies could design the research with a before and after measure, evaluating one's memory and attitude right after the exposure to tweets and again two weeks after. Third, the experiment was conducted online, without a possibility to ensure that participants were not distracted during the study and rightly motivated. However, it can be debated that this would be the most natural setting to verify the influence of social media as social media is mostly consumed in natural setting such as when at home or being in company. Lastly, as the experiment was conducted on a mixed population of international students and individuals recruited via social media, language could have been a barrier. The study tried to control for such factor by asking to rate how clearly questions were formulated and to self-rate one's English proficiency level. Both the evaluations of the clearness of the phrase questions and the participants' English level were high. Thus, possibly indicating for language to have not been of hinderance in the study.

Overall, the statistical findings indicate that social media, namely Twitter, to have low to no influence on the ability to provide unbiased and fair sentencing. Attitude and memory accuracy were not altered when providing sentencing and judgments. Thus, indicating for sentencing, and the legal field, to be able to respect the fundamental right to a fair trial. Such

findings bring hope for the legal arena, as unbiased and just prosecutions are still possible despite the ever-growing presence of social media. This could ensure for criminals who have had major social media coverage to still have a chance to a fair trial. Finally, the present thesis may indicate for memory and attitude to be less influenceable than theorized.

Conclusion

As social media are gradually taking over traditional media (i.e., journalism) and becoming the new source of news information it appeared important to verify the influence exposure to social media has of the ability to provide a fair and unbiased trial. Such shift in news source was believed to have an impact on the quality of available information regarding news, such as crimes and criminals themselves. Such impact was believed to occur through the alteration of individuals' memory of criminal cases and consequent attitude towards criminals. Hence, for trialing and sentencing to be based on information that is not solely provided by the court and on reliable information – key requirement for the right to a fair trial to be delivered. Yet, the results of this revealed for there to be no difference in terms of memory accuracy and attitude towards the criminal case, among the positive, negative, and mixed tweets group. Thus, Twitter was found to not impact memory accuracy of the criminal case and attitude towards the alleged criminal. Such findings provide hope for the legal arena as it is possible for the legal field to be less impacted by social media and fictitious news than originally feared. However, this issue requests further rigorous investigation, as the outcome of this study, including its limitations, is not strong enough to support any clear-cut conclusions without more data.

References

Bahkshay, S. & Haney, C. (2018). The media's impact on the right to a fair trial: A content

    analysis of pretrial publicity in capital cases. *Psychology Public Policy and Law, 4,* 1-

    31. https://doi:10.1037/law0000174

Birhanu, F. (2017). The impact of media on fair trial rights of the accused: An assessment of

    selected federal high-profile criminal cases. *Bahirdar University School of Law.*

    http://hdl.handle.net/123456789/8207

Bogaard, G., Ewout, E. H., Vrij, A., Broers, N. J. & Merckelbach, H. (2013). Contextual bias

    in verbal credibility assessment: Criteria-Based Content Analysis, reality monitoring

    and scientific content analysis. *Wiley Online Library,* 79-90. https://doi

    10.1002/acp.2959

Bourne, K. A., Boland, S. C., Arnold, G. C. & Coane, J. H. (2020). Reading the news on

    Twitter: Source and item memory for social media in younger and older adults.

    Cognitive Research: Principles and Implications, *5*(11).

    https://doi.org/10.1186/s41235-020-0209-9

European Court of Human Rights. (2020). Guide on article 6 of the convention –Right to a

    fair trial (Criminal limb). *In Case-law Guides by Article.*

    https://www.echr.coe.int/Documents/Guide_Art_6_ENG.pdf

Fenn, K. M., Griffin, N. R., Uitvlugt, M. G., & Ravizza, S. M. (2014). The effect of Twitter

    exposure on false memory formation. *Psychonomic Bulletin & Review*, *21*(6), 1551–

    1556. https://doi.org/10.3758/s13423-014-0639-9

Field, A. (2018). *Discovering Statistics Using IBM SPSS Statistics* (5th ed.). Sage Edge.

Kwak, H., Lee, C., Park, H., & Moon, S. (2010). What is Twitter, a social network or a news

    media? *WWW '10: Proceedings of the 19th International Conference on World Wide

    Web*, 591–600. https://doi.org/10.1145/1772690.1772751

Lacy, J. W., & Stark, C. E. (2013). The neuroscience of memory: Implications for the

      courtroom. Nature Reviews Neuroscience, 14(9), 649-658. doi:10.1038/nrn3563

Marder, N. S. (2011). An Introduction to comparative jury systems. *Chicago-Kent Law*

      Review, 86(2), 453-466. https://scholarship.kentlaw.iit.edu/cklawreview/vol86/iss2/3.

Mendes, K., Ringrose, J., & Keller, J. (2018). #MeToo and the promise and pitfalls of

      challenging rape culture through digital feminist activism. *European Journal of*

      Women's Studies, *25*(2), 236–246. https://doi.org/10.1177/1350506818765318

Miller, J. (2013). The New News Media: *Democratic implications of undergraduate*

      education and news consumption over social and traditional media [Thesis

      dissertation, Simon Fraser University]. Core.

      https://core.ac.uk/download/pdf/56379367.pdf

Petty, R. E., & Wegener, D. T. (2010). Attitude change: Multiple roles of persuasion

      variables. *Advanced Social Psychology: The State of the Science*, 217–259.

Rassin, E. (2016). Defining forensic psycho(patho)logy. In *The Handbook of Forensic*

      Psychopathology and Treatment. Routledge.

Segesten, A. D., Bossetta, M., Holmberg, N., & Niehorster, N. (2020). The cueing power of

      comments on social media: How disagreement in Facebook comments affects user

      engagement with news. *Information, Communication & Society* https://

doi.org/10.1080/1369118X.2020.1850836

St. Eve, Amy. J., & Zuckerman, M. A. (2012). Ensuring an impartial jury in the age of social

      media. *Duke Law & Technology Review*, *11*, 1–29.

Stoycheff, E., Pingree, J. R., Peifer J. T., & Sui, M. (2018) Agenda Cueing Effects of News

      and Social Media. *Media Psychology*, *21*(2), 182-201.

      https://doi.org/10.1080/15213269.2017.1311214

Tippet, E. C. (2018). The legal implications of the MeToo Movement. *Minnesota Law*

   Review, *57*.

   https://scholarship.law.umn.edu/cgi/viewcontent.cgi?article=1056&context=mlr

Tonry, M. (2006). Purposes and Functions of Sentencing. *Crime and Justice*, *34*(1), 1–52.

   https://doi.org/10.1086/503374

Appendix A: Negatively Cued Tweets

Margarette Boynsen
@MargeBoynsen

The Stallion case is astonishing. It is clear Boxter did it. But white businessman...This proves that if you have money you can get away with anything. There is clear evidence against the guys, and yet we are still debating on whether he is guilty or not? PLEASE #justice #JStallion

11:25 PM · Apr 22, 2021

284 Retweets   **127** Quote Tweets   **283** Likes

Robert Nassel
@BobbyNash

Boxter deserves way more than prison sentence.
#deathpenalty #Boxtercriminal #Criminalsystem #servejustice

9:54 AM · Jan 10, 2021

269 Retweets   **135** Quote Tweets   **291** Likes

Marque Golaz ✔
@MarqueGolaz

I just have no words. This is disgusting. Horrible. Devastating. EVIL. She did not deserve to die. I ask for JUSTICE TO BE SERVED!!! THIS NEEDS TO STOP!
#JessyStallions #BoxterGuilty

10:42 AM · Feb 4, 2021

321 Retweets   **92** Quote Tweets   **514** Likes

Lidya Lopez
@Lydya_

She was innocent. A young teen, at the beginning of her life. So much to give and receive. Boxter robbed her of her life, the opportunity to shine. May he pay for what he has done to her and her family. Boxter, may you suffer as much as you have made Jessy suffer
#JessyStallion

1:59 AM · Jan 13, 2021

263 Retweets   **38** Quote Tweets   **436** Likes

Barbara Jamesons
@BabeRocket

Boxter is 100% guilty. Just throw that bastard in jail and let him rot in it.
#justice #believeinthelegalsystem #sentencing #boxterguilty

4:31 PM · Mar 31, 2021

172 Retweets   **56** Quote Tweets   **437** Likes

Jackson Palope
@Jackson_Palo

In today's society people are not safe anymore. I cannot believe that little girls are being murdered so easily and freely. What are we supposed to do? Sit here and watch? I will not be frightened into keeping my teenage girl locked in the house.
#changesociety #societysafe

4:36 AM · Feb 4, 2021

183 Retweets   **76** Quote Tweets   **273** Likes

Appendix B: Positively Cued Tweets

Jonathan Stanson ✓
@StJohn

They wanted to find someone to blame, and they did. Boxter was in the wrong place at the wrong time. When will the police start protecting its people?
#freeBoxter #questionthesystem #Boxtercase

7:52 AM · Apr 14, 2021

198 Retweets   **321** Quote Tweets   **437** Likes

Lisabeth Biggens ✓
@Lizzy__Bigs

Typical case of a male being blamed for a girl's killing. How do you know it was him? There's no proof!
#freeBoxter #Jessyisnoinnocent

12:21 AM · Jan 18, 2021

123 Retweets   **75** Quote Tweets   **118** Likes

Mark Pepper
@PMark

BOXTER DIDN'T DO IT. LEAVE THE MAN ALONE! WAKE UP PEOPLE, THEY ARE LYING TO US. Re-open the investigation and take it seriously this time.
#Boxterinnocent #Boxtercase

4:22 PM · Mar 9, 2021

103 Retweets   **240** Quote Tweets   **337** Likes

Linda Branden
@Linda_Bran279

I empathize with Jessy Stallion's family…I feel for your loss and am close to you…but empathy should not get in the way with rationality. Boxter is clearly being framed! He is the victim of a broken system.
#innocent #freeBoxter #brokensytem

4:04 PM · Mar 1, 2021

376 Retweets   **75** Quote Tweets   **293** Likes

Marcella Bobbiess ✓
@Marcy19

Judge McCallen was found to be corrupted. What a surprise! No wonder the poor guy was sentenced with barely any evidence against him.
#questionthesystem #boxtercase #judgeMcCallen #corruption

9:43 AM · Dec 12, 2020

85 Retweets   **123** Quote Tweets   **369** Likes
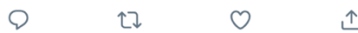
Juan Lopez
@Juan97

In name of all men who were convicted for the wrong reasons. For all the fathers who were taken away from their families because found guilty of a crime they did not commit. A minute of silence for all the men.
#wrongconviction #freeBoxter #Boxterinnocent

12:27 PM · Feb 28, 2021

283 Retweets   **107** Quote Tweets   **392** Likes

Appendix C: Mixed Tweets: Positively and Negatively Cued Tweets

Robert Nassel
@BobbyNash

Boxter deserves way more than prison sentence.
#deathpenalty #Boxtercriminal #Criminalsystem #servejustice

9:54 AM · Jan 10, 2021

269 Retweets   **135** Quote Tweets   **291** Likes

Barbara Jamesons
@BabeRocket

Boxter is 100% guilty. Just throw that bastard in jail and let him rot in it.
#justice #believeinthelegalsystem #sentencing #boxterguilty

4:31 PM · Mar 31, 2021

172 Retweets   **56** Quote Tweets   **437** Likes

Jonathan Stanson ✔
@StJohn

They wanted to find someone to blame, and they did. Boxter was in the wrong place at the wrong time. When will the police start protecting its people?
#freeBoxter #questionthesystem #Boxtercase

7:52 AM · Apr 14, 2021

198 Retweets   **321** Quote Tweets   **437** Likes

Linda Branden
@Linda_Bran279

I empathize with Jessy Stallion's family...I feel for your loss and am close to you... but empathy should not get in the way with rationality. Boxter is clearly being framed! He is the victim of a broken system.
#innocent #freeBoxter #brokensytem

4:04 PM · Mar 1, 2021

376 Retweets   **75** Quote Tweets   **293** Likes

Marque Golaz ✔
@MarqueGolaz

I just have no words. This is disgusting. Horrible. Devastating. EVIL. She did not deserve to die. I ask for JUSTICE TO BE SERVED!!! THIS NEEDS TO STOP!
#JessyStallions #BoxterGuilty

10:42 AM · Feb 4, 2021

321 Retweets   **92** Quote Tweets   **514** Likes

Mark Pepper
@PMark

BOXTER DIDN'T DO IT. LEAVE THE MAN ALONE! WAKE UP PEOPLE, THEY ARE LYING TO US. Re-open the investigation and take it seriously this time.
#Boxterinnocent #Boxtercase

4:22 PM · Mar 9, 2021

103 Retweets   **240** Quote Tweets   **337** Likes

Appendix D: Fictitious Criminal Case: The Murder of Jessy Stallions

Mr. Lucky Boxter is a Caucasian, 33-year-old, male. Mr. Boxter is a wealthy and successful businessman.

In November 2020 Mr. Boxter was interrogated by the police for the alleged murder of Jessy Stallions, a Caucasian, 17-year-old girl.

Jessy's body was found in a lake near her home on October 16th, 2020. Her body, despite the damage made by the water, showed clear signs of struggle. Her body was found bruised and with bite marks on her legs. Proof of rape was found.

It is thought for the body to have been left at the lake, but for the crime to have occurred elsewhere.

Through further investigation Mr. Boxter's record shows he has been reported for both sexual harassment in the workplace and alleged sexual assault. However, no action was taken regarding these sexual allegations. He is currently being tried for the murder of Jessy Stallions and could be sentenced with life in prison.

Appendix E: Questionnaire of Memory and Attitude towards Criminals (QMAC)

*The numbers in parentheses indicate the coding for statistical analysis and/or how to calculate the total of the questionnaire.

<u>Memory section</u>

This section of the questionnaire evaluates what is remembered of the shown criminal case.

1. What crimes did the accused commit?
   a. Murder and sexual assault   (1)
   b. Murder and Theft
   c. Sexual assault and battery
   d. This information was not provided

2. What crime is the accused being tried for:
   a. Sexual assault
   b. Murder   (1)

3. The victim was a male:
   a. True
   b. False   (1)

4. What was the age of the victim?
   a. 22
   b. 13
   c. 17   (1)
   d. This information was not provided

5. The accused has already been convicted:
   a. True
   b. False   (1)

6. The accused was convicted for sexual harassment and sexual assault
   a. True
   b. False   (1)

7. The victim's body was dragged to the location it was found in:
   a. True
   b. False
   c. This information was not provided   (1)

Appendix E (Continued)

Appendix E (Continued): Questionnaire of Memory and Attitude towards Criminals (QMAC)

8. The accused's sperm was found on the victim's body
    a. True   (1)
    b. False

9. The victim's face had a bite mark:
    a. True
    b. False   (1)

10. The accused was given life in prison:
    a. True
    b. False   (1)

11. What was the status of the sexual harassment and sexual assault claims?
    a. Tried and found guilty
    b. Tried and found innocent
    c. They are only allegations, but proof is being gathered
    d. They are only allegations. No trial yet   (1)

12. The accused was…
    a. Hispanic
    b. African descending
    c. Caucasian   (1)
    d. This information was not provided

13. The case found incriminating evidence such as:
    a. Fingerprints
    b. DNA
    c. Hair
    d. None of the above   (1)

Appendix E (Continued): Questionnaire of Memory and Attitude towards Criminals (QMAC)

Attitude section

This section evaluated participant's attitude towards the fictitious criminal case

1. What level of severity do you assign to the described criminal act in this case?

    a. Not severe at all   (1)

    b. A little sever   (2)

    c. Neither sever nor not severe   (3)

    d. Very severe   (4)

    e. Extremely severe   (5)

2. This case angers me so much I would take actions into my own hands

    a. Strongly disagree   (1)

    b. Somewhat disagree   (2)

    c. Neither agree nor disagree   (3)

    d. Somewhat agree   (4)

    e. Strongly agree   (5)

3. In your opinion, the accused is

    a. Innocent   (1)

    b. Guilty   (2)

        i. How certain are you that the accused is guilty (from 0 to 100%)?

            0-100   (%)

4. What sentence does the accused deserve:

    a. Community service   (1)

    b. Prison sentence   (2)

        i. Please specify the number of years below   (#)

    c. Life in prison   (3)

    d. Death penalty   (4)

    e. Other

        i. Please specify

Appendix E (Continued): Questionnaire of Memory and Attitude towards Criminals (QMAC)

5. How evil do you deem the accused to be?
   a. Not evil at all   (1)
   b. A little evil   (2)
   c. Neither evil nor not evil   (3)
   d. Very evil   (4)
   e. Extremely evil   (5)

6. How much do you agree with the statement that the accused should not be given a
   second change?
   a. Strongly disagree   (1)
   b. Somewhat disagree   (2)
   c. Neither agree nor disagree   (3)
   d. Somewhat agree   (4)
   e. Strongly agree   (5)

7. How much do you think the victim's actions contributed to the killing? With 0 being
   not responsible at all and 100 being completely responsible – it is her own fault
   a. 0-100   (%)

Appendix F: Original Answers to Question 4, option "Other", of the Attitude QMAC Section

Please note that the below answers are the original and unaltered responses by participants

1. This answer assumes the accused is guilty. Until the case moves forward, the accused has a right to a fair trial.

2. Innocent until proven guilty

3. If found guilty, prison + tbs

4. Nothing until further notice. Innocence until proven guilty.

5. Depends on the evidence against accused

6. I am unsure whether the accused in guilty so hard to answer

7. Considering the way justice is served in our society, I would say the accused deserves a prison sentence of 30+ years, etc. However, I personally think the justice system often lacks focus on rehabilitation and placing someone in a cell for years to rot is not beneficial. ALSO, I don't remember reading why Lucky Boxster was considered a suspect (i.e. DNA evidence, eyewitness, ...), so my answer for many of these questions also depends on whether he actually is or not obviously.

8. I didn't see any proof but if he was guilty I would say he deserves life

9. If physical evidence is also recovered, not only circumstantial I would not oppose the death penalty

10. There is not enough evidence to assume for sure that he did it

11. any sentence as defined by state laws if proven guilty

12. Life in prison in case of guiltiness

13. 40 years (in the case he indeed commit sexual assault + murder)

14. No sentence, until there is proof he did something to the victim. Or being held in custody until further research is complete.

15. I cannot judge now based on absence of convicting evidenc

Appendix F (Continued): Original Answers to Question 4, option "Other", of the Attitude

QMAC Section

16. We were not given any evidence that the accused actually committed the crime. We were told he was interrogated, not convicted. So for now he is innocent and should have no sentence.

17. This is difficult because it seems like they don't even have hard evidence that he did it? So I have to say keep him out of prison until they find more information on the trial

18. The accused should get a sentence for the sexual harassment claims at work. But considering innocent until proven guilty, until there is proof that it was the accused to do such vile acts to a girl he should not be found guilty for sexual assault and murder.

19. None, because no evidence was provided

20. Prison + psichiatric therapy

21. If the accuse indeed is proven to have caused the crime then death penalty. But it has to be proved with as many forensics as possible reatment.
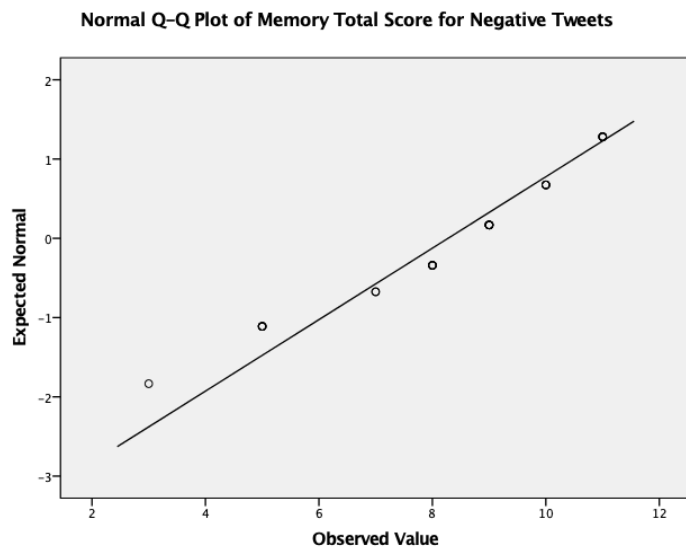
Appendix G: Graphs for ANOVA Assumptions: Normality Plots for Memory Accuracy of the

Criminal Case

Figure 1. *Normality Plot on Memory Accuracy of the Criminal Case shown for the group exposed to no Tweets*
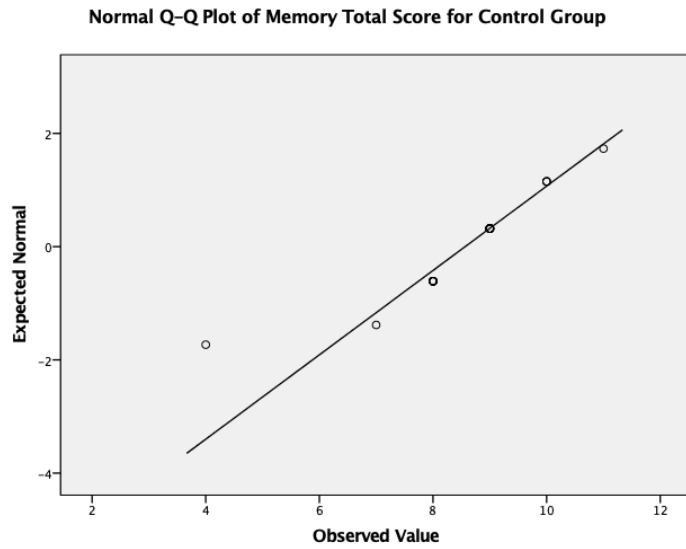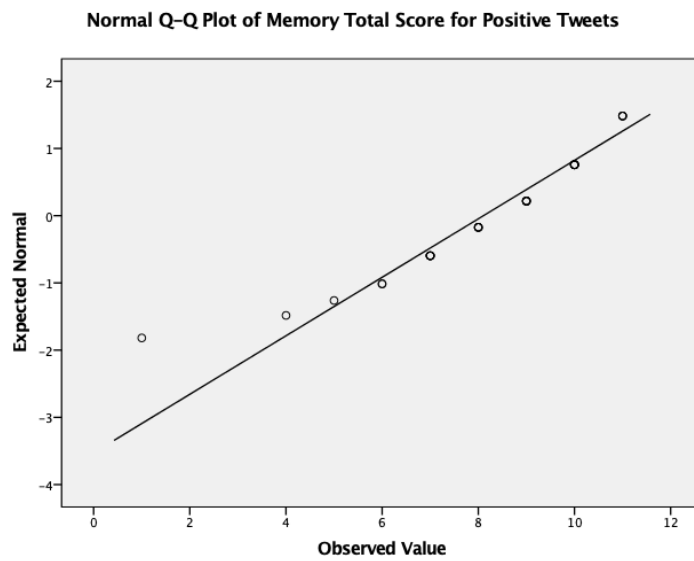

Figure 2. *Normality Plot on Memory Accuracy of the Criminal Case shown for the group exposed to Negative Tweets*
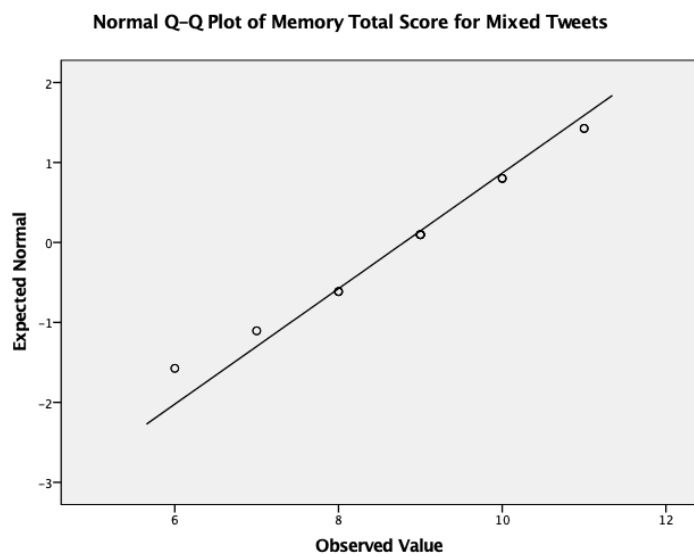
Appendix G (continued)

Figure 3. *Normality Plot on Memory Accuracy of the Criminal Case shown for the group exposed to Positive Tweets*
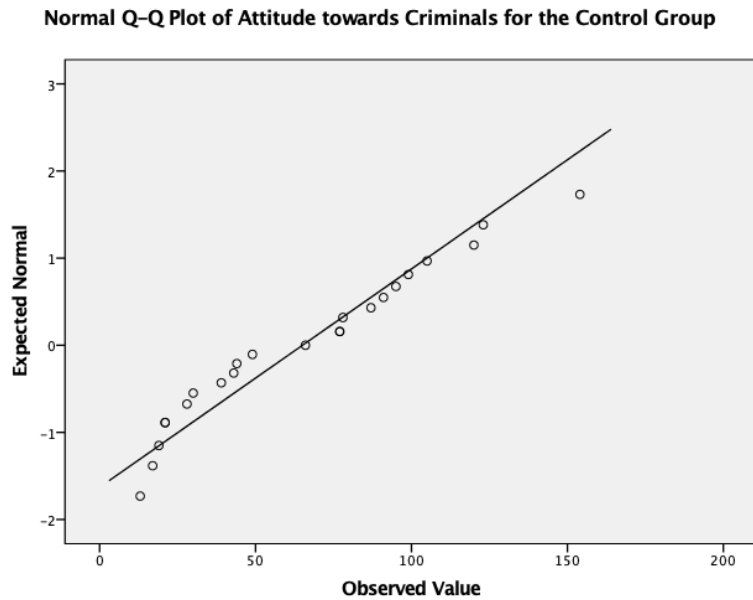

Figure 4. *Normality Plot on Memory Accuracy of the Criminal Case shown for the group exposed to Mixed Tweets*
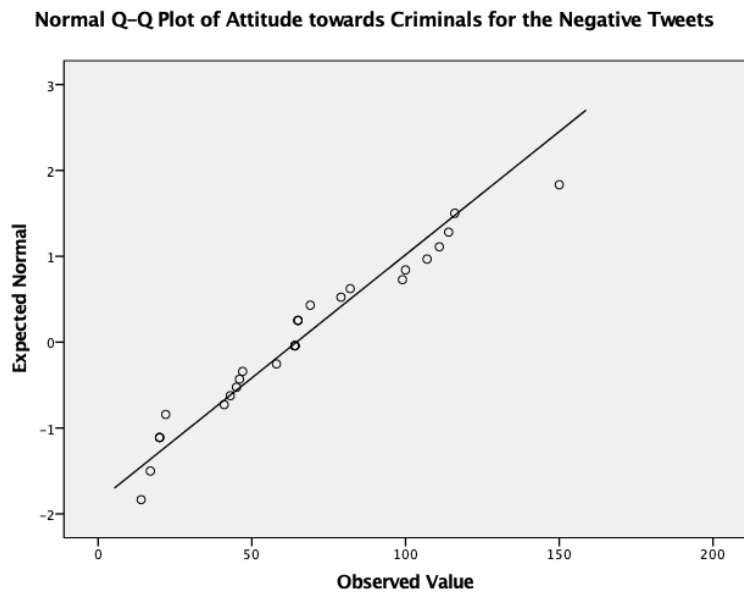
Appendix H: Graphs for ANOVA Assumptions: Normality Plots for Attitude towards the Criminal

Case

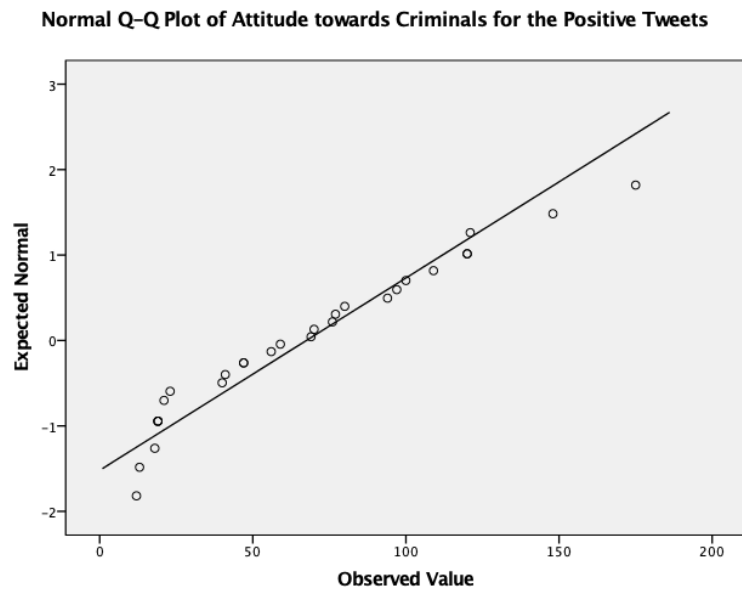**Figure 5**. *Normality Plot for the group exposed to no Tweets and Attitude towards Criminals*

Figure 6. *Normality Plot for the group exposed to Negative Tweets and Attitude towards Criminals*

Appendix H (continued)

Figure 7. *Normality Plot for the group exposed to Positive and Attitude towards Criminals*

Figure 8. *Normality Plot for the group exposed to Mixed tweets and Attitude towards Criminals*