EXHIBIT 8

UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

E. JEAN CARROLL, *Plaintiff,* v. DONALD J. TRUMP, in his personal capacity, *Defendant.*	No. 20 Civ. 7311 (LAK) (JLC)

EXPERT REPORT OF PROFESSOR ASHLEE HUMPHREYS, PHD

October 14, 2022

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I. INTRODUCTION

A. Qualifications

I am a Professor of Integrated Marketing Communications at Medill School of Journalism and Professor of Marketing at the Kellogg School of Management, Northwestern University. I hold a Doctorate in Marketing from the Kellogg School of Management with a concentration in Cultural Sociology and a Bachelor of Arts degree in Economics and Philosophy from Northwestern University.

I have been on the faculty at Northwestern University for 14 years, regularly teaching classes on Social Media, Consumer Research, and Marketing Research. I instruct students on both the strategic and analytical tasks of Marketing, which include assessing the impact of social media campaigns and strategically directing a portfolio of social media tools to pursue managerial goals involving persuasion, advertising, market growth, and branding.

My current research focuses on social media and online communities. I am the author of *Social Media: Enduring Principles* (Oxford University Press, 2016), a review and synthesis of the empirical social science research on social media. My research on social media includes a project looking at the development of norms and institutions on social media platforms like Wikipedia and YouTube. I also have conducted recent research in the area of online search and search engine optimization, including a project in which I use text analysis to identify consumer goals that, when matched, can optimize advertising spending and increase click-through rates. In this work, I have developed and refined the method of automated text analysis, which I use to analyze textual data—a method I helped introduce to Marketing.

My broader research agenda concerns the role of institutions in markets. My dissertation research examined how markets are created through shifts in social structure using the case of casino gambling in America. This research ("Megamarketing: The Creation of Markets as a Social Process, *Journal of Marketing*, 2010) was selected as a lead article in the *Journal of Marketing*.

I have received several accolades for my research. I was runner up for the Maynard Award for best paper in Marketing. I have also won the Sidney J. Levy award in 2010 for the contribution of my dissertation research to Consumer Culture Theory. In addition, I was named an MSI Young Scholar in 2012 and have been selected as an MSI Scholar in 2020, one of a select group of 35 Marketing Scholars who are counted "amongst the most prominent marketing scholars in the world," according to Barbara Kahn, MSI's Executive Director.

My full CV and list of matters in which I have testified is attached as Appendix A.

B. Assignment

I was engaged by Kaplan Heckler & Fink LLP on behalf of E. Jean Carroll to create an analytic model to (1) estimate the number of impressions for the allegedly defamatory statements ("Statements") that were made by Donald Trump on June 21, 22, and 24, 2019, and circulated on social and traditional media ("Impressions Model"), (2) analyze the impact, if any, of these Statements by estimating the percentage of people who may have been receptive to these Statements and assess the damage to Ms. Carroll's reputation and person brand ("Impact Model"), and (3) provide a model to estimate costs for reputational repair based on the impact of those impressions ("Damages Model") on behalf of Ms. Carroll in connection with the above-

captioned case.[1, 2]

The analysis detailed in this report provides an estimate of the impressions across social and traditional media channels and their reputational impact in order to assess reputational harm based on the information provided to me by Counsel and my independent research. Specifically, it takes into account the multi-channel dissemination of the Statements across social media like Twitter, traditional media like the *New York Times* and CNN, and websites like the *Huffington Post* and the *Washington Examiner*.

My analysis is presented as of October 14, 2022. On October 12, 2022, Mr. Trump made a new statement regarding Ms. Carroll, reiterating many of the defamatory claims against Ms. Carroll.[3] Given the recency of this statement, and that the extent of its dissemination is not yet known, it has not been incorporated into the models used to calculate damages to Ms. Carroll's reputation. I reserve the right to amend or supplement my opinions in consideration of this new information or if other new information becomes available to me.

C. Summary of Opinions

After reviewing the data provided in this case, performing independent research and analysis, and based on my own professional background, prior research, education, and more

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1 I was assisted in the preparation of this report by a team of research assistants at Voluble Insights, whom I supervised. Throughout my report, I use the word "I" to refer to work conducted by myself or work Voluble implemented under my direction.

2 For the purposes of writing this report, I am being compensated at a rate of $600 per hour, subject to a 15 percent discount. I will be compensated at a rate of $1,000 per hour for deposition testimony, and at a rate of $1,000 per hour for trial testimony, subject to the same 15 percent discount. My compensation is in no way contingent on the nature of my findings, the presentation of my findings in this report or subsequent testimony, or the outcome of this or any other proceeding. I have no other interest in this proceeding.

3 https://truthsocial.com/@realDonaldTrump/posts/109158644496040450; https://truthsocial.com/@realDonaldTrump/posts/109158586745522514.

than a decade of experience in the field of digital communication and marketing, I conclude the following with a reasonable degree of certainty:

A. Person brands are well-known people who also possess a set of brand meanings and associations that have value. Person brands are formed through exposure in a media system. They have social and cultural capital and can become devalued when an unpredictable event occurs, or if a negative claim is made about the person. A person brand that has a general popular following can be especially harmed by negative claims, even if only a subset of the public believes the claims. Their reputation relies on a "generalized perception" among the public, and public opinions and individual beliefs can shift when people take cues from their surroundings, including what they learn in the media. The damage to a person brand can be severe and lasting, no matter if the person at issue is at fault or whether their primary followers believe the claims.

B. Once a popular advice columnist at *Elle* Magazine, Ms. Carroll had invested many years in forming and maintaining a person brand as a wise, personable, and insightful truth-seeker. As a celebrated writer, she had a broad readership, reaching about 4.5 million *Elle* readers.

C. Mr. Trump made the at-issue Statements on June 21, 22, and 24, 2019, about Ms. Carroll in response to her allegation that Mr. Trump had sexually assaulted her in the mid-1990s in the dressing room of a Bergdorf Goodman department store in New York City. These Statements made by Mr. Trump, an extraordinarily high-profile person, have received wide and sustained dissemination and media coverage.

D. A measure of the dissemination of the Statements is possible using an information cascade model to estimate impressions on social media and with ratings, circulation, and web traffic data to estimate impressions on traditional media. I have identified between **142,334,424 and 188,155,507 impressions** generated by Mr. Trump's Statements ("Impressions Model"). This very high number of impressions reflects the prominence of Mr. Trump, but nonetheless is a conservative estimate for the reasons I detail in the description of the Impressions Model.

E. The impressions Mr. Trump's Statements generated across online and traditional media impacted Ms. Carroll's person brand. It is possible to quantify some, but not all, of the negative impact. Through a qualitative analysis of media coverage, search trends, and comments about Ms. Carroll, it is clear that there was a significant shift in the nature of Ms. Carroll's person brand. Associations with her shifted from her role as an advice columnist to her association with Mr. Trump. A high volume of negative and vicious messages has continued to be posted up to the present, indicating that her person brand has been, and continues to be harmed.

F. In an attempt to quantify at least a portion of the impact these Statements had on Ms. Carroll's brand, I applied academic research and industry estimates related to audience composition to estimate that, of the impressions collected, an average of 25.45% of the impression recipients were likely receptive to Mr. Trump's message, resulting in an estimated range of **34,075,512 to 42,936,354 receptive impressions** that should be corrected (*i.e.,* impressions that may have been received by those who likely found those Statements credible; "Impact Model").

G. The utterance and circulation of Mr. Trump's Statements caused short- and long-term harm to Ms. Carroll's person brand, shifting perceptions associated with her person brand with the general public and specific perceptions amongst a group of people receptive to the claims. Ms. Carroll's reputational value has been diminished due to the Statements. This kind of reputational harm has long-lasting effect on her ability to capitalize on her person brand in the future because Ms. Carroll has lost control of her brand, which she worked for decades to develop.

H. A holistic, integrated campaign is needed to effectively create attitudinal change and in turn repair reputational damage. In such a campaign, the corrective message would need to come from a trusted source and would need to ensure that the audience is exposed to the message multiple times. For example, one such solution to reputation repair is to enlist the help of multiple online intermediaries and sources that consumers trust. The campaign would need to take into account where the target audience gets their news. Using my estimates for the quantifiable impact of Mr. Trump's Statements (*i.e.*, the **34,075,512 to 42,936,354** receptive impressions that should be corrected) and research related to exposures required and media considerations costs, I estimate that the cost to counteract the impact of the defamatory claims is between **$3,333,058.72 and $20,998,861.18** ("Damages Model"). Given the above-stated needs of the campaign, I believe the minimum appropriate corrective campaign to run would be the middle range, from $9,999,176.17 to $12,599,316.71.

I. My estimates of the impressions generated by the Statements, the quantification of the receptive impressions, and the costs of the corrective campaign are all conservative. Among other things, I consider only a subset of the impressions generated by Mr. Trump's Statements and do not attempt quantify the significant impact of Mr. Trump's status as then-President. Therefore, I undercount the receptive impressions and the costs needed to correct the receptive impressions.

The materials I considered are noted in this report, provided as appendices or native files, and/or listed in Appendix B. A glossary of technical terms used throughout my report can be found in Appendix C.

II. CASE BACKGROUND

A. The Parties

i. E. Jean Carroll

Elizabeth Jean (E. Jean) Carroll is a journalist, author, former writer for *Saturday Night Live*, and former advice columnist for *Elle* Magazine.[4] Ms. Carroll wrote for *Saturday Night Live* in the 1980s and hosted her own show called *Ask E. Jean* on MSNBC's predecessor, America's Talking, from 1994 to 1996.[5] Her work was featured in numerous major publications including *Rolling Stone*, *GQ*, and *Playboy*. Ms. Carroll's column for *Elle* Magazine, "Ask E. Jean," was at the time it was published, the longest running advice column in the United States.[6]

Ms. Carroll is also the author of numerous books including *Female Difficulties: Sorority Sisters*, *Rodeo Queens*, *Frigid Women*, *Smut Stars*, *and Other Modern Girls*, *Hunter: The Strange and Savage Life of Hunter S. Thompson*, *A Dog in Heat Is a Hot Dog and Other Rules to Live By*, *Mr. Right, Right Now*, and *What Do We Need Men For?: A Modest Proposal*.[7]

ii. Donald J. Trump

Donald John Trump is an American businessman, media personality, and politician who served as the 45th president of the United States from 2017 to 2021.[8] He was a real estate developer who owned and/or had his name on numerous hotels, casinos, golf courses, and other buildings in New York and around the world.[9] In 2004, Mr. Trump starred in "The Apprentice"

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4 https://www.elle.com/author/4913/e-jean/
5 https://www.usatoday.com/story/money/2019/07/03/e-jean-carroll-new-york-circuit-donald-trump-assault-accusation/1584135001/
6 https://www.amazon.com/E-Jean-Carroll/e/B000AP7CJM
7 https://www.goodreads.com/author/show/30738.E_Jean_Carroll
8 https://www.britannica.com/biography/Donald-Trump
9 https://www.britannica.com/biography/Donald-Trump

(later known as "The Celebrity Apprentice"), a reality television competition series where he judged aspiring business people based on his business experience.[10] He hosted for 14 seasons until 2015.[11]

In July 2016, Mr. Trump was nominated as the Republican presidential candidate and ultimately won the 2016 U.S. presidential election.[12] Throughout his time as president, Mr. Trump enjoyed significant support from Republican voters, with an average of 87% of Republicans saying they approved his handling of the job from 2017 through 2020.[13] After serving one term as president, Mr. Trump lost his bid for re-election and officially left the White House in January 2021.[14]

Since leaving office, there have been a number of investigations into Mr. Trump, his business dealings, and his handling of classified information.[15] Despite these investigations, polls show that support for Mr. Trump has remained consistent. Polls tracked by FiveThirtyEight show that Mr. Trumps maintained a favorability rating of around 40% from February 2021 through October 2022.[16] Favorability among Republican voters is even higher. A September 2022 New York Times-Siena College poll found that 90% of Republican respondents had either a very favorable or somewhat favorable impression of Mr. Trump.[17] Further, the same poll found

10 https://www.nytimes.com/2020/09/28/arts/television/trump-taxes-apprentice.html
11 https://www.cbsnews.com/news/donald-trump-officially-fired-from-the-celebrity-apprentice/
12 https://www.cnn.com/2016/07/19/politics/donald-trump-republican-nomination-2016-election
13 https://www.pewresearch.org/fact-tank/2020/08/24/trumps-approval-ratings-so-far-are-unusually-stable-and-deeply-partisan/
14 https://time.com/5907973/donald-trump-loses-2020-election/; https://www.nytimes.com/2021/01/20/us/politics/biden-president.html
15 https://time.com/6212677/donald-trump-investigations-explained/
16 https://projects.fivethirtyeight.com/polls/favorability/donald-trump/
17 https://www.nytimes.com/interactive/2022/09/16/upshot/september-2022-times-siena-poll-crosstabs.html

that 91% of Republican respondents indicated they would vote for Mr. Trump, assuming he were the Republican nominee and President Biden were the Democratic nominee in the 2024 election.[18] In an August 2022 Ipsos poll, 59% of Republicans indicated that Mr. Trump should be the Republican party nominee for the 2024 election.[19]

B. Allegedly Defamatory Statements

Mr. Trump made a series of three Statements in which he made allegedly defamatory claims about Ms. Carroll.[20] These Statements were made in response to the allegation by Ms. Carroll in an excerpt from her forthcoming book that Mr. Trump sexually assaulted her in the mid-1990s in the dressing room of a Bergdorf Goodman department store in New York City.[21]

The first of the three Statements was released by Mr. Trump on June 21, 2019:

> "Regarding the 'story' by E. Jean Carroll, claiming she once encountered me at Bergdorf Goodman 23 years ago. I've never met this person in my life. She is trying to sell a new book—that should indicate her motivation. It should be sold in the fiction section.
>
> "Shame on those who make up false stories of assault to try to get publicity for themselves, or sell a book, or carry out a political agenda—like Julie Swetnick who falsely accused Justice Brett Kavanaugh. It's just as bad for people to believe it, particularly when there is zero evidence. Worse still for a dying publication to try to prop itself up by peddling fake news—it's an epidemic.
>
> "Ms. Carroll & New York Magazine: No pictures? No surveillance? No video? No reports? No sales attendants around?? I would like to thank Bergdorf Goodman for confirming that they have no video footage of any such incident,

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18 https://www.nytimes.com/interactive/2022/09/16/upshot/september-2022-times-siena-poll-crosstabs.html

19 https://www.ipsos.com/en-us/news-polls/Republican-voters-continue-to-view-Trump-as-the-partys-leader

20 Throughout this report, when I use the phrase "defamatory statements," I mean "allegedly defamatory statements" and am basing my opinion on the assumption that these statements are defamatory.

21 https://www.cnbc.com/2019/06/21/e-jean-carroll-says-donald-trump-sexually-assaulted-her.html

because it never happened.

"False accusations diminish the severity of real assault. All should condemn false accusations and any actual assault in the strongest possible terms.

"If anyone has information that the Democratic Party is working with Ms. Carroll or New York Magazine, please notify us as soon as possible. The world should know what's really going on. It is a disgrace and people should pay dearly for such false accusations."[22]

The second Statement was made to reporters at the White House on June 22:

[Reporter]: [Y]ou had said earlier that you never met E. Jean Carroll. There was a photograph of you and her in the late 1980's—

[Trump]: I have no idea who this woman is. This is a woman who has also accused other men of things, as you know. It is a totally false accusation. I think she was married—as I read; I have no idea who she is—but she was married to a, actually, nice guy, Johnson—a newscaster.

[Reporter]: You were in a photograph with her.

[Trump]: Standing with coat on in a line—give me a break—with my back to the camera. I have no idea who she is. What she did is—it's terrible, what's going on. So it's a total false accusation and I don't know anything about her. And she's made this charge against others.

And, you know, people have to be careful because they're playing with very dangerous territory. And when they do that—and it's happening more and more. When you look at what happened to Justice Kavanaugh and you look at what's happening to others, you can't do that for the sake of publicity.

New York Magazine is a failing magazine. It's ready to go out of business, from what I hear. They'll do anything they can. But this was about many men, and I was one of the many men that she wrote about. It's a totally false accusation. I have absolutely no idea who she is. There's some picture where we're shaking hands. It looks like at some kind of event. I have my coat on. I have my wife standing next to me. And I didn't know her husband, but he was a newscaster. But

[22] Complaint, ¶82

> I have no idea who she is—none whatsoever.
>
> It's a false accusation and it's a disgrace that a magazine like New York—which is one of the reasons it's failing. People don't read it anymore, so they're trying to get readership by using me. It's not good.
>
> You know, there were cases that the mainstream media didn't pick up. And I don't know if you've seen them. And they were put on Fox. But there were numerous cases where women were paid money to say bad things about me. You can't do that. You can't do that. And those women did wrong things—that women were actually paid money to say bad things about me.
>
> But here's a case, it's an absolute disgrace that she's allowed to do that.[23]

The final Statement was published in an interview with *The Hill* on June 24, 2019: "I'll say it with great respect: Number one, she's not my type. Number two, it never happened. It never happened, OK?"[24]

I understand that these three Statements contained several allegedly defamatory claims about Ms. Carroll, including: (1) that Mr. Trump did not rape Ms. Carroll, (2) that he had never met Ms. Carroll, (3) that he had no idea who Ms. Carroll was, (4) that she had made up the allegation to increase the sales of her book, (5) that she made up the allegation to carry out a political agenda, (6) that she made up the allegation as part of a conspiracy against him by the Democratic Party, (7) that she had falsely accused other men of sexual assault, and (8) that she had been paid money to invent the rape accusation against him.[25]

As discussed below, these three Statements received widespread circulation across print,

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[23] Complaint, ¶¶ 91
[24] Complaint, ¶97
[25] Complaint, ¶¶81-100

web, social, and traditional media outlets and directly impacted Ms. Carroll's brand.

III. THEORETICAL BACKGROUND

A. Reputation and Reputational Damage

Reputation is fundamentally a social concept; one's reputation is determined by the social esteem held among a bounded group of people, up to and including the public sphere at large.[26] It has value in the sense that it gives someone social standing and respect in society. Reputation has been conceptualized as property—something that has economic value—and as dignity—something that has moral value.[27]

Reputation is determined in the sphere of generalized public opinion, which encompasses individual beliefs but is more than the sum of them, a "generalized perception."[28] What people think their friends, family, coworkers, and other members of their community think is an important determinate of an individual's belief, particularly if one does not have strong opinions about an issue or person. Over time, the beliefs of a subset of society, including what is represented in the media, can shift in public opinion and generalized associations as people take cues from those around them who believe differently.[29] If someone is receptive to a claim—if it is congruent with their other beliefs and/or if the claim comes from a source they trust—they

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[26] Weber, Max (1922/1978), *Economy and Society: An Outline of Interpretive Sociology*, Vol. 2: University of California Press.

[27] Ardia, David S. (2010) "Reputation in a Networked World: Revisiting the Social Foundations of Defamation Law," *Harvard Civil Rights-Civil Liberties Law Review*, 45(2), 261-328, p. 261.

[28] Weber, Max (1922/1978), *Economy and Society: An Outline of Interpretive Sociology*, Vol. 2: University of California Press. Sharman, Jason C. (2007) "Rationalist and constructivist perspectives on reputation." *Political Studies* 55, no. 1: 20-37.

[29] Dewenter, Ralf, Melissa Linder, and Tobias Thomas (2019), "Can Media Drive the Electorate? The Impact of Media Coverage on Voting Intentions," *European Journal of Political Economy*, 58, 245-61. Huang, J., *et al.* (2021). "Large-scale quantitative evidence of media impact on public opinion toward China," *Humanities and Social Sciences Communications,* 8(1), 1-8.

may only need to be exposed to it once to form a belief.[30] If they are less receptive to the claim, mere exposure, again from a trusted source, can eventually change attitudes through repetition.[31] An individual's receptivity to a claim is based on the process through which people process new information, form beliefs, and integrate beliefs with prior knowledge.[32] According to the balance theory of attitudes,[33] when people do not have a belief about a person, it is relatively easy to create a belief, particularly when it is congruent with their other beliefs.[34] However, once people have a belief, it is harder to change that belief and requires multiple exposures, often from several different, trusted sources.[35]

i. Reputational Repair

Reputational repair is a matter of public good and must occur in relation to the public sphere and the sphere in which it was originally damaged. To quantify the damage to one's reputation, one must look to the *cost to repair* rather than the *cost to inflict* reputational harm. I

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30 Heider, Fritz (1946), "Attitudes and Cognitive Organization," *The Journal of Psychology*, 21(1), 107-12, Hummon, Norman P and Patrick Doreian (2003), "Some Dynamics of Social Balance Processes: Bringing Heider Back into Balance Theory," *Social Networks*, 25 (1), 17-49.

31 Cialdini, Robert B (1987), *Influence*, Vol. 3: A. Michel Port Harcourt, Sterrett, David, Dan Malato, Jennifer Benz, Liz Kantor, Trevor Tompson, Tom Rosenstiel, Jeff Sonderman, and Kevin Loker (2019), "Who Shared It?: Deciding What News to Trust on Social Media," *Digital Journalism*, 7 (6), 783-801.

32 Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.), Action control: From cognition to behavior. Berlin, Heidelberg, New York: Springer-Verlag. (pp. 11-39).; Heider (1946); Cacioppo, J. T. and R. E. Petty (1980), "Persuasiveness of Communications Is Affected by Exposure Frequency and Message Quality: A Theoretical and Empirical Analysis of Persisting Attitude Change," *Current Issues and Research in Advertising*, 3 (1), 97-122.

33 Heider, Fritz (1946), "Attitudes and Cognitive Organization," *The Journal of Psychology*, 21 (1), 107-12.

34 Kunda Z. (1990), The case for motivated reasoning. Psychological Bulletin, 108(3):480-98.; Housholder and LaMarre (2014), Facebook Politics: Toward a Process Model for Achieving Political Source Credibility Through Social Media, *Journal of Information Technology & Politics*, 11:368–382; Festinger, L. (1962), "Cognitive dissonance." *Scientific American* 207(4): 93-106.; Kahneman and Tversky (1974), Judgment under Uncertainty: Heuristics and Biases, Vol. 185, No. 4157, pp. 1124-1131.

35 Cacioppo, John & Petty, Richard. (1979). Effects of message repetition and position on cognitive response, recall, and persuasion. Journal of Personality and Social Psychology. 37. 97-109.; Housholder and LaMarre (2014); Weiss, Robert Frank (1969), "Repetition of Persuasion," *Psychological Reports*, 25 (2), 669-70.

therefore provide three models: a model that estimates the impressions that initially created the reputational beliefs, a model to estimate the percentage of readers or viewers who were receptive to those claims, and a model of damages that estimates the cost to repair reputational damage.

ii. Person Brands and Brand Value

Human, or person, brands are "well-known persona[e] who [are] the subject of marketing communications efforts," and have been shown to enhance consumers' feelings of autonomy and relatedness to the brand and others.[36] Starting from attachment theory, scholars have researched the ways in which consumers and audiences form attachments to people—who themselves become brands—through exposure in a media system.[37] Human brands are both biographical people and brands—constellations of meaning—and these two elements form interdependences as the actions of biographical people can affect their brand value.[38] Brand value is the aggregate of associations with a brand.[39] If those associations change, brand value can be diminished.

Person brands can become devalued when unpredictable or unforeseen events occur to them.[40] Fournier and Eckhardt (2019), for example, find that mortality, hubris, unpredictability, and social embeddedness underlie the value of human brands and have the potential to build or

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36 Thomson, M. (2006). Human Brands: Investigating Antecedents to Consumers' Strong Attachments to Celebrities. *Journal of Marketing*, 70(3), 104–119, p. 104.

37 Dyer (1979) Heavenly Bodies: Film Stars and Society; Thomson (2006); Parmentier, Marie-Agnès, Eileen Fischer, and A Rebecca Reuber (2013), "Positioning Person Brands in Established Organizational Fields," Journal of the Academy of Marketing Science, 41 (3), 373-87; Fournier, S., & Eckhardt, G. M. (2019). Putting the Person Back in Person-Brands: Understanding and Managing the Two-Bodied Brand. Journal of Marketing Research, 56(4), 602–619.

38 Fournier and Eckhardt (2019).

39 Keller, K.L. (1993) Conceptualizing, Measuring, and Managing Customer-Based Brand Equity, Journal of Marketing, 57:1, 1-22.

40 Dyer (1979) *Heavenly Bodies: Film Stars and Society*; Gamson (1994) *Claims to Fame: Celebrity in Contemporary America*.

diminish brand value. As Fournier and Eckhardt say, "the meaning and daily manifestations of person-brands are inherently socially embedded in a web of relationships that the person-brand cannot control, escape, or ignore."[41] That is, if an unpredictable event or claim is made about the person, it affects their brand because of their embeddedness within a social system.[42] The damage to a person brand can be severe and lasting. This damage can persist, *even when* they are not at fault.[43] It can persist *even when* their primary fans or followers do not believe the claims.[44] Loss of value for a person brand, particularly a person brand that has a general popular following, can be harmed even if only a subset of the public believes the negative claims. Person brands have social and cultural capital.[45] This capital can become harmed, thereby affecting their overall brand value to a popular audience.

Although it may be difficult to repair reputational damage on social media, it is possible, actionable, and important to the restoration of reputation. As Ardia (2010) notes:

> Although the global communication networks that are the hallmarks of our networked society have brought new reputational challenges, they also provide novel solutions to prevent and ameliorate those harms. One such solution is to enlist, through legal and social incentives, the help of private online intermediaries such as content hosts and search providers. These intermediaries play a central role in community governance and are often in a position to

41 Fournier and Eckhardt (2019) p. 611.
42 Fournier and Eckhardt (2019).
43 David, John (2016), *How to Protect (or Destroy) Your Reputation Online: The Essential Guide to Avoid Digital Damage, Lock Down Your Brand, and Defend Your Business*: Red Wheel/Weiser.
44 Luedicke, Marius K, Craig J Thompson, and Markus Giesler (2010), "Consumer Identity Work as Moral Protagonism: How Myth and Ideology Animate a Brand-Mediated Moral Conflict," *Journal of consumer research*, 36 (6), 1016-32.
45 Brooks, Gillian, Jenna Drenten, and Mikolaj Jan Piskorski (2021), "Influencer Celebrification: How Social Media Influencers Acquire Celebrity Capital," *Journal of Advertising*, 50 (5), 528-47, Parmentier, Marie-Agnès, Eileen Fischer, and A Rebecca Reuber (2013), "Positioning Person Brands in Established Organizational Fields," *Journal of the Academy of Marketing Science*, 41 (3), 373-87.

recognize and respond to reputational harms.[46]

The public in which the reputational harm originally occurred persists on social media and may have limited exposure to traditional media.[47] Given the fracture of media audiences in the last 10 years, new forms of media are required to reach what was formerly a relatively unified "public" of news readers and TV viewers. Accordingly, an attempt to repair reputational harm must now account for new channels of communication and for the importance of sources in the communication process.

B. Reputational Damage in a Complex Media System

Assessing reputational damage is complex when the public sphere is fragmented by aspects of digital technology such as filter bubbles, political polarization, ranking algorithms, reputational cues, such as followers, and the proliferation of claims both true and false. Understanding how the "public sphere" is constructed online requires understanding how social media platforms filter and display content and how multiple platforms—traditional television and print in addition to web and social media—disseminate information.

i. The Media System

When a prominent person makes a claim, it enters the media system, a network of platforms and people who circulate information.[48] As illustrated in Figure 1 below, the media

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46 Ardia (2010).

47 https://www.pewresearch.org/journalism/2020/01/24/democrats-report-much-higher-levels-of-trust-in-a-number-of-news-sources-than-republicans/

48 Chadwick, Andrew (2017), *The Hybrid Media System: Politics and Power*: Oxford University Press; Curran, James, Shanto Iyengar, Anker Brink Lund, and Inka Salovaara-Moring (2009) "Media System, Public Knowledge and Democracy: A Comparative Study," *European Journal of Communication*, 24 (1), 5-26; Gans, Herbert J (2004), Deciding What's News: A Study of CBS Evening News, NBC Nightly News, Newsweek, and Time: Northwestern University Press.

system consists of press briefings or reports; Associated Press or other syndication; print and web coverage by major print and broadcast news outlets; podcasts and radio; social media posts on Twitter and Facebook or other platforms; comments, retweets, and likes to a story; and, in some instances, re-coverage of the claims themselves in traditional journalism or social media,[49] to say nothing of word-of-mouth conversation and other informal channels such as rumor or gossip.[50] The spread of information, particularly when it originates from a high-profile individual like Mr. Trump, is vast and sweeping. The claims of high-profile figures tend to receive more coverage, and more sustained coverage, than others due to the routines of the newsroom and reporting and the effects of status on public attention.[51]

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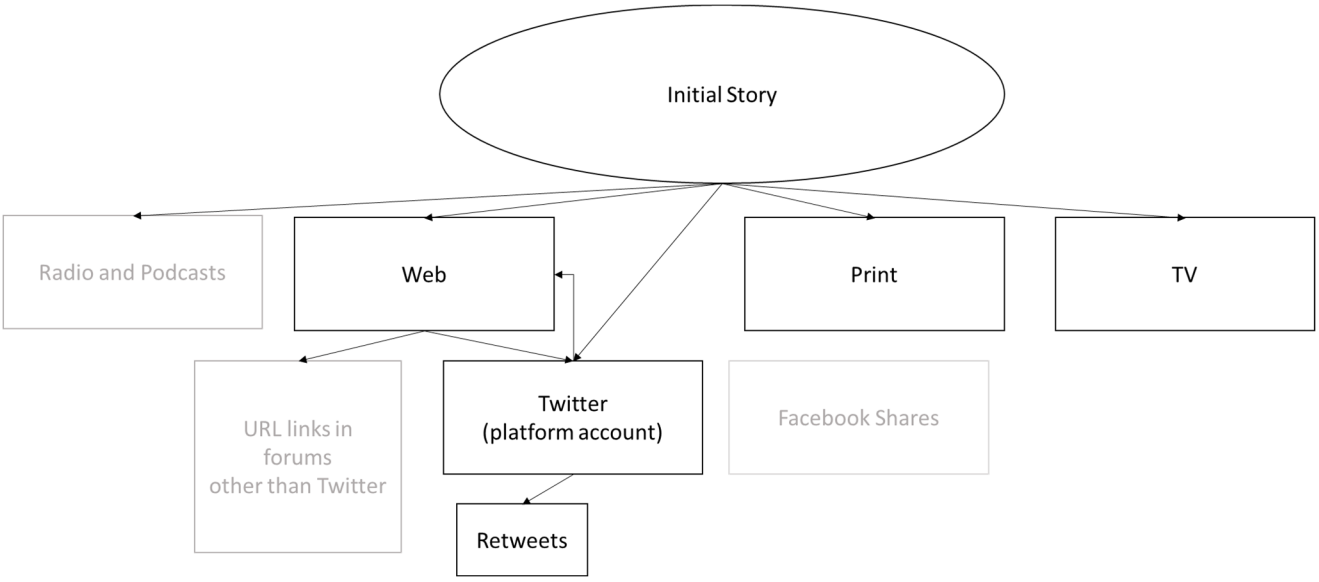
[49] Pfeffer, Jürgen, Thomas Zorbach, and Kathleen M Carley (2014), "Understanding Online Firestorms: Negative Word-of-Mouth Dynamics in Social Media Networks," *Journal of Marketing Communications*, 20 (1-2), 117-28; Tuchman, Gaye (1978), *Making News: A Study in the Construction of Reality*, New York: Free Press; Curran (2009); Messner, Marcus and Marcia Watson Distaso (2008), "The Source Cycle: How Traditional Media and Weblogs Use Each Other as Sources," *Journalism Studies*, 9 (3), 447-63.

[50] Rosnow, Ralph L. and Gary A. Fine (1976), *Rumor and Gossip: The Social Psychology of Hearsay*: Elsevier.

[51] Grabe, Zhou & Barnett, 1999; Gans, Herbert J (2004), *Deciding What's News: A Study of Cbs Evening News, Nbc Nightly News, Newsweek, and Time*: Northwestern University Press; Sigal, Leon V (1973), "Bureaucratic Objectives and Tactical Uses of the Press," *Public Administration Review*, 336-45; Whitney, D Charles, Marilyn Fritzler, Steven Jones, Sharon Mazzarella, and Lana Rakow (1989), "Geographic and Source Biases in Network Television News 1982 - 1984," Journal of Broadcasting & Electronic Media, 33 (2), 159-74.

Figure 1. The Media System[52]



Estimating the number of impressions for a Statement requires itemizing impressions from each source that disseminated the Statement. As Figure 1 above illustrates, that means that one would need to calculate and then sum the number of impressions from, at a minimum, (1) web and social media, (2) print, and (3) television.

ii. Social Media Impressions

On social media, impressions are estimated by calculating an information cascade.[53] To model the impact of the Statements, I rely on the prior work in sociology, computer science, and information systems concerning cascades and social networks. To understand what might be needed to change attitudes and repair reputation, I rely on research from social psychology and marketing concerning persuasion, media exposure, and developing effective integrated media

[52] I have grayed out media types that I am not considering in my quantitative analysis.

[53] Vosoughi, Soroush, Deb Roy, and Sinan Aral (2018), "The Spread of True and False News Online," *Science*, 359 (6380), 1146-51.

campaigns that include social media advertising. A brief overview of prior research is necessary to understand how impressions and damage are calculated.

Networks and Information Cascades. Unlike traditional media, messages travel on social media through a network—a system of users connected by exchanges of information. The network structure—how many connections one has and how many connections *those* connections have—can determine whether and how fast a message travels through the network. Social capital is represented in the network by the number of followers, or connections, one has, and greatly increases how broadly and deeply a message spreads. If one sends a message, it has the potential reach of not only all of one's followers, but all of *their* followers as well. Additionally, false news spreads more broadly, more deeply in the network, and faster online than true news.[54]

Social media is a hybrid of mass and face-to-face communication.[55] In mass media like television or news, there is typically one source that sends messages out to many readers or viewers (known as one-to-many communication). In face-to-face distribution of rumors, messages are transmitted from one person to another, usually one at a time. In social media, messages are transmitted both through hubs (one-to-many) and dyadically, creating chains of messages called information cascades. The time it takes for the message to move from one person to another in the information cascade is typically a day for traditional media but can be only a few hours to seconds for online communication, leading to rapid dissemination of both

[54] Vosoughi *et al.* (2018).
[55] Humphreys, A. (2015). Social Media: Enduring Principles, Oxford University Press.

true and false news.[56]

Impression Rate. Although the number of followers is a measure of reach, it represents only the potential impressions of a message. Information competes for attention in any attention economy.[57] Although a message may be tweeted to all followers, it is not necessarily seen by that number of followers for a variety of reasons: only a subset of followers will sign on that day, they follow a certain number of accounts, or ranking algorithms may not prioritize the content. For these reasons, information scientists incorporate an impression rate when calculating social media impressions, which represents the chance that the message was seen by a follower.[58]

Engagement Rate. Engagement rate represents the percent of people who engage with—retweet or like—a post. It has two components: 'liking rate' and 'retweet rate'. Here, I computationally consider only a subset of the engagement rate: the retweet rate, which is defined as the percent chance that the message was retweeted (or quote tweeted).[59] Only a fraction of social media posts are seen, and only a fraction of those are retweeted or liked. While not directly used in my calculation of impressions, 'liking' can be used in some algorithms to rank or promote content. In short, content that is 'liked' by more people is likely to be prioritized and therefore to be viewed by more people.[60] Engagement can be used to understand impact in that it reflects response to the statement. In social and web forms of media, comments can further

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56 Pfeffer *et al.* (2014); Vosoughi *et al.* (2018).

57 Davenport, T. H. and J. C. Beck (2013). The attention economy: Understanding the new currency of business, Harvard Business Press.

58 Wang et al. (2016); https://martech.org/facebook-twitter-impressions/.

59 A quote tweet is a retweet with comment (https://help.twitter.com/en/using-twitter/types-of-tweets). When reporting the total number of retweets generated by a post, Twitter combines the number of retweets with the number of quote tweets.

60 Newswhip (2019). 2019 Guide to Publishing on Facebook. http://go.newswhip.com/rs/647-QQK-704/images/Facebook%20Publishing%202019_Final.pdf.

constitute and amplify the impact of false information.[61]

Impression vs. Individuals. Scholarship on media viewership has provided two ways to measure audiences: as people and as impressions. New media like social and digital media tends to be measured in impressions[62] while old media tends to be measured in reach, or people.[63] One individual may receive multiple impressions. That is, some people may receive multiple exposures to a Statement while others may receive only one exposure. I assume that for media broadcast on television, one viewer represents one impression and do not consider the number of times a viewer was exposed to a statement during a broadcast, which is conservative. As I will discuss in the Damages section, I also lower my estimate of the number of exposures needed in a corrective campaign in order to account for the fact that the impressions generated by a corrective campaign may reach some people more frequently than others.

Calculating Impressions. To model the total number of impressions in an information cascade, one calculates and sums the number of impressions that occur at each level in the network.[64] To calculate the total number of impressions at each level requires also determining how many diffused to the next level of the network, multiplied by the chance those messages were seen, and then adding the number of impressions at the next level, and so on (see Figure 2 below).

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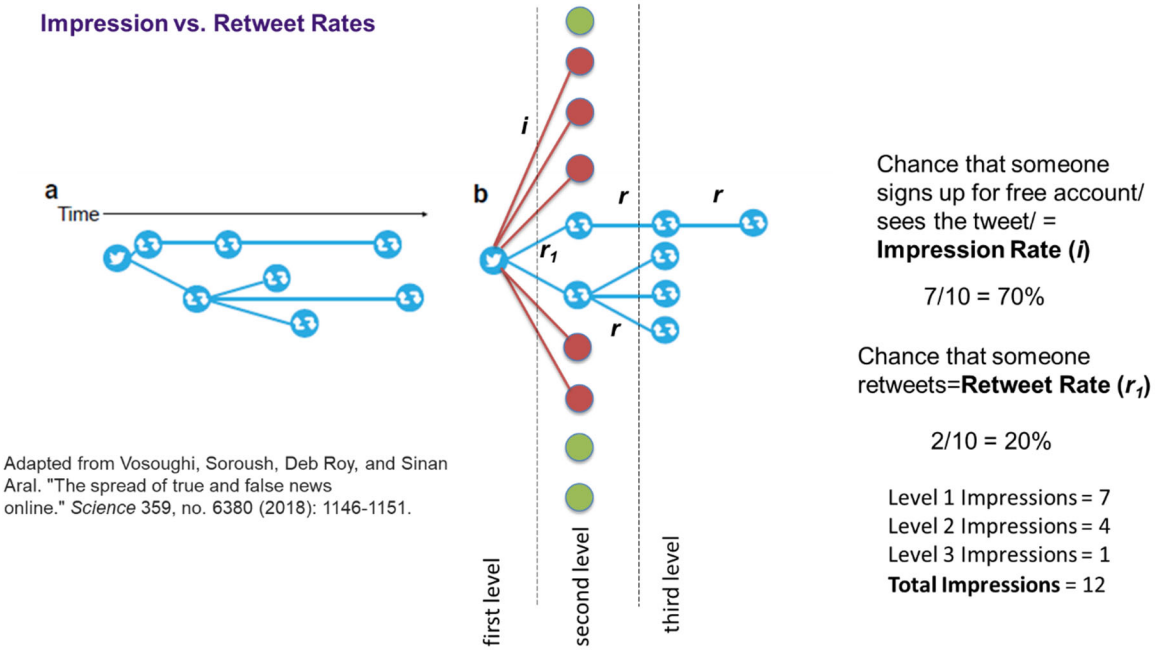
61 Vosoughi *et al.* (2018).
62 https://theraveagency.com/blog/finding-the-value-in-twitter-impressions.
63 Gensch, Dennis and Paul Shaman (1980), "Models of Competitive Television Ratings," *Journal of Marketing Research*, 17 (3), 307-15, Picard, Robert G (1988), "Measures of Concentration in the Daily Newspaper Industry," *Journal of Media Economics*, 1 (1), 61-74.
64 Vosoughi *et al.* (2018).

Figure 2. Information Cascade



- *Social media.* Social media impressions are measured based on the number of followers to an account, the account's estimated impression rate, the number of retweets, the impression rate of retweeters, and their number of followers at the second level.

The Impressions Model section details the particular parameters chosen given this prior literature and the data presented in the case.

iii. Traditional Media Impressions

Methods for calculating the number of impressions generated by traditional, mass media have been in use since at least 1942.[65] Because ratings are tied to advertising revenue, metrics are carefully audited by services like Nielsen and the Alliance for Audited Media (AAM).[66]

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65 Buzzard, Karen (2012), *Tracking the Audience: The Ratings Industry from Analog to Digital.*

66 https://markets.nielsen.com/us/en/solutions/measurement/television/ and https://auditedmedia.com/Solutions/Print-Publisher-Audits.

Paradigms for measuring circulation and readership are well established in media and communication scholarship.[67] I therefore use the following measures of impression:

- *Television.* Television impressions are measured through viewership, the ratings derived from independently audited services like Nielsen.[68]
- *Print.* Print impressions are measured through circulation, the number of readers as reported by the AAM.[69]
- *Web impressions.* Though existing online, articles published on websites tend to be more 'traditional' in nature because viewership can be estimated by the amount of traffic or page views. I use the number of daily users, discounted by the bounce rate (the percent of users who do not perform an action on the site).
- *Total impressions.* Total impressions are calculated as the total of impressions across social media, television, print, and web.

C. Assessing Damages for Defamation Online: Adapting Traditional Approaches to the Sphere of Social Media

i. Rectifying Harm to Reputation Online

Traditional approaches to rectifying reputational harm involve attempts to repair reputation in the public sphere.[70] However, social media has complicated these traditional approaches in a few ways. Some aspects of social media such as filter bubbles and echo chambers have fragmented the public sphere such that it is unclear how or where reputation repair can and should take place. Secondly, trust in traditional media has declined across the ideological spectrum.[71] Whereas legitimate sources of news once went unquestioned, assessing trust of the source is now a primary concern of users when assessing claims both in social and

67 Gensch & Shaman (1980); Picard (1988).
68 https://markets.nielsen.com/us/en/solutions/measurement/television/
69 https://auditedmedia.com/Solutions/Print-Publisher-Audits
70 Ardia (2010).
71 https://www.pewresearch.org/fact-tank/2021/08/30/partisan-divides-in-media-trust-widen-driven-by-a-decline-among-republicans/

traditional media—and this is true regardless of political ideology.[72] Finally, increasing polarization[73] in the American context means that attitudes have become more entrenched and therefore harder to change.[74] In this section, I provide a brief overview of the theories necessary for understanding how reputational harm can occur, and be repaired, through social media.

Prior cases have taken a traditional approach to assessing damages to reputation in the public sphere. For example, in the case of *United States v. Macys.com, Inc.* (D. Del. July 26, 2000),[75] the remedy for alleged violation of consumers' expectations relating to product shipping time was the purchase of banner advertising on search engines to inform consumers about their rights when shopping online. However, the traditional approach represented by prior cases fails to take into account the new and complex technological infrastructure for communication, the erosion of trust in mass media particularly among the audience likely to be receptive to the Statements (*i.e.*, people on the political right and/or supporters of Mr. Trump)[76] and the importance of personal sources that are trusted by the individual for news online. Persuasion online now includes influencers, social networking, and live video in addition to search and display advertising. The educational campaign of *United States v. Bayer Corp.*, No. 07-01(HAA) (D.N.J. Jan. 4, 2007) is more akin to the current state of social media. In this case, an educational campaign was required as remediation that included a consumer brochure,

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72 https://www.pewresearch.org/journalism/2020/01/24/democrats-report-much-higher-levels-of-trust-in-a-number-of-news-sources-than-republicans/

73 https://www.pewresearch.org/politics/interactives/political-polarization-1994-2017/

74 Conover, Michael, Jacob Ratkiewicz, Matthew Francisco, Bruno Gonçalves, Filippo Menczer, and Alessandro Flammini. "Political polarization on Twitter." In *Proceedings of the International AAAI Conference on Web and Social Media,* Vol. 5, No. 1, pp. 89-96. 2011; Prior, Markus. "Media and political polarization." *Annual Review of Political Science* 16 (2013): 101-127.

75 https://www.ftc.gov/sites/default/files/attachments/training-materials/enforcement.pdf.

76 https://www.pewresearch.org/fact-tank/2021/08/30/partisan-divides-in-media-trust-widen-driven-by-a-decline-among-republicans/

advertisement for that brochure, and placement of the information with key opinion leaders and gatekeepers, such as physicians. In this way, remediation for reputational harm entails working with multiple sources that consumers trust to counter false claims.

D. Media Exposure and Counter-Attitudinal Attitude Change

To understand how to assess the costs for repairing reputational harm on social media, one must understand the process of attitude change, also known as persuasion.[77] Source, message, and even media type can play a role in how many exposures it requires to change attitudes.[78] For someone who holds a weak attitude or no attitude about someone or something, one exposure to a message from a reasonably credible source is likely to be enough to change attitudes.[79] However, for someone with entrenched beliefs, source and message quality become very important, and changing that belief requires more than a few exposures from a single source.[80] Due to confirmatory bias,[81] people are likely to attend to information that confirms or is congruent with their existing beliefs and ignore or discount information that is counter to them. The more entrenched the belief, the more exposures required to change attitudes. For these reasons, changing an attitude that is counter to one's existing set of beliefs is exceedingly hard and potentially requires multiple messages from multiple trusted sources.

Here, a trusted source means a person or entity that is trusted by the user or reader, not necessarily a source that would be deemed trustworthy by the public at large. Platforms like

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77 Cialdini R. B., R. E. Petty, J. T. Cacioppo. (1981). Attitude and Attitude Change, *Annual Review of Psychology*.

78 Albarracin, D., and Shavitt, S. (2018). Attitudes and attitude change. *Annual Review of Psychology*, 69, 299–327; Cialdini *et al.* (1981).

79 Cialdini *et al.* (1981).

80 Cialdini *et al.* (1981).

81 Kahneman and Tversky (1974).

newspapers and websites can be the source, but they can also convey the information of sources that may or may not be trusted. Research in psychology and communication shows that readers and viewers can distinguish between the media source and the individual source when interpreting a message.[82] For example, a reader may not trust the *New York Times* but may trust direct quotes attributed to a trusted source reported by the *New York Times*.

On social media, attitude change can be even more complex. Filter bubbles mean that users are likely to see only information that is congruent with their present and past beliefs and behaviors[83] and come from selective media sources that viewers trust.[84] Due to homophily, we tend to know and follow others who have the same attitudes that we do. As Garrett (2009) notes, multiple messages coming from multiple sources about the same event or fact create the impression for the user that the event is indeed true and that the belief is universally held.

In all media, but particularly social media, messages are received, trusted, and interpreted relative to their source. Social capital (*i.e.*, how many people you know) and status (*i.e.*, legitimacy) of a source is important. Messages that come from sources with no social capital (*i.e.*, no followers) do not have the same strength as those that come from sources with considerable social capital.[85] Because trust of unfamiliar sources is typically lacking online,[86]

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82 Bakker, Tom, Damian Trilling, Claes de Vreese, Luzia Helfer, and Klaus Schönbach (2013). "The Context of Content: The Impact of Source and Setting on the Credibility of News," *Recherches en Communication*, 40, 151-68.

83 Pariser (2011), "The Filter Bubble: What the Internet Is Hiding from You."

84 https://www.pewresearch.org/journalism/2020/01/24/democrats-report-much-higher-levels-of-trust-in-a-number-of-news-sources-than-republicans/.

85 Kruglanski, A. W., and Gigerenzer, G. (2011). "Intuitive and deliberate judgments are based on common principles": Correction to Kruglanski and Gigerenzer (2011). *Psychological Review*, 118(3), 522–522. https://doi.org/10.1037/a0023709

86 Metzger, M. J., and Flanagin, A. J. (2013). Credibility and trust of information in online environments: The

known and trusted sources are particularly important when communicating messages attempting to change attitudes online.[87] In this sense, attitude change requires the message to come from *inside* the filter bubble and requires considering a number of trusted sources within the echo chamber to influence opinion.

In sum, if harm is caused amongst a population who do not trust traditional media, the most effective way to repair it is through alternative informational channels the audience trusts and that mirror where people get their news.[88]

IV. IMPRESSIONS MODEL

The Impressions Model section details the particular parameters chosen given this prior literature and the data presented in the case. In order to estimate the number of impressions generated by the Statements, I reviewed and analyzed news coverage of the claims, including 53 online news articles, 55 social media posts, 63 television broadcasts, and 14 print articles.

A. Web Impressions

The web impressions analysis is limited to the set of 52 online news articles[89] cited in the Complaint in footnotes 9-14. In these footnotes, the Complaint list a set of online sources that reported on the Statements.

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use of cognitive heuristics. *Journal of Pragmatics*, 59, 210–220. https://doi.org/10.1016/j.pragma.2013.07.012.

87 Liu, Shixi, Cuiqing Jiang, Zhangxi Lin, Yong Ding, Rui Duan, and Zhicai Xu (2015), "Identifying Effective Influencers Based on Trust for Electronic Word-of-Mouth Marketing: A Domain-Aware Approach," *Information Sciences*, 306, 34-52.

88 For example, 35% of Republicans reported trusting national news media: https://www.pewresearch.org/fact-tank/2021/08/30/partisan-divides-in-media-trust-widen-driven-by-a-decline-among-republicans/

89 Please note, my analysis incorporates 53 unique URLs as the June 21, 2019 article by Yahoo! News appeared on both news.yahoo.com and sports.yahoo.com.

To estimate the number of web impressions, I used data provided by Semrush, a company that provides website traffic statistics.[90] Semrush reports unique monthly visitors, and I transformed this measure to daily visitors by dividing unique monthly visitors by 30. Further, to account for people who visit the site but do not perform any other action, I multiplied daily visitors by 1 minus the bounce rate (see Figure 3 below). A table showing the online articles considered and the impressions estimate is included as Appendix D.

Figure 3. Equation 1

Web Impressions = (Unique Monthly Visitors/30)*(1-bounce rate)

B. Social Media Impressions

The social media impressions analysis is limited to the set of tweets that (a) link to one of the 53 online news stories I considered in my analysis of web impressions, (b) were published by the primary account of the publisher or the article's author, and (c) contain one of the defamatory claims contained in the Statements when viewed by a user (*i.e.*, a user who sees the tweets is exposed to a defamatory claim even if they do not click through to the article). A total of 55 tweets met the three criteria.

To measure social media impressions, one must estimate the percent of followers who saw a particular message. As described above, this is called the impression rate. Impression rates vary depending on the number of followers and the other contextual conditions in the system such as

[90] https://www.semrush.com/kb/26-traffic-analytics

competition for attention on any given day.[91] Impression rates for Twitter are estimated at between 1.3% to 2.6% for typical users.[92] However, that range can vary depending on number of followers, publisher/non-publisher status, frequency and relevance of tweets, and other variables. Sites aimed at creating shareable content, including political news, can have impression rates up to 22%.[93] Account holders can directly view their impression rate for each tweet, but otherwise the information is not publicly available. Buzzfeed, for example, has an impressions rate of 22%, which is convergent with conventional marketing goals that aim for a rate of 20%,[94] but lower than the 30% rate that Twitter suggested in 2014.[95]

Based on all publicly available information, I provide estimates using two impression rates. The first estimate comes from Wang *et al.*'s (2016) formula for calculating impressions given the total number of followers in the cascade, retweets, and followers of the original tweet (Equation 2a). Equation 2a can be used to estimate impressions for each account, given the account's number of followers, the number of retweets, and the followers of the retweeters. This means that each tweet has a unique impression rate. Wang *et al.* (2016) develop this equation from a full set of data taken from Buzzfeed and Buzzfeed News and its associated accounts (average followers at the time of Wang *et al.*'s analysis: Buzzfeed = 2.8 million, BuzzfeedNews = 470,000). Based on a full set of data, they are able to provide an estimate of impressions given

91 Wang et al., 2016; https://martech.org/facebook-twitter-impressions/.
92 https://martech.org/facebook-twitter-impressions/
93 https://martech.org/facebook-twitter-impressions/
94 https://www.tweetbinder.com/blog/twitter-impressions/; https://marxcommunications.com/what-does-impressions-mean-on-twitter/
95 Ad Age (2014). "Twitter Tells Brands They Can Reach 30% of Their Followers for Free," https://www.adweek.com/performance-marketing/twitter-tells-brands-they-can-reach-30-their-followers-free-158886/.

known and public data like followers and retweets. As a conservative step, I took into account the potential presence of bots as followers in my estimation although it may be unnecessary in this model.[96]

The impressions estimate generated by Equation 2a may be considered low for a number of reasons. First, Buzzfeed, from which the equation was developed, is an account that has had and continues to have considerably fewer followers than many accounts in our data set (*e.g.*, Buzzfeed_{2022} = 6.3 million followers vs. New York Times_{2022} = 54.4 million, Washington Post_{2022} = 19.9 million).[97] Secondly, as large publications, people are likely to be exposed to these accounts because they are considered more legitimate than a site like Buzzfeed News.[98] Finally, because they are high status, "standard-bearers" of news, people often tweet them to share relevant, official news stories. In addition, I account for the potential presence of bots as followers, 12.6%, based on recent estimates in computer science.[99] The formula used to calculate impressions using Equation 2a is displayed in Figure 4 below. The formula is applied for each of the 55 tweets considered in the social media impressions analysis.

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96 This may be an unnecessarily conservative step, as Wang *et al.* (2016) formed their estimate of parameters from a set of known and actual impressions provided by Twitter, which may have already accounted for bots.

97 Data were collected October 7th, 2022.

98 https://www.pewresearch.org/journalism/2020/01/24/democrats-report-much-higher-levels-of-trust-in-a-number-of-news-sources-than-republicans/

99 Luceri, L., Deb, A., Giordano, S., & Ferrara, E. (2019). Evolution of bot and human behavior during elections. *First Monday*, *24*(9). https://doi.org/10.5210/fm.v24i9.10213

Figure 4. Equation 2a

$$\text{Social Media Impressions} = 10^{(0.7396 \log(TF*(1\text{-bot rate})) + 0.0473 \log(PF*(1\text{-bot rate})) + 0.1027 \log(RT))}$$

Where:

PF (primary followers) = number of followers of original tweet
RT (retweets) = number of retweets to the original post
TF (total followers) = average number of followers of all retweets*RT[100] + number of followers of original poster (PF)
Bot rate = 0.126

Given the differences between Buzzfeed and some of the accounts in the Twitter dataset, I calculated a second estimate of impressions based on an impression rate of 20% (Equation 2b).[101] Not only was Buzzfeed itself purported to have a rate close to this, but it is also a rate used as a marketing "rule of thumb" as a benchmark for most major accounts.[102] Given the size and the influence of some of the accounts in the dataset, 20% is a reasonable and likely estimate for impression rate. Here, I again used 12.6% to account for potential bots.[103] In this equation, I include impressions at both the first level (*i.e.*, the number of followers of the original tweet and an impression rate of 20%) and the second level of the information cascade (*i.e.*, the number of

100 To collect the number of followers for all retweets, I used the Twitter API to search for both retweets and quote tweets (retweets with comment) of each of the 55 original tweets considered in the social media impressions analysis. I then filtered out any tweets that don't reference the original tweet (*e.g.*, retweets of quote tweets). After analyzing the data, I found a discrepancy between the number of retweets displayed on www.Twitter.com and the number of retweets I was able to collect. The discrepancy is likely due to users whose accounts are private and/or protected, meaning their data is not retrievable using Twitter's API. Using the list of retweets and quote tweets I assembled, I collected the Tweet IDs of each user who posted a retweet or quote tweet and used Brandwatch to collect the follower count of each of the users at the time they posted the retweet or quote tweet. I then averaged the follower counts of each retweeters or quote tweeter for each of the 55 original tweet and multiplied the average by the number of retweets.

101 https://martech.org/facebook-twitter-impressions/.

102 https://www.tweetbinder.com/blog/twitter-impressions/.

103 Luceri *et al.* (2019)

retweets multiplied by the average number of followers held by people who retweeted and an impression rate of a "typical" Twitter user of 1%[104]). The formula used to calculate impressions using Equation 2b is displayed in Figure 5 below. The formula is applied for each of the 55 tweets considered in the social media impressions analysis. A table showing the tweets considered and the impressions estimate (using both Equation 2a and Equation 2b) is included as Appendix E.

Figure 5. Equation 2b

$$\textbf{Social Media Impressions} = \textbf{followers}_{\textbf{first-level}} * \textbf{first level impression rate} * (1\textbf{-bot rate}) + \textbf{retweets} * \textbf{followers}_{\textbf{second-level}} * \textbf{second level impression rate} * (1\textbf{-bot rate})$$

Where:

$\text{Followers}_{\text{first-level}}$ = number of followers of the original tweet
First level impression rate = 0.2
Bot rate = 0.126
$\text{Followers}_{\text{second-level}}$ = average number of followers of all retweets[105]
Second level impression rate = 0.01

C. Television Impressions

To measure television impressions, I relied on the TV News Archive, a database maintained by the Internet Archive, a non-profit archive of content from television, internet, and audio, among many other sources.[106] The Internet Archive's TV News Archive allows users to

[104] https://martech.org/facebook-twitter-impressions/

[105] I used the same process described above to collect data on the average number of followers of all retweets. I collected a list of all retweets and quote tweets of the 55 original tweets using the Twitter API. Using that list, I collected the follower accounts of all users who published a retweet or quote tweet from Brandwatch. I then averaged the follower counts of each retweeters or quote tweeter for each original tweet and multiplied the average by the number of retweets.

[106] https://archive.org/details/tv

search through the closed captioning of broadcasts. To identify broadcasts to incorporate into the television impressions analysis, I searched through the closed captioning of broadcasts mentioning "E Jean Carroll" from June 21, 2019, to June 27, 2019, from the following stations: ABC, Fox, NBC, MSNBC, CBS, and CNN. After identifying the broadcasts, I searched through the closed captioning to identify broadcasts that referenced the Statements. Please note, I considered only broadcasts that included verbatim quotes from Mr. Trump's Statements. The search yielded a total of 63 broadcasts.

To estimate the number of impressions these programs received, I consulted public reports of viewership for each program from 2019,[107] which are usually derived from Nielsen. Where possible, I collected the Live + Same Day[108] or P2+[109] ratings estimates for the program in which a Statement appeared. If I was unable to find ratings estimates associated with a specific program, I relied on the average total day viewership for the network for the quarter or year closest to June 2019. To be conservative, I only counted ratings for a particular program once per day, even if a program appeared multiple times in the search results. For instance, the search results include two broadcasts of *Anderson Cooper 360* on June 21, 2019, one at 5pm-6pm PDT[110] and another at 8pm-9pm PDT.[111] Even though both airings mention the Statements (and

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107 *e.g.*, https://deadline.com/2020/09/abc-news-world-news-tonight-viewership-2019-20-1234582089/. Wherever possible, I relied on ratings estimates from June 2019 or second quarter of 2019 or. In some instances, it was not possible to collect data from that time period. In these cases, I relied on data that averages viewers from 2018 to 2019 and from 2019 to 2020.

108 Live + Same Day is an estimate of the number of households that watched a program while it aired or watched it via DVR on the same day the program aired. (https://thevab.com/storage/app/media/Toolkit/mediaterminologyformulas.pdf; https://www.hollywoodreporter.com/tv/tv-news/tv-ratings-explained-a-guide-what-data-all-means-1245591/)

109 P2+ is an estimate of the persons aged 2 or older who watched a program.

110 https://archive.org/details/CNNW_20190622_000000_Anderson_Cooper_360/

111 https://archive.org/details/CNNW_20190622_030000_Anderson_Cooper_360

thereby generated two separate impressions), my analysis only incorporates ratings for one airing. Similarly, CNN's *New Day with Alisyn Camerota and John Berman* appeared in the search results two times on June 22, 2019, once between 3am-4am PDT[112] and again between 4am-5am PDT.[113] *New Day* is a three-hour long morning show that the TV News Archive split into three hour-long blocks. I am only counting once instance of New Day in my calculations even though viewers would have been exposed to a Statement twice.[114] A table showing the broadcasts considered, the ratings estimate, and the source of the rating estimate is included as Appendix F.

D. Print Impressions

To capture the spread of the news stories in print as well as online, I searched for print articles covering the Statements from the publications I considered in my analysis of web impressions. Using ProQuest's U.S. Newstream database, a database of all U.S. news from 1980 to present,[115] I searched for newspaper articles containing "E Jean Carroll" in the publications of interest from June 21, 2019, to June 27, 2019. All articles returned by the search were reviewed to ensure they mentioned at least one of the Statements. The search yielded 11 articles from six news publications that mentioned the Statement.

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112 https://archive.org/details/CNNW_20190625_100000_New_Day_With_Alisyn_Camerota_and_John_Berman/

113 https://archive.org/details/CNNW_20190625_110000_New_Day_With_Alisyn_Camerota_and_John_Berman/

114 Additionally, I am also not considering whether the statements appeared multiple times within a one-hour block.

115 https://about.proquest.com/en/products-services/nationalsnews_shtml/

To estimate the number of print impressions, I used the data provided by the Alliance for Audited Media, a widely accepted standard for measuring print audience size that determines advertising rates.[116] I was able to find audience estimates for only five of the six publications. Only the nine articles from these five publications with audience estimates contributed to the print impressions estimate. A table showing the print articles considered and the circulation is included as Appendix G.

E. Total Impressions

I calculated both a high and low estimate for impressions of Mr. Trump's Statements. The low estimate is calculated with social media impression rate using Equation 2a. The high estimate is calculated with industry standard impression rate to estimate social media impressions using Equation 2b.[117] To calculate the total impressions across media, I aggregated views/impressions for the (1) social media impressions, (2) TV impressions, (3) print impressions, and (4) web impressions (see Figure 6 below).

Figure 6. Equation 3

Total impressions = social media impressions + TV impressions + print impressions + web impressions

Figure 7 below summarizes the results of the impressions analysis.

116 https://auditedmedia.com/about/who-we-are

117 Please note, in four cases the impressions associated with the "low" estimate are higher than the "high" estimate. Nonetheless, the "high" estimate is much higher than the "low" estimate overall.

Figure 7. Total Impressions

	Social Media	Web	Print	TV	Total
High	63,040,041	13,922,234	2,613,232	108,580,000	188,155,507
Low	17,218,959	13,922,234	2,613,232	108,580,000	142,334,424

High=impression rate of 20% for first level followers, 1% for second level followers (Sullivan 2014)
Low=median impression rate of 5.2% (Wang *et al.* 2016)

The Statements generated between 142,334,424 and 188,155,507 impressions between June 21, 2019, and September 6, 2022, the time frame from which data were collected for this analysis.

i. Other Impressions Not Calculated into Model

There are a number of impressions that my estimate does not take into account. Equations 2a and 2b adjust for different impression rates, but they omit many significant sources of impressions due to data availability or clarity. This makes both estimates a considerable undercount of impressions.

Web Impressions. Online news impressions are limited to the articles cited in the Complaint. I did not count other online news articles that covered or discussed the Statements. Additionally, some of the articles I did consider were authored by the Associated Press[118] and

[118] The analysis incorporates five versions of two Associated Press articles. Darlene Superville, Trump Denies Knowing NY Woman Accusing Him of Sexual Assault, ASSOCIATED PRESS (June 22, 2019); Darlene Superville, Trump Denies Knowing E. Jean Carroll, Woman Accusing Him of Sexual Assault in Department Store, ABC NEWS (June 22, 2019); Associated Press, Trump on E. Jean Carroll Sexual Assault Claim: "She's Not My Type", HOLLYWOOD REP. (June 25, 2019); Associated Press, Trump Says Famed Advice Columnist Who Accused Him of Sexual Assault Is "Not My Type", CHI. TRIB. (June 24, 2019); Associated Press, Trump: Woman Who Accused Him of Sexual Assault Not His Type, DENVER POST (June 24, 2019).

Reuters.[119] Although it likely that identical (or very similar) versions of these articles appeared in multiple publications, I did not count these impressions due to the inability to access traffic numbers for each of these websites. For instance, the June 25, 2019, *Hollywood Reporter* article, titled "Trump on E. Jean Carroll Sexual Assault Claim: 'She's Not My Type,'" appeared in at least 20 additional publications.[120] Further, the June 22, 2019, Associated Press article, titled "Trump Denies Knowing NY Woman Accusing Him of Sexual Assault" appeared in at least 7 additional publications.[121]

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119 The analysis incorporates two versions of the same Reuters article: Doina Chiacu, Trump Denies Woman's Sexual Assault Accusation: "She's Not My Type", BUS. INSIDER (June 25, 2019); and Doina Chiacu, Trump Denies Woman's Sexual Assault Accusation: "She's Not My Type", REUTERS (June 25, 2019).

120 https://www.pbs.org/newshour/politics/trump-says-woman-who-accused-him-of-sexual-assault-is-not-his-type; https://www.insider.com/trump-woman-who-accused-him-of-sexual-assault-not-his-type-2019-6; https://abcnews.go.com/Politics/wireStory/trump-woman-accused-sexual-assault-type-63921054; https://www.localsyr.com/news/politics/trump-woman-who-accused-him-of-sexual-assault-not-his-type/; https://libn.com/2019/06/25/trump-says-woman-accusing-him-of-sexual-assault-not-my-type; https://www.ksbw.com/article/shes-not-my-type-president-trump-denies-sexually-assaulting-author-in-store/28180018; https://www.abqjournal.com/1332620/trump-woman-who-accused-him-of-sexual-assault-not-his-type.html; https://lasvegassun.com/news/2019/jun/24/trump-woman-who-accused-him-of-sexual-assault-not/; https://www.deseret.com/2019/6/24/20676380/trump-woman-who-accused-him-of-sexual-assault-not-his-type; https://wjla.com/news/nation-world/trump-woman-who-accused-him-of-sexual-assault-not-his-type; https://www.kcci.com/article/shes-not-my-type-president-trump-denies-sexually-assaulting-author-in-store/28180018; https://www.wvtm13.com/article/shes-not-my-type-president-trump-denies-sexually-assaulting-author-in-store/28180018; https://www.theguardian.com/us-news/2019/jun/25/donald-trump-says-assault-accuser-e-jean-carroll-not-my-type; https://www.fox35orlando.com/news/trump-said-woman-who-accused-him-of-sexual-assault-not-his-type.amp; https://www.abc27.com/news/us-world/politics/trump-woman-who-accused-him-of-sexual-assault-not-his-type/; https://www.wtae.com/article/shes-not-my-type-president-trump-denies-sexually-assaulting-author-in-store/28180018; https://www.kmbc.com/article/shes-not-my-type-president-trump-denies-sexually-assaulting-author-in-store/28180018; https://www.kcra.com/article/shes-not-my-type-president-trump-denies-sexually-assaulting-author-in-store/28180018#; https://www.nbcboston.com/news/politics/trump-e-jean-carroll/108391/; and https://www.necn.com/news/local/trump-e-jean-carroll/220418/.

121 https://www.marketwatch.com/story/new-york-advice-columnist-claims-trump-sexually-assaulted-her-in-mid-1990s-2019-06-22; https://www.gazettenet.com/Carroll-26480259; https://www.usnews.com/news/best-states/new-york/articles/2019-06-21/trump-faces-new-sexual-assault-allegation-he-issues-denial; https://www.pressherald.com/2019/06/23/trump-denies-knowing-ny-woman-accusing-him-of-sexual-assault/; https://www.ksl.com/article/46579012/trump-denies-knowing-ny-woman-accusing-him-of-sexual-assault; https://www.courthousenews.com/trump-denies-knowing-ny-woman-accusing-him-of-sexual-assault/; and https://www.wwltv.com/article/news/trump-issues-denial-after-new-sexual-assault-allegation/507-33064ca1-b511-40e2-bbe2-57e7d672fc9f.

Social Media Impressions. I limited social media impressions to those generated from tweets published by the primary account of the publisher or the article author. While I did consider the retweets and quote tweets of the 55 original tweets, I did not consider retweets to quote tweets even though a user who navigates to a quote tweet will be shown the text of the original tweet. Data suggests that some of the quote tweets generated significant engagement. For instance, four quote tweets[122] of The Hill's original tweet[123] published at 7:40 am ET on June 25 generated over 100 retweets. One of those quote tweets generated over 2,000 retweets.[124] For comparison, the combined total of all retweets generated by the original tweets I considered was 5,560.

Additionally, I did not consider any tweets from other publishers of stories covering Mr. Trump's Statements, tweets from users who shared links to the 52 articles (or other articles containing the Statements), or tweets in which users repeated or otherwise amplified the Statements.

Additionally, the social media impressions analysis does not consider impressions generated on other platforms, such as Facebook and Reddit because it is difficult to find research or publicly available data on impression rates for platforms other than Twitter. Nonetheless, there is evidence that the 52 online news articles I considered in my web impressions analysis were shared widely on those platforms. Using CrowdTangle,[125] a social media insights tool

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122 https://twitter.com/1/status/1142180829835255808; https://twitter.com/1/status/1142184727492878336; https://twitter.com/1/status/1142197820826501120; and https://twitter.com/1/status/1142226611380600832.

123 https://twitter.com/1/status/1143477200148189184.

124 https://twitter.com/Olivianuzzi/status/1142197820826501120.

125 Meta provides a free and publicly accessible CrowdTangle extension for the Chrome browser that allows

owned and operated by Meta,[126] I searched for instances where the 52 articles were shared on Facebook and Reddit. CrowdTangle data were available for 39 of the news articles considered,[127] yielding a total of 588 shares and 396,390 interactions, disseminating to 476,196,543 followers.[128] On average, the data from CrowdTangle suggest that each article was shared 15 times and generated more than 10,000 interactions per article. Given the high number of shares and the overall number of followers associated with those shares, it is clear that my estimate of social media impressions is a significant undercount of the actual impressions generated.

Television Impressions. I limited the television impressions analysis to broadcasts contained in the Internet Archive's TV News Archive database from the following broadcasters: ABC, Fox, NBC, MSNBC, CBS, and CNN. I did not include television shows that paraphrased Mr. Trump's claims but did not directly quote. For example, *The Tucker Carlson Show*, which averaged over 2.8 million viewers at the time,[129] covered the issue for 12 minutes on June 25, 2019,[130] but I did not include it. Additionally, I only counted ratings for a particular program

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users to track shares of webpages across multiple social media platforms (https://apps.crowdtangle.com/chrome-extension). For each share in CrowdTangle's database, the Chrome extension provides a list of each share, the number of interactions (i.e., the number of reactions, upvotes, likes, comments, and shares) generated by that share, and the total number of followers associated with the share. (Followers are defined as "The sum of Page Likes, Instagram followers, Twitter followers, or Subreddit subscribers for all of the matching results.") The browser extension does not track reach or impressions generated by a post nor does the list of shares incorporate data from private or restricted accounts.

126 https://help.crowdtangle.com/en/articles/4201940-about-us

127 It was not possible to find shares of the Washington Examiner article, likely due to the way the Washington Examiner structures its URL. Instead of generating URLs with unique identifiers, articles are assigned tags (in this case, the tag was "donald-trump") and stored on a single webpage in reverse chronological order. As a result, using the CrowdTangle Chrome extension returns the shares of all articles assigned the "Donald Trump" tag, rather than shares of the specific at-issue article.

128 To arrive at the total number of followers, I summed together all the followers associated with each share. It was not possible to deduplicate unique followers across different articles and channels.

129 https://www.forbes.com/sites/markjoyella/2021/06/15/tucker-carlson-has-most-watched-show-in-cable-news-as-fox-leads-basic-cable-for-17-straight-weeks/?sh=6c4a2379661c

130 https://archive.org/details/tv.

once in a day, even if a program was aired multiple times in day. I also did not consider the number of times a Statement was mentioned during a broadcast, even though multiple mentions of a Statement generate multiple impressions.

Print Impressions. I limited the print impressions analysis to publications that published an online news article that was cited in the Complaint. I did not count other print news articles about Carroll that may have mentioned the claims, even though I was able to find 33 print articles via ProQuest published between June 22, 2019, and September 28, 2022, that referenced the Statements.[131] None of these 33 articles overlapped with the 14 articles I considered in my analysis. Further, only five of the six publications contributed to the impressions estimate because I was unable to find publicly available circulation for all six publications.

Other Sources of Impressions. I did not include podcast impressions, although there is anecdotal evidence that these claims were discussed on podcasts and radio shows like *The Kevin Jackson Show* and the *New York Times*' *The Daily*.[132] I did not include impressions generated from people who were exposed to the Statements in article headlines while browsing Google News, Apple News, or other news aggregating applications. As well, I did not include face-to-face pass-along of the claims.

For these reasons, the estimate of impressions I provide is a conservative estimate in which several sources of further dissemination were not taken into account. A summary of

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131 Proquest search query of US Newstream: (e jean carroll) AND (stype.exact("Newspapers") AND ps.exact("Carroll, E Jean"))

132 https://www.listennotes.com/podcasts/the-kevin-jackson/20190626-h1-s1-e-jean-FQEPcIrl3Rk/, https://www.listennotes.com/podcasts/the-kevin-jackson/20190626-h1-s2-e-jean-4OxWMCNKko_/, and https://www.listennotes.com/podcasts/the-daily/corroborating-e-jean-carroll-PfFq5DHZoag/

conservative steps taken in the impressions analysis is included in Appendix J.

V. IMPACT ASSESSMENT

In this section, I provide an impact assessment to evaluate the nature and amount of harm done to Ms. Carroll's person brand as a result of Mr. Trump's Statements. The impact of these Statements should be viewed both qualitatively and quantitatively.

In the qualitative assessment, I assess the nature of the Statements and their more generalized harm to a brand that faces a general (rather than niche) public. I also take into account the nature of the associations and their likely harm to the person brand of a professional woman and assess the long-term nature of this harm. These are dynamics that occur on the sociocultural level and therefore require more qualitative assessment. Further, they impact the generalized social perceptions of Ms. Carroll, thereby diminishing her reputational value to speak to a broad and diverse public. As such, this kind of reputational harm may impact her ability to capitalize on her person brand in the future.

I also provide a quantitative impact assessment to link the impressions estimate with the damages estimate. How many people saw and might have believed or been receptive to Mr. Trump's Statements? There are some who would have read/heard his Statement and dismissed it out of hand. While the Statement itself may represent some generalized harm, to calculate a fair estimate to rectify the more specific harm, one must take into account the fact that not everyone may have read/heard and readily believed Mr. Trump's Statements. Yet, political science provides tools for estimating the quantitative impact by incorporating the likelihood that a reader or viewer would have been receptive to Mr. Trump's Statements.

A. Qualitative Impact Assessment

To conduct the qualitative impact analysis, I relied on materials publicly available from before and after Mr. Trump's Statements on June 21, 22, and 24, 2019. These include media coverage of Ms. Carroll both before and after the Statements,[133] Amazon reviews of her books,[134] negative social media comments generated after the Statements, and negative messages sent privately to Ms. Carroll.

Prior to the Statements on June 21, 2019, Ms. Carroll was a popular advice columnist at *Elle* Magazine, where she had been a mainstay for 25 years.[135] Her brand personality was that of a sassy dating advice columnist and author of books on a range of topics, including dating, culture, and the life of Hunter S. Thompson. As the columnist of "Ask E. Jean" at *Elle*, she reached about 4.5 million readers, according to her publisher.[136] Ms. Carroll was known widely for her personable, modern advice for women.[137] Over the years of her popularity, she was heralded as "feminism's answer to Hunter S. Thompson."[138] She is the author of *A Dog in Heat is a Hot Dog and Other Rules to Live By*, (1996) and *Mr. Right, Right Now!* (2005), books that offer "sassy" dating and personal advice.[139] Former *Elle* editor-in-chief Robbie Myers, who until

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133 Proquest search query of US Newstream: (e jean carroll) AND (stype.exact("Newspapers") AND ps.exact("Carroll, E Jean")).

134 https://www.amazon.com/product-reviews/0060530286 and https://www.amazon.com/product-reviews/0525935681/.

135 Deposition of Robbie Myers, October 12, 2022, 31:20-22, 32:4-12; https://www.nytimes.com/2020/02/19/business/media/e-jean-carroll-elle.html.

136 https://web.archive.org/web/20200520030235/http:/www.ellemediakit.com/r5/showkiosk.asp?listing_id=5748326. I was unable to find readership data prior to 2020.

137 Deposition of Robbie Myers, October 12, 2022, 23:7-24:4.

138 Quammen, David. "A Cheap Hide Out for Writers." New York Times. 01 Nov 1981: A.14.

139 Joan Kelly. "Get a Grip and Take Some Sassy but Sane Advice from Elle's E. Jean." Newsday. 22 Mar 1994: B.13.

2017 was Ms. Carroll's boss,[140] described her as a gifted, beloved writer:

> "That's a -- the term that came to mind is sort of she's a baller, meaning she's -- as a writer. She's a gifted writer. She is a journalist first and everything that she writes is informed by that, meaning the facts, but she -- she also, you know, has a lot of wit and I think that's why her readers loved her so much."[141]

Ms. Myers noted Ms. Carroll's "high public profile" and credited her with elevating the national advice column genre and building trust with her readers by being witty but grounded in the facts of journalism:

> "…I mean, what other people are doing is great, right, and it's fun and interesting, but women really trusted E. Jean and we got lots of feedback from readers that she helped them. Also, you know, they loved her voice because she puts a lot of funny in there or sort of -- but it's always undergirded by reporting."[142]

Ms. Myers stated that Ms. Carroll had made significant positive contributions to *Elle* in helping to build the magazine's audience both in print and online, which resulted in both a raise and increased space allotted to the "Ask. E. Jean" column.[143]

i. Reception to Ms. Carroll's Professional Work

Ms. Carroll was known to her readers as a "a sharp and funny social commentator, and a terrific journalist,"[144] offering "sassy female insights."[145] Ms. Carroll was noted for dishing out "SASSY BUT SANE ADVICE," "E. Jean's PUNCHY wisdom SHINES in compilation."[146]

"E. Jean Carroll, with her razor-sharp insights and wildly popular way of serving

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140 Deposition of Robbie Myers, October 12, 2022, 9:11-13.
141 Deposition of Robbie Myers, October 12, 2022, 21:15-22.
142 Deposition of Robbie Myers, October 12, 2022, 22:12-18.
143 Deposition of Robbie Myers, October 12, 2022, 28:9-14, 28:18-21, and 32:9-12
144 https://www.amazon.com/gp/customer-reviews/RD84I3FPD8DS1/ref=cm_cr_arp_d_rvw_ttl?ie=UTF8&ASIN=0060530286.
145 https://www.amazon.com/gp/customer-reviews/RBTLK02LIQ4ED/ref=cm_cr_arp_d_rvw_ttl?ie=UTF8&ASIN=0060530286.
146 Dan. "E. Jean's PUNCHY wisdom SHINES in compilation." Indianapolis Star. 31 Mar 1996: D.6.

them up to the masses, is, above all else, a truth-seeker."[147]

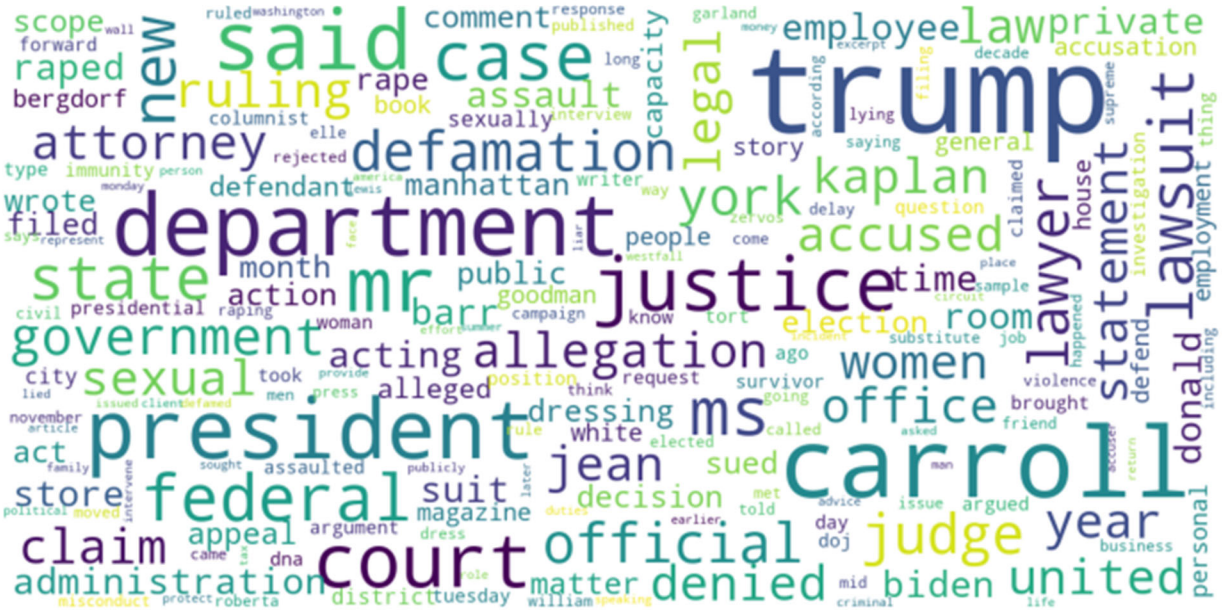
"She's a real writer, a sharp and funny social commentator, and a terrific journalist, and I love her voice. Smart readers will be particularly impressed with her skill reporting the current research in sex and marriage. I admire the way she covers the waterfront. She goes to rock-climbing spots, moto-cross tracks, gun clubs, university labs, millionaires' cocktail parties. About halfway through, I realized, this woman is an explorer. I think we're lucky that someone with her quality of mind and sense of humor has turned her attention to one of the most frustrating dilemmas of contemporary women: how to find someone real to love."

After June 2019, the associations with Ms. Carroll's person brand shifted. One way to examine the shift in associations is through word association, as represented in a word cloud.[148] As can be seen in Figure 8 and Figure 9 below, the semantic associations shifted from those associated with her role as a sassy news columnist ("love," "dating," and "men") to being associated with Mr. Trump, sexual assault, and this case ("defamation," "justice"). While some shift was attributable to the publication of her memoir and *New York Magazine* piece in which she detailed the alleged encounter with Mr. Trump,[149] an analysis of Google search data in Subsection iii below, illustrates that Mr. Trump's response, and not her initial claim, resulted in the escalating attention that she has received and played a considerable role in shifting the nature and valence of associations with her name.

147 https://www.amazon.com/gp/customer-reviews/R2KGOC1J5G6VTR/
148 Humphreys and Wang (2018)
149 https://www.thecut.com/2019/06/donald-trump-assault-e-jean-carroll-other-hideous-men.html.

Figure 8. Before June 2019 (top 200 words in news articles about E. Jean Carroll)

Figure 9. After June 2019 (top 200 words in news articles about E. Jean Carroll)



ii. Elle's Readership

It is also noteworthy to consider the composition of *Elle*'s readership. In 2019, 36% of the

American public identified as conservative.[150] *Elle* has a large and diverse readership in all regions of the country.[151] Its readers have a median age of 41 and an income of $194,000 per year.[152] Given the composition of the United States and the reach of *Elle's* readership, a meaningful proportion of Elle readers, roughly 1 in 3 readers, is likely conservative. Further, according to a poll conducted by YouGov,[153] 76% of Republicans polled either found the allegations of sexual harassment and sexual assault made against Mr. Trump to be not credible or needed more information about the claims, which I consider to mean that they are receptive to believing the Statements in this case.[154] Taken together, this means that 26%[155] of *Elle* readers—or about one in four—may have been receptive to Mr. Trump's Statements. While not all *Elle* readers would have been receptive, a considerable portion would have.

One in four *Elle* readers being receptive to the Statements is a considerable portion of readers to critically damage Ms. Carroll's brand as a columnist for the magazine. *Elle* reported having 4.5 million readers in 2019,[156] meaning more than a million readers may have been receptive to the claim that she was a "totally lying" about having been sexually assaulted by Mr. Trump. Further, the shift in associations provoked by the Statements undermines generalized, public perceptions of Ms. Carroll in ways that can unsettle prior perceptions about her. These

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150 https://news.gallup.com/poll/328367/americans-political-ideology-held-steady-2020.aspx

151 AAM 2019

152 http://www.ellemediakit.com/r5/showkiosk.asp?listing_id=5748326; https://www.nytimes.com/interactive/2019/08/08/opinion/sunday/party-polarization-quiz.html

153 https://today.yougov.com/topics/politics/articles-reports/2020/05/06/how-americans-view-sexual-assault-allegations-poll

154 The YouGov poll was conducted in 2020, after Ms. Carroll published the allegations about Mr. Trump.

155 26% is the product of multiplying the 34.7% of *Elle* who identify as conservative and the 76% of republicans polled who found the allegations of sexual harassment and sexual assault made against Mr. Trump to be either not credible or needed more information about the claims.

156 https://web.archive.org/web/20200520030235/http:/www.ellemediakit.com/r5/showkiosk.asp?listing_id=5748326

readers also have friends, family, neighbors, and colleagues. They are part of the public at large. As sociologists argue, public perception can be colored not only by what an individual thinks, but also by what an individual's friends and family think.[157] For example, if someone not inclined to believe Mr. Trump's claims about Ms. Carroll is friends with or married to someone who does find them credible, this also imperils reputational value due to the nature of social influence, particularly over time.[158]

iii. Search Interest

Google Trends provides another way to assess the impact of Mr. Trump's Statements on Ms. Carroll's brand. Google Trends is a free tool that allows users to compare relative search interest on up to five different search terms and topics. Data on Google Trends are presented on a relative scaled from 0 to 100, indexed to the peak search volume achieved during the time period of interest. Using Google Trends, I can analyze the change in search volume related to E. Jean Carroll following *New York Magazine* publishing an excerpt from her memoir on June 21, 2019, and Mr. Trump making the Statements on June 21, 22, and 24, 2019.

The graph in Figure 10 below shows the relative search interest in E. Jean Carroll[159] from June 1, 2019, through June 30, 2022, for searches conducted in the United States.[160, 161] The data

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157 Johnson, Cathryn, Timothy J. Dowd, and Cecilia L. Ridgeway (2006), "Legitimacy as a Social Process," *Annual Review of Sociology*, 32, 53-78.

158 Ardia (2010).

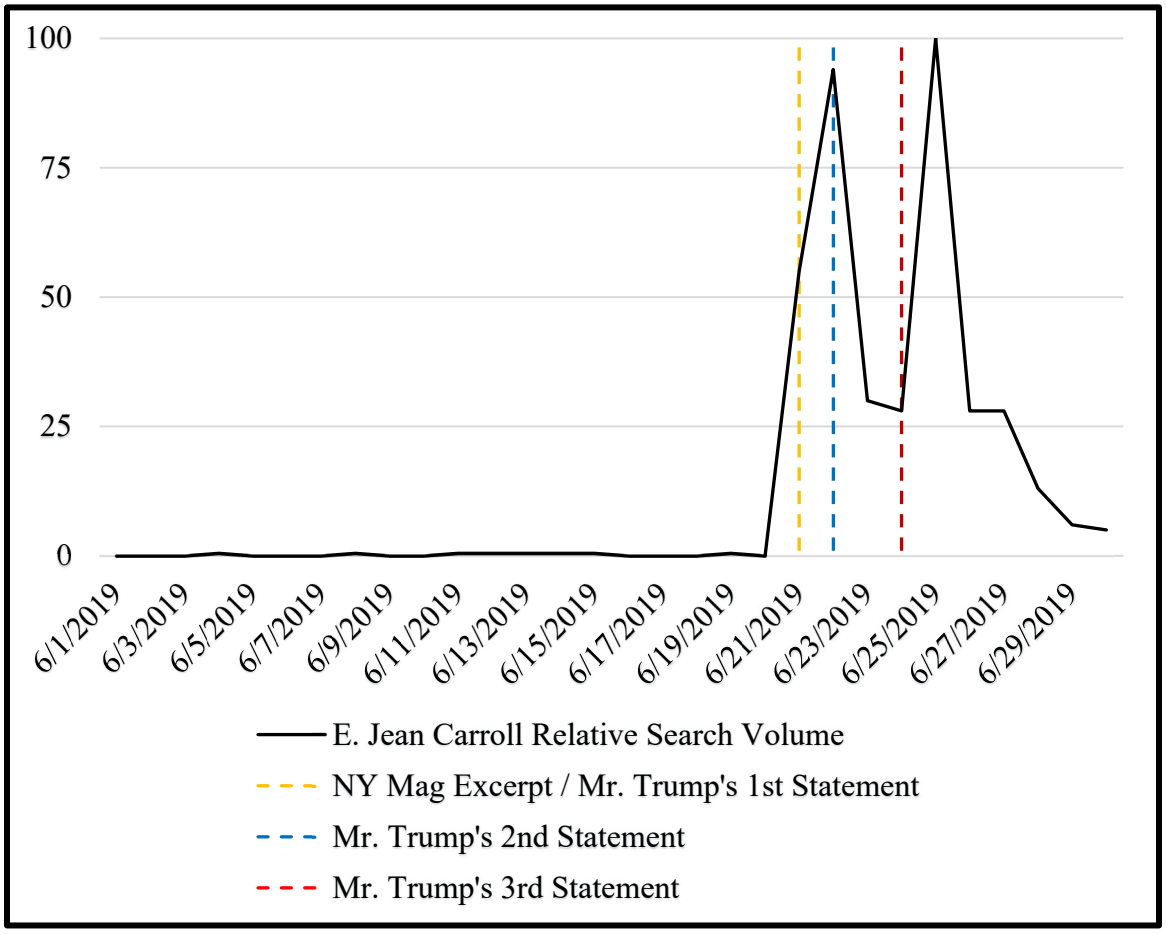
159 I relied on the "E. Jean Carroll" topic (as opposed to terms) when conducting the search. Topics are groups of keywords and phrases Google categorizes as referring to the same concept. Searching by topic is beneficial as it allows the results to incorporate misspellings and different ways of referring to the concept of interest. https://support.google.com/trends/answer/4359550?hl=en

160 https://trends.google.com/trends/explore?date=2019-06-01%202019-06-30&geo=US&q=%2Fm%2F02qwtqv

161 When exporting data from Google Trends, Google will sometimes list the daily volume as "<1" when the relative volume is between 0 and 1. I have converted all instances of "<1" to 0.5.

show two clear spikes in search volume. The first spike occurred on June 22, the day Mr. Trump made his second Statement. The second occurred on June 24, the day that Mr. Trump made the third Statement. Notably, the relative search volume on June 21 (the day *New York Magazine* released an excerpt from Ms. Carroll's memoir) was 55, or nearly half the relative volume generated on June 22 (94) and June 25 (100), indicating the Mr. Trump's response to Ms. Carroll's accusation may have been at least as impactful as Ms. Carroll's allegations.

Figure 10. Daily Relative Search Interest for E. Jean Carroll for June 2019



Another way to measure the impact of Mr. Trump's statement using data from Google Trends is by analyzing the "related queries." Related queries are other searches users conducted

when searching for the topic of interest. Like search interest, related queries are indexed to the most commonly searched words and phrases and reported on a scale from 0 to 100. I reviewed the top related queries for searches of E. Jean Carroll to determine the degree to which consumers searching for Ms. Carroll were interested in her "Ask E. Jean" column compared to searches linking her to Mr. Trump.

The tables in Figure 11 below show the top related queries associated with searches of E. Jean Carroll[162] across three different time periods. The first time period (the "before" period) incorporates searches conducted from January 1, 2019, through June 20, 2019.[163] The second period (the "after – short" period) incorporates searches conducted from June 21, 2019, through November 3, 2019,[164] the day before Ms. Carroll filled the present lawsuit. The third period (the "after – long" period) incorporates searches conducted from November 4, 2019, through the end of the most recent month before I conducted my analysis, August 31, 2022.[165] Rows highlighted in green indicate related queries that link Ms. Carroll to her "Ask E. Jean*"* column; rows highlighted in yellow indicate related queries that link Ms. Carroll to Mr. Trump. As the data show, consumer associations for Ms. Carroll changed following her accusation and Mr. Trump's response. Prior to her allegations, related searches associated with Ms. Carroll's column were relatively high. After the allegations and Mr. Trump's response, queries related to Ms. Carroll's column disappear from the list and are replaced by queries linking Ms. Carroll to Mr. Trump.

162 Here too, I relied on the "E. Jean Carroll" topic when searching on Google Trends.
163 https://trends.google.com/trends/explore?date=2019-01-01%202019-06-20&geo=US&q=%2Fm%2F02qwtqv
164 https://trends.google.com/trends/explore?date=2019-06-21%202019-11-03&geo=US&q=%2Fm%2F02qwtqv
165 https://trends.google.com/trends/explore?date=2019-11-04%202022-08-31&geo=US&q=%2Fm%2F02qwtqv

Figure 11. Top Related Queries for E. Jean Carroll

Before (01/01/19 – 06/20/19)	
Related Query	**Relative Value**
e jean	100
ask e jean	75
jean carroll	69
dear abby	14
miss manners	6

After – Short (06/21/2019 – 11/03/19)	
Related Query	**Relative Value**
jean carroll	100
e jean	66
e carroll	60
jean e carroll	60
e. jean	23
e. jean carroll	22
trump	16
carroll trump	15
trump jean carroll	13
e jean carroll trump	8
jean carroll young	6
e jean carroll young	5
donald trump	3
trump rape	3
e. jean carroll trump	3
jean carroll donald trump	3
anderson cooper	2
jean carroll anderson cooper	2
e.jean	2
donald trump e jean carroll	2
jean carrol	2
john johnson	1
e.jean carroll	1
e jean carrol	1
e jean carroll anderson cooper	1

After – Long (11/04/19 – 08/31/22)	
Related Query	**Relative Value**
jean carroll	100
e jean	51
e carroll	49
jean e carroll	48
trump	21
e. jean carroll	21
jean carroll trump	18
trump e jean carroll	11
trump rape	5
e. jean carroll trump	4
jean carroll young	4
jean carroll dna	4
donald trump	3
e jean carroll trump rape	3
trump dna	3
e jean carroll young	2
e jean carroll dna	2
e jean carroll news	2
e jean carroll donald trump	2
e jean carroll twitter	2
e jean carroll case	2
trump news	2
trump rape case	1
jean carroll dress	1
e jean carroll lawsuit	1

iv. Engagement Analysis

Comments and Engagement on Social Media News Article Shares. As an additional

qualitative indicator of the impact of these Statements in the public sphere, I examined engagement on social media that resulted as a response to news articles covering Mr. Trump's Statements. The news articles I analyzed in the Impressions Model and that were posted on Twitter by the publications received 7,880 responses and 10,982 likes. Comments on these articles repeated and agreed with Mr. Trump's Statements about Ms. Carroll, showing yet again that his Statements about her resonated with some people. For example, on a *Washington Post* article, one commenter said, "Baloney---For over 20 years silence and now since book is ready for sale we need new sensation to boost sale."[166] Another commenter, on the *New York Magazine* article, replied, "I could care less about this phony article being that the source is a leftist mouthpiece for brainwashing and helping an agenda of the antiAmerican left Communist Democrats in DC work toward Communism of our country. TRUMP is doing a great job. I voted for him and will do it again in 2020. New York has the worst Mayor ever in the entire United States. SUPPORT CAPITALISM AND SAVE OUR NATION. VOTE TRUMP 2020!"[167]

Since the news broke in June 2019, these same news publications have continued to cover the story, which has extended the effect of Mr. Trump's Statements further into the present day. To gain insight into whether the public continued to view Carroll negatively, I selected a sample of four publications that covered Mr. Trump's Statements and were included in my Impressions

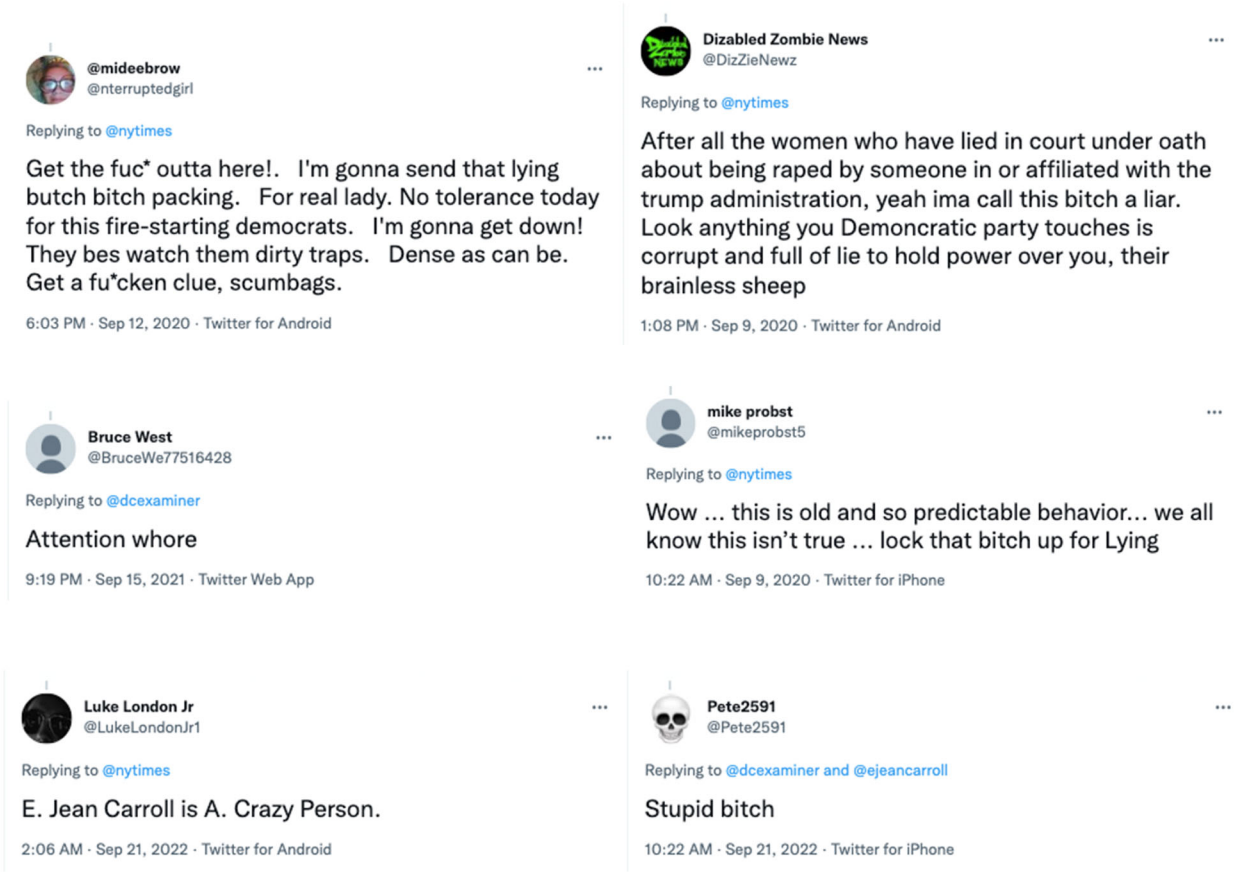
166 Colby Itkowitz, Magazine Columnist Accuses Trump of Sexual Assault More than Two Decades Ago, an Allegation He Denies, WASH. POST (June 21, 2019), https://www.washingtonpost.com/politics/magazine-columnist-accuses-trump-of-sexual-assault-more-than-two-decades-ago-an-allegation-he-denies/2019/06/21/2afc6f12-945a-11e9-b58a-a6a9afaa0e3e_story.html.

167 Sarah Jones, E. Jean Carroll: "Trump Attacked Me in the Dressing Room of Bergdorf Goodman.", N.Y. MAG. (June 21, 2019), https://nymag.com/intelligencer/2019/06/president-donald-trump-faces-new-rape-accusation.html.

Model (New York Times, Daily Caller, Washington Examiner, and USA Today.) I identified these news outlets' coverage of Ms. Carroll on Twitter and Facebook, after June 2019, when the statements first appeared in news through when I conducted this analysis on September 28, 2022.[168] Searching for replies using three phrases that reference a subset of Mr. Trump's claims ("book sale," "sell her book" and "agenda") and three negative terms ("crazy," "whore," and "bitch") led me to hundreds of negative comments about Ms. Carroll. Figure 12 below includes some of these comments, and Appendix H contains over a hundred additional examples.

[168] On Twitter, I used the Twitter API to search for Carroll-related tweets authored by each of the four specified news publication, using a query such as "e jean carroll from:usatoday since: 2019-07-01." On Facebook, I went on each publication's Facebook Page and searched for posts mentioning "e jean carroll" since July 2019. I then collected all the comments and replies to these tweets and Facebook posts.

Figure 12. Sample of Replies Generated by Long-Term News Coverage[169]



The nature of the engagement around this news coverage continues to reference Mr. Trump's Statements to this day and illustrates the changed tenor and malice of the associations with Ms. Carroll's name. For example, in response to recent press coverage, readers say, "… after all the women who have lied in court under oath about being raped by someone in or affiliated with the trump administration, yeah ima call this bitch a liar. …", and label her a "attention whore" and "lying bitch" in response to articles that contain the allegedly defamatory

169 https://twitter.com/1/status/1304903451625713664, https://twitter.com/1/status/1303742205648142336, https://twitter.com/1/status/1303700235210891265, https://twitter.com/1/status/1438311461110095873, https://twitter.com/1/status/1572592008316981250, https://twitter.com/1/status/1572467301315940352.

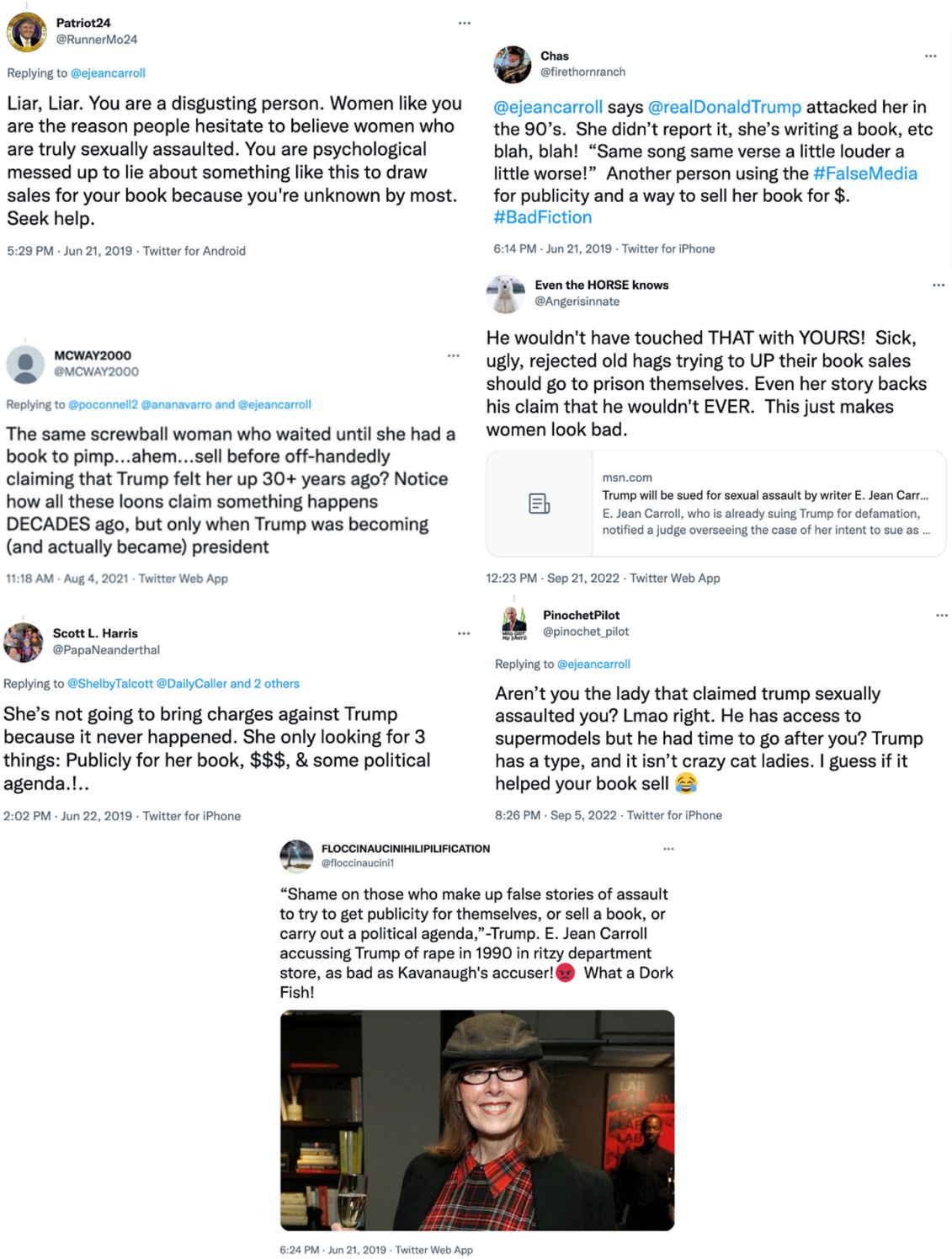
claims. These negative messages are further indication of the lingering negative effect of Mr. Trump's claims about Ms. Carroll on her person brand.

Posts on Twitter. The negative and malicious nature of the messages to Ms. Carroll extend to social media more broadly as evidenced by posts with no direct connection to the original Statements. Using the same search phrases as I did above led me to thousands of negative posts in response to or mentioning Ms. Carroll.[170] Many of the replies and tweets I found explicitly reference and/or repeat Mr. Trump's defamatory claims about Ms. Carroll, as illustrated in Figure 13 below.

For example, RunnerMoe24 calls Ms. Carroll a "Liar…a disgusting person" and accuses her of making up the story to "draw sales for your book," as Mr. Trump claimed. These kinds of comments continue into the present, with Angerisinnate calling her a "sick, ugly, rejected old hag," and repeating Mr. Trump's claim that she is attempting to sell books as recently as September 2022.

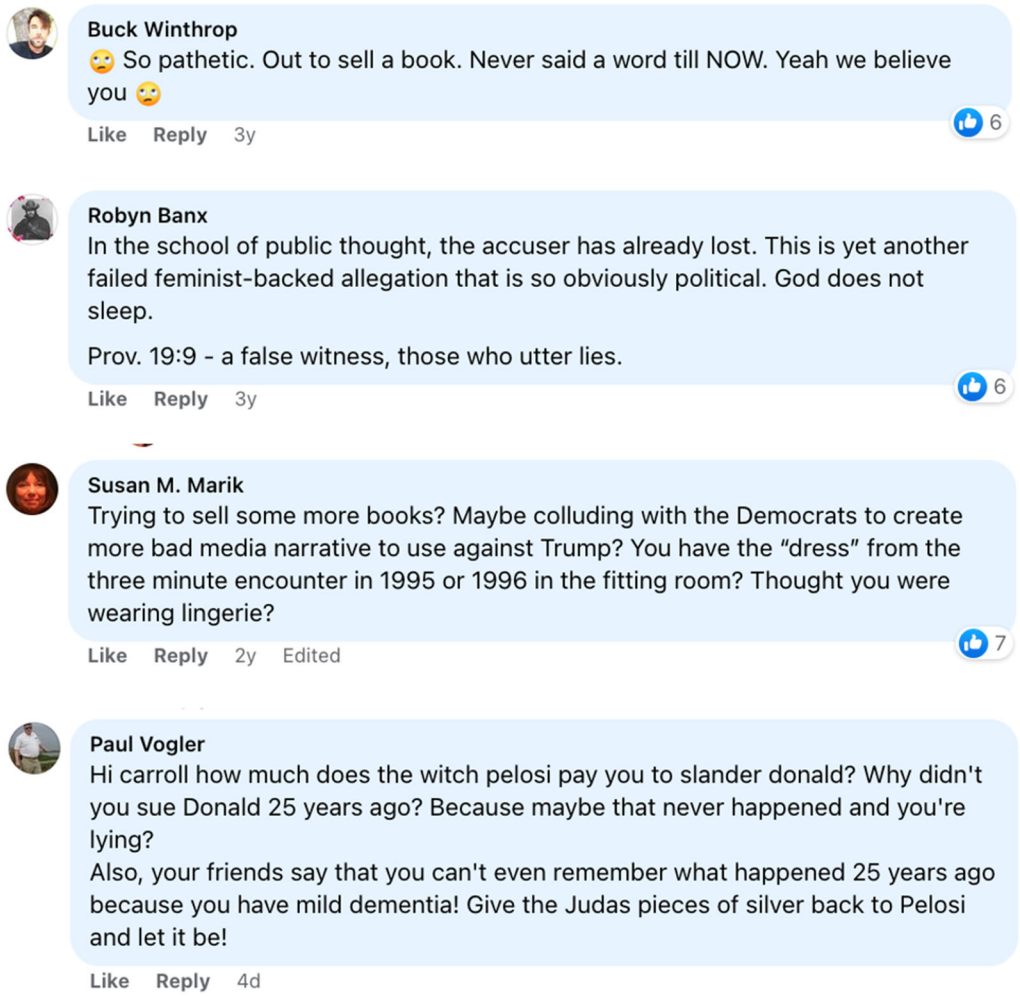
[170] I used Brandwatch to conduct this search. I searched for posts from January 1, 2019 through September 28, 2022 with the following query: (ejeancarroll OR "e jean carroll" OR "jean carroll" OR jeancarroll) OR engagingWith:ejeancarroll.

Figure 13. Sample of Twitter Commentary about Ms. Carroll Following Mr. Trump's Statements[171]



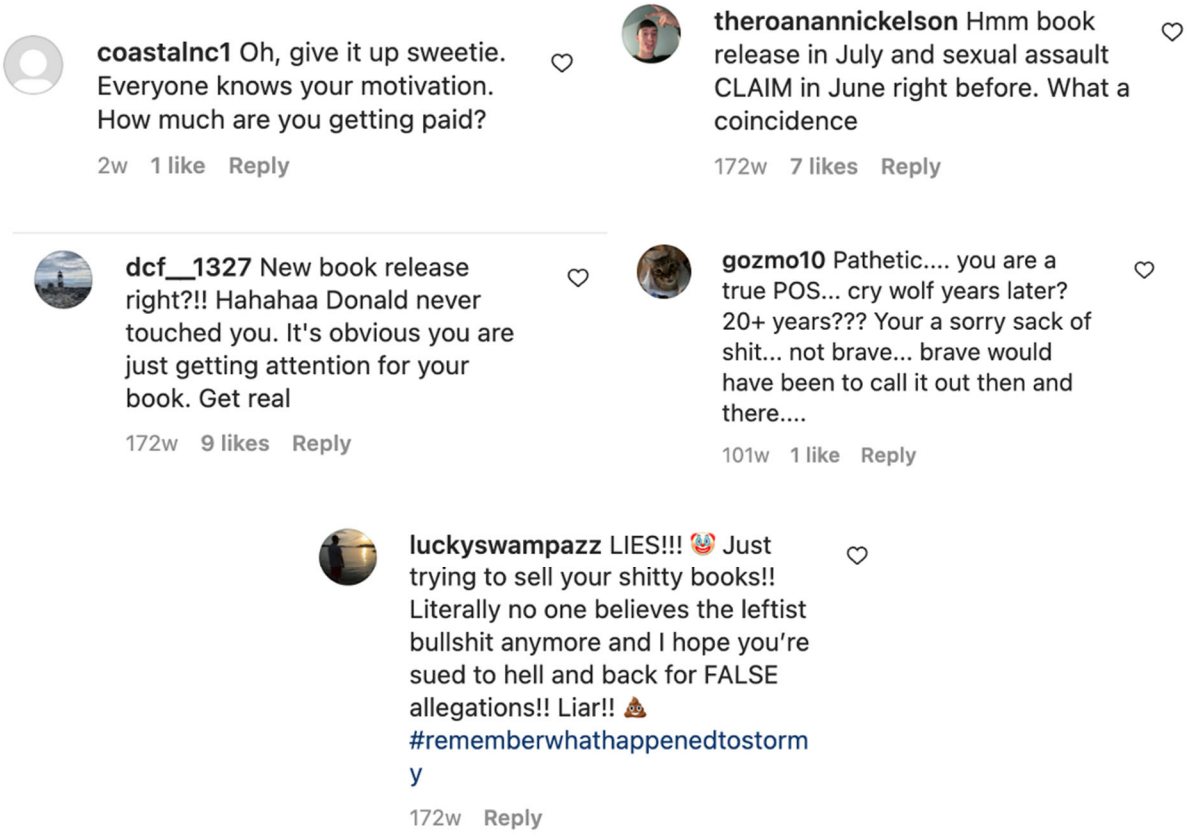
Replies Directly to Ms. Carroll on Facebook and Instagram. Additionally, I reviewed comments and replies to posts made by Ms. Carroll on her personal Facebook and Instagram, accounts where I found hundreds of negative and malicious messages and attacks on her character (see Figure 14 and Figure 15 below.) One, for example, says, "I hope you're sued into hell and back for these FALSE allegations." Another says, "Pathetic.... you are a true POS... cry wolf years later? 20+ years??? Your (sic) a sorry sack of shit... not brave... brave would have been to call it out then and there...."

Figure 14. Examples from Ms. Carroll's Facebook Page[172]



[172] https://www.facebook.com/EJeanCarroll/posts/pfbid043HtweB8cSVrpUX4jTsLnYVcZ51tESLc41qzM8fSBVm74Hipc1pe44QMxaibif3Zl?comment_id=10161904009925176; https://www.facebook.com/EJeanCarroll/posts/pfbid043HtweB8cSVrpUX4jTsLnYVcZ51tESLc41qzM8fSBVm74Hipc1pe44QMxaibif3Zl?comment_id=10161904500605176; https://www.facebook.com/EJeanCarroll/posts/pfbid02KbarmdFqXiqXWMMy4C4QLfMNXp7iaVe7cJ4e6n8b39SJVjExHMdnN8vXuRgib9pjl?comment_id=10162947248725176; https://www.facebook.com/EJeanCarroll/posts/pfbid0pM1JLR679TDR96NHp2CdGZPFJS9xmq4cbSBCFpSCfFKJJw9LyAes1sWYJZSJDC93l?comment_id=505171354452764.

Figure 15. Examples from Ms. Carroll's Instagram[173]



The negative impression people have of Ms. Carroll persists to the present, as the hateful messages continue to be posted and continue to reference Mr. Trump's Statements (see, for example, Appendix H). While there are many messages of support for Ms. Carroll among the posts I reviewed, the fact that I was able to find a high volume of negative and vicious messages using a limited set of phrases is indicative of the persistent and ongoing harm to her person

[173] https://www.instagram.com/p/ByS3GZAnG8T/c/18055365523120673, https://www.instagram.com/p/ByS3GZAnG8T/c/17890688779356795, https://www.instagram.com/p/ByS3GZAnG8T/c/17885005825367171, https://www.instagram.com/p/CGsjKyxJcHA/c/18081883450220561, https://www.instagram.com/p/CbF28JKuJmw/c/18146401978279673.

brand. Appendix I contains over 1,000 examples of these acerbic and hurtful public comments, both from responses to her personal accounts and from Twitter more generally.

In addition to these types of general social media comments, Ms. Carroll received many malicious direct messages and emails, over 80 examples of which can be found in Appendix I. These hateful messages continue into 2022, calling her a "liar and a fraud" and a "stupid bitch."[174] The direct messages to Ms. Carroll come from a wide range of platforms including email, Facebook, Twitter, and the submission email account for her "Ask E. Jean" column.

Overall, my qualitative impact analysis indicates that Ms. Carroll's person brand has been harmed by Mr. Trump's Statements. While her brand was associated with dating and advice prior to the Statements in 2019, after the Statements, her name is, and continues to be, associated with a different set of associations, and she is assailed publicly and continually online, often with direct reference to Mr. Trump's Statements. The news coverage of her and search traffic about her continues to be tied to Mr. Trump and his Statements. While some public attention came just after the publication of her book, the highest volume of attention came directly after Mr. Trump's Statements.

B. Quantitative Impact Assessment

In addition to a qualitative analysis of the tenor and nature of the impact of Mr. Trump's Statements on Ms. Carroll's person brand, I conducted a quantitative analysis to assess the portion of impressions calculated in the impressions analysis that would have been made to a receptive audience (the "receptive impressions"). To approximate the receptive impressions, I

[174] CARROLL_028059 and CARROLL_029774.

used estimates of the percent of the readership/viewership who identify as Trump supporters and/or are Republicans and estimates of the percent of Republicans who did not find allegations of sexual harassment and sexual assault made against Mr. Trump to be credible. I then discounted the total number of impressions generated by the Statements (as calculated in the Impressions Model) by the estimated percent of receptive impressions.

i. Readership Analysis

Readership Based on Pew Data. What percentage of the impressions were made to an audience that was inclined to believe them? To understand the impact of Mr. Trump's claims regarding Ms. Carroll, I used data from Pew Research's ongoing survey of American Trends. Pew Research is a non-partisan think-tank that does "data-driven social research."[175] Their American Trends panel survey provides information about Americans' political beliefs, and I use it to calculate the percent of readership that were receptive to his claims.[176] I used data from the survey Pew conducted between October 29 and November 11, 2019, making it a reasonable approximation of the composition of readership of the sources where the June 21, 22, and 24, 2019 Statements appeared (subscription periods tend to be on a yearly basis). The survey data and documentation are publicly available.[177] The Pew survey is "a national, probability-based online panel of adults living in households in the United States" and generated 12,043 responses collected from a nationally-representative sample.[178]

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175 https://www.pewresearch.org/about/

176 https://www.pewresearch.org/our-methods/u-s-surveys/

177 The data from this study was downloaded and produced. Pew Research Center's American Trends Panel Wave 57, Pathways to Election News Project, November 26, 2019, https://www.pewresearch.org/journalism/dataset/american-trends-panel-wave-57/.

178 With a probabilistic sample of this size, the sampling error was ± 1.43 percentage points, https://www.pewresearch.org/our-methods/u-s-surveys/the-american-trends-panel/.

The following variables were used in the analysis:

- SOURCEUSE: "Please click on all of the sources that you got political and election news from in the past week. This includes any way that you can get the source. If you are unsure, please DO NOT click it. **[KEEP IN SAME ORDER AS SOURCEHEARD]"**
- PARTY: "In politics today, do you consider yourself a: **ASK IF INDEP/SOMETHING ELSE (PARTY=3 or 4) OR MISSING:** PARTYLN As of today do you lean more to…"
- THERMO: "We'd like to get your feelings toward a number of people on a 'feeling thermometer.' A rating of zero degrees means you feel as cold and negative as possible. A rating of 100 degrees means you feel as warm and positive as possible. You would rate the person at 50 degrees if you don't feel particularly positive or negative toward them." (recoded to Trump receptive if value was >=50).

Receptivity based on YouGov Poll. Not every Republican is necessarily inclined to be receptive to Mr. Trump's Statements. For that reason, I corrected by discounting according to the percent of Republicans who either (1) found the various allegations of sexual harassment and assault made against Mr. Trump to not be credible (49%) or (2) needed more information (27%), for a total of 76%.[179] I did not include those who were unsure. These responses indicate a reasonable expectation that the respondent either already believed Mr. Trump's Statements or was open to believing them, given their other beliefs and their current lack of information (*i.e.*, they did not select that they did believe the allegations made against Mr. Trump were credible).

I performed the following calculations:

- *Percent Republicans* = percent of a publications' audience that are Republican[180]
- *Percent Receptive Republicans* = Percent Republicans * Percent of Republicans Receptive to the claims (.76, YouGov)

[179] https://today.yougov.com/topics/politics/articles-reports/2020/05/06/how-americans-view-sexual-assault-allegations-poll

[180] Republicans were identified as PARTY=1 in the raw data.

- *Percent Trump Supporters* = sum of all people who were receptive towards Mr. Trump[181]

Based on this analysis, I can conclude that an average of 25% of the total impressions were to individuals inclined to be receptive to the Statements of Mr. Trump. As can be seen in Figure 16 below, the minimum receptive audience was 11.25% (*Huffington Post*), while publications like the *Daily Caller* had a more receptive audience of 68.63%.

[181] I considered all people who listed a "feeling thermometer" greater than or equal to 50 to be receptive to Mr. Trump (*i.e.*, THERMO>=50).

Figure 16. Percentages of Republican or Republican-Leaning Readers/Viewers and the Percentage of Trump Supporters for Each Publication[182]

Publication	Percent Republican	Percent Receptive Republicans	Trump Supporters
The New York Times	16.3%	12.39%	13.7%
ABC	34.7%	26.37%	32.5%
NBC	31.0%	23.56%	29.5%
CBS	33.7%	25.61%	31.6%
Washington Post	18.1%	13.76%	14.6%
Time	21.0%	15.96%	18.5%
Huffington Post	14.8%	11.25%	12.4%
Daily Caller	90.3%	68.63%	84.9%
Fox News	69.8%	53.05%	68.2%
MSNBC	20.5%	15.58%	19.9%
CNN	23.6%	17.94%	23.3%
The Wall Street Journal	38.7%	29.41%	31.6%
USA Today	34.9%	26.52%	32.6%
Politico	22.4%	17.02%	17.8%
BuzzFeed	23.2%	17.63%	19.8%
Newsweek	23.1%	17.56%	20.9%
Business Insider	31.5%	23.94%	26.3%
The Hill	32.1%	24.40%	26.6%
Washington Examiner	65.7%	49.93%	58.4%
The Guardian	19.2%	14.59%	16.7%
Average		**25.25%**	

To calculate the final number of impressions to a receptive audience, I took the lowest of these variables, which is the Receptive Republicans, and multiplied the impressions generated by

[182] Pew Research Center's American Trends Panel Wave 57, Pathways to Election News Project, November 26, 2019

each media source by that percent. Data was not available for some of the publications considered in the Impressions Model. I used the average for all other publications if data was unavailable for a specific publication. Multiplying the impressions estimate from the Impressions Model by the Percent Receptive Republicans yields the percent of impressions made to people who were receptive to them. This estimate of the receptive impressions can then be carried forward to assess how much it would cost to repair reputational damage with this population. The formula used to calculate receptive impressions is displayed in Figure 17 below. The formula is applied to each of the media analyzed in the Impressions Model.

Figure 17. Receptive Impressions Calculation

Receptive Impressions = Percent Republicans * Percent of Receptive Republicans * Impressions Estimate

Where:

Percent Republican = percent of a publications' audience that are Republican
Receptive Republicans = Republicans receptive to the claims (.76, YouGov)[183]
Impressions Estimate = the total impressions from the Impressions Model

Figure 18 below summarizes the total receptive impressions generated by the Statements. Appendix J includes the detailed results of the quantitative impact model.

Figure 18. Total Receptive Impressions

	Social Media	Web	Print	TV	Total
High	12,441,816	3,275,673	444,737	26,774,128	42,936,354
Low	3,580,974	3,275,673	444,737	26,774,128	34,075,512

[183] If data related to Percent Republicans is not available, the equation is as follows: the average Percent Receptive Republicans (25.25%) * Impressions Estimate.

The quantitative impact analysis uses information about readership, political ideology, and receptivity given political ideology to calculate the number of impressions generated by Mr. Trump's Statements that were made to a receptive audience. Certainly, as detailed in the qualitative impact analysis and impression analysis, the Statements caused sufficient harm to Ms. Carroll's brand to a general public, meaning individuals across the ideological spectrum. The quantitative impact analysis provides an estimate of the target audience for a corrective campaign. That said, the total harm done to Ms. Carroll's brand in the eyes of the generalized public exceeds the very limited bounds of this quantitative impact and damages calculation. Appendix J includes a summary of the various reasons why the quantitative impact analysis is an undercount.

VI. MODELING THE COSTS FOR REPUTATION REPAIR IN SOCIAL MEDIA

A. Modeling Reputation Repair on Social Media

As detailed in the theoretical background section above, defamation causes harm to one's reputation in the public sphere. As a corrective measure to repair reputation, an advertising and strategic communications plan can attempt to change attitudes that may have been affected by the Statements. This section details the methodology for calculating the costs to repair reputation damage via social media channels. The costs to repair the reputation are based on the estimates of the number of receptive impressions. The goal of the corrective campaign is to counteract the number of receptive impressions generated by the Statements, enabling Ms. Carroll to repair the damage done to her person brand by Mr. Trump. The best way to allocate spending on media for this kind of campaign would be to create a media mix that is based on how the target audience

gets their information.[184] Further, a particular group that does not trust traditional media, such as those who identify as Republicans and/or support Mr. Trump, requires alternative information channels that they do trust.

i. Campaign Goals, Platforms, and Measurements

In my opinion, and given the prior literature summarized in Section II, a campaign to repair reputational damage must include (i) hiring influencers whom the audience regards as trusted sources, (ii) circulating statements in multiple media to replicate the echo chambers in which they originated, (iii) ensuring that the audience is exposed to the message multiple times in order to create attitude change, and (iv) extending for a long enough time to allow for dissemination, given what is known about the slow spread of true versus false claims online[185] and the multifaceted nature of effective corrective repair through online channels (*e.g.*, *United States v. Bayer Corp.*, No. 07-01(HAA) (D.N.J. Jan. 4, 2007). A holistic social media campaign that includes these integrated elements is therefore the most effective way to repair reputational damage in this case.[186]

An effective social media campaign to repair reputational damage must be multi-pronged and include a mix of platforms and people. A typical social media campaign will combine display and search advertising along with hiring influencers to promote a message via blogs and on their Instagram, YouTube, and other channels. Production costs for video and to promote

184 Ardia 2010.
185 Vosoughi *et al.* (2018).
186 Shankar, V., and Kushwaha, T. (2020). Omnichannel Marketing: Are Cross-Channel Effects Symmetric? *International Journal of Research in Marketing*; Payne, E. M., Peltier, J. W., & Barger, V. A. (2017). Omni-channel marketing, integrated marketing communications and consumer engagement: A research agenda. *Journal of Research in Interactive Marketing*, 11(2), 185–197.

content are often also included. Because the source—and not just the message—is so critical to attitude change, particularly on social media, it is important to work with credible and likeable sources likely to gain traction with the intended audience. For this reason, hiring social and mass media influencers is critical to one's ability to repair reputational damage.

ii. Media Mix

To allocate media budget and media spend across each platform, I relied on the Pew data previously cited in the impact analysis. Using the Pew data, I conducted an analysis of the ways individuals who identify as Trump supporters reported getting their news (see Figure 19 below). Respondents who identified as Trump supporters[187] were asked "what is the most common way you get political and election news?" News websites or apps were the most commonly cited media used, with 23.1%. I added this together with social media (13%) to allocate the online and influencer budget. The next most common responses were cable (21.3%), local (15.6%), and national network television (14%), which I allocated to the mass media budget. I allocated radio (9.1%) and print (3.4%) accordingly as well, using publicly available data on rates for these media channels.

[187] I analyzed the media habits of Trump supporters (THERMO variable >50), as that was the closest reflection of the receptive Republican audience in the Pew data.

Figure 19. The Media Mix of Respondents who Identify as Trump Supporters

NEWS_MOST_W57. What is the most common way you get political and election news?				
	Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Print newspaper or magazines	162	3.4	3.4	3.4
Radio	438	9.1	9.1	12.5
Local television	748	15.6	15.6	28.1
National network television	669	14	14	42.1
Cable television	1020	21.3	21.3	63.3
Social media	623	13	13	76.3
News website or app	1109	23.1	23.1	99.5
Refused	26	0.5	0.5	100
Total	4795	100	100	
		99.5		

To estimate the cost for repair on each platform, two measurements are used as the industry standard. To assess the number of impressions, one can use the cost per thousand impressions, otherwise known as cost per mille (CPM) to estimate how many impressions would be gained for each dollar spent and cost per click (CPC) to estimate the number of engagements each dollar is likely to yield. For each channel, I calculated either the CPM or CPC multiplied by the number of receptive impressions generated by the Statements (as discussed, below I also incorporated an attitude-change multiplier to account for the fact it takes multiple exposures to change an existing attitude). I also included costs to have social and mass media influencers share the message across their channels, similar to the method in which Mr. Trump's Statements were spread and that mirrors the ways in which Trump supporters get their news, according to analysis of the Pew Research poll.[188]

Costs of advertising were calculated as CPM or CPC multiplied by the target number of

[188] Pew Research Center's American Trends Panel Wave 57, Pathways to Election News Project, November 26, 2019.

impressions of each channel or platform. Whether to use CPM or CPC in a cost calculation depends on the goal of the campaign. Annual industry benchmark reports of CPM and CPC for different channels and platforms published by research firms and advertising networks are used in the damages model to estimate costs for reputation repair. When the cost of advertising of a specific channel could be calculated from either CPM or CPCI used CPC in the final cost of this channel in order to ensure attitude change/conversion. For influencer promotion and mass media advertising, only CPM was used for cost calculation because CPC is usually not available.

iii. Attitude Change Multiplier

As covered in the aforementioned psychological literature, an attitude is not changed by one impression alone. In order to actually change attitudes, a campaign would need to serve multiple impressions per person; showing someone a counter-attitudinal message one time will not change their attitude. This is true in traditional media,[189] but it is particularly true in the crowded attention marketplace of social media. While prior research has found that it requires about 3 to 5 impressions to change an attitude in traditional advertising exposure, on social media the number of exposures is likely much higher. Taking into account the attention environment, the strength of attitudes, and the impression rate (likelihood of an exposure leading to an actual impression), I estimate that a message would need to be seen approximately 3 to 5 times on social media *from a credible source* before it would lead to attitude change. With some audiences, 7 times may be more appropriate. For some audiences, it would be impossible to change attitudes.

[189] Cacioppo and Petty (1980).

iv. Potential Overlap in Impressions

As mentioned above, the aim of the corrective campaign is to repair the harm to Ms. Carroll's brand caused by the receptive impressions. Yet the literature on attitude change multipliers is based on individuals and not impressions (*i.e.*, one individual would require between 3 and 5 impressions to change attitudes). It is possible that the proposed campaign, which is measured in impressions, could serve multiple impressions to one individual, even without an attitude change multiplier. In order to account for this potential overlap, I provide estimates as low as a multiplier of 1, which would undercover the number of impressions needed for attitude change. For informative purposes, the damages model that I include provides a range of attitude change multiples, from 1 to 5. However, owing to the need to include multiple exposures for everyone in the target audience,[190] I believe at least 3 impressions would be needed to change attitudes in this case.

Empirical data suggest that a multiplier of 1 is overly conservative, especially given the media habits of the audience who were likely receptive to the Statements. Using the Pew dataset referenced previously, I conducted an analysis of media habits of Trump supporters. The data show that Trump supporters[191] are more likely to use only one news source (37% vs. 27% for non-Trump supporters), and they are more likely to use cable news than non-Trump supporters (21% vs. 16%).[192] If the audience tends to consume one news source, it is unlikely that they will

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190 Cacioppo and Petty (1980); Housholder and LaMarre (2014); Weiss (1969).

191 Because the survey did not have a "receptive Republicans" measure and I could not infer it on an individual level, I used survey respondents who indicated support for Trump. According to my prior analysis, this percentage is roughly equivalent to receptive Republicans.

192 The most common way Trump supporters get their news is through a news website (23.1%), followed closely by cable television (21.3%). Although only 13% report commonly getting news from social media, 43.4%

receive multiple impressions from a campaign with a frequency multiplier of 1. A campaign that would actually change attitudes for this audience would need to show multiple impressions, particularly to those who only use one primary news source (the others would be likely to get multiple impressions if they use more than one news source).[193] Taking into account the potential overlap of impressions per person in this instance, the damages model therefore presents a conservative range from 1 impression—which I feel is an underestimate—to 5 impressions.

B. Costs of the Corrective Campaign

Figure 20 below shows the total costs of the corrective campaign. I include three costs: a low estimate, which incorporates an attitude change multiplier of 1; a medium estimate, which incorporates an attitude change multiplier of 3; and a high estimate, which incorporates an attitude change multiplier of 5. As detailed above, I believe a multiplier of at least 3 (the medium estimate) would constitute the minimum corrective campaign to run, given the importance of multiple exposures and the likelihood that the audience will receive them and be affected by them.[194] Appendix K includes the detailed results of the damages model.

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report often or sometimes getting news from social media (17.9% reporting that they often get news from social media). The most common sources for political news by media can be found by analyzing the Pew Research 2019 dataset. For each channel, I used the rates associated with the most common response, as listed in the Pew Survey (variables MAINSOPOL_USE_W57 and NEWS_MOST_W57). Respondents also provided an open-ended response about what media sources they use, which provided insight into the best channels for placement and guided rate selection.

193 Note that a campaign with a multiplier of 1 may result in some people seeing the same message more than once (say, for example on cable television), even if they only get their information from one news source. Nonetheless, a 1x multiplier mimics the number of initial impressions they received on a 1:1 basis, not a 3:1 basis, as I would suggest for counter-attitudinal messages.

194 Cacioppo and Petty (1980); Housholder and LaMarre (2014); Weiss (1969).

Figure 20. Final Damages Calculations

	Low	Medium	High
High Impressions	$4,199,772.24	$12,599,316.71	$20,998,861.18
Low Impression	$3,333,058.72	$9,999,176.17	$16,665,293.62

High & low impressions from the Impressions Model
Low = 1x attitude change multiplier, Medium = 3x, High = 5x
In the campaign, I assume an impression rate of 5%[195] and a bounce rate of 90%.[196]

The damages model presents a conservative estimate of the cost to run a multi-media campaign to correct attitudes amongst the audience most likely to have been receptive to the Statements (see Appendix J for the reasons why the damages model is conservative). It does not account for the harm to Ms. Carroll's brand in the public at large, but only among this specific receptive audience. The campaign takes into account readership and viewership patterns in the target audience, the number of receptive impressions, and the current advertising costs across media. In this case, the Statements came from Mr. Trump, a high-profile individual with a loyal following whom the media covered, and continues to cover, extensively. Given his status, Mr. Trump's Statements received a very large number of impressions. Of the large audience where these statements appeared, at least 25% were receptive to them. The estimate to correct reputational damage is therefore of the same magnitude as the inflicted harm.

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195 The CPMs I rely on for Twitter, Facebook, and YouTube influencers are based on an influencer's number of followers or subscribers. For the reasons described above, not all a user's followers will see an influencer's post. As a result, to ensure the corrective campaign generates sufficient impressions, it is necessary to incorporate an impression rate. In this case, I am relying on an impression rate of 5% which is the median impression rate calculated using Equation 2a from the Impression Model.

196 The CPM I rely on for web blog influencers is based on site visits. To account for people who visit a blogger's website but do not perform any other action, I multiplied the impressions needed by a bounce rate of 90%, a typically bounce rate for blogs. (https://influencermarketinghub.com/glossary/bounce-rate/).

VII. CONCLUSION

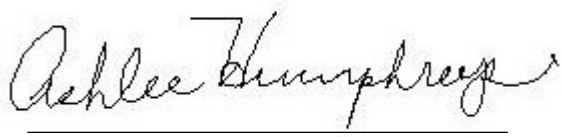
I conclude that Mr. Trump's Statements about Ms. Carroll have significantly harmed her person brand. My conclusion is based on my academic research and expertise and my analysis of the facts of this case and of data I collected regarding the dissemination of, and receptivity to, Mr. Trump's Statements; it is also supported by abundant qualitative evidence. The models I developed demonstrate how Mr. Trump's Statements spread to a receptive audience across online and traditional media platforms and provide the basis for calculating the cost of an effort to repair the damage done to Ms. Carroll's person brand. My conclusions are as follows:

- **Impressions Model Conclusion:** Mr. Trump's Statements made on June 21, 22, and 24, 2019, received between 142,334,424 and 188,155,507 impressions across social, digital, television, and print media. The extraordinary dissemination of the Statements is in keeping with the high profile and ongoing media coverage of Mr. Trump. While extraordinary, this number of impressions is a conservative estimate for reasons I have previously delineated.
- **Impact Model Conclusion:** Of the impressions generated, an average of 25% of recipients were receptive to these Statements, resulting in between 34,075,512 and 42,936,354 impressions that should be corrected. Further, my qualitative assessment of the impact of the dissemination of Mr. Trump's Statements is that they caused short- and long-term harm to Ms. Carroll beyond the estimate of receptive impressions calculated in my Impact Model. Evidence from a number of sources indicates that there has been a shift in the perceptions associated with Ms. Carroll's person brand with the general public and specific perceptions amongst a group of people receptive to the claims.
- **Damages Model Conclusion:** The cost to counteract the impact of these Statements is between $3,333,058.72 and $20,998,861.18. I believe the minimum corrective campaign to repair reputational damage would be the middle range, from $9,999,176.17 to $12,599,316.71 for reasons outlined above. Because I took a conservative approach to calculating the Impressions input, this range represents a conservative estimate.

I reserve the right to revisit and supplement this analysis and amend these conclusions should additional informatin and/or documents become available, such as Mr. Trump's October 12 statement, reiterating many of the defamatory claims against Ms. Carroll, in response to a

judge's denial of Mr. Trump's request to delay his deposition. I further reserve the right to respond to opinions and issues raised by any opposing experts. Finally, I reserve the right to use demonstrative and/or other exhibits to present the opinions expressed in this report and/or any supplemental, amended, and/or rebuttal reports.

Dated: October 14, 2022



Professor Ashlee Humphreys

APPENDIX A. PROFESSOR HUMPHREYS' CV AND PRIOR TESTIMONY

[Produced in Native Format]

APPENDIX B. MATERIALS CONSIDERED

Bates Stamped Documents

- CARROLL_024475-79
- CARROLL_024499
- CARROLL_024554
- CARROLL_024559
- CARROLL_024562
- CARROLL_024640-41
- CARROLL_024684
- CARROLL_024796
- CARROLL_024944
- CARROLL_024974
- CARROLL_025080
- CARROLL_026326
- CARROLL_026329
- CARROLL_026331
- CARROLL_026473
- CARROLL_026479
- CARROLL_026596
- CARROLL_028058-59
- CARROLL_028063-65
- CARROLL_028069
- CARROLL_028115
- CARROLL_028549
- CARROLL_028588
- CARROLL_028592
- CARROLL_029331
- CARROLL_029774-75
- CARROLL_030105-08
- CARROLL_030111-29
- CARROLL_030131-48
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- http://twitter.com/floccinaucini1/statuses/1142196689148813313
- http://twitter.com/pinochet_pilot/statuses/1566945839679180800
- http://twitter.com/RunnerMo24/statuses/1142182659071860737
- http://twitter.com/ScottLHarris1/statuses/1142493161886892032
- https://truthsocial.com/@realDonaldTrump/posts/109158586745522514
- https://truthsocial.com/@realDonaldTrump/posts/109158644496040450
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- https://twitter.com/1/status/1142184727492878336
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- https://twitter.com/1/status/1303742205648142336

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- https://twitter.com/MCWAY2000/status/1422939994235228162
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- https://twitter.com/TristanSnell/status/1580390962115006464
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- https://www.facebook.com/EJeanCarroll/posts/pfbid0pM1JLR679TDR96NHp2CdGZPFJS9xmq4cbSBCFpSCfFKJJw9LyAes1sWYJZSJDC93l?comment_id=505171354452764
- https://www.instagram.com/p/ByS3GZAnG8T/c/17885005825367171
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APPENDIX C. GLOSSARY OF TERMS

Bounce Rate: The percentage of users who leave a page without taking any action.

Cost Per Click (CPC): The cost an advertiser pays each time a user clicks on an advertisement.[197]

Cost Per Mille (CPM): The cost an advertiser pays per one thousand impressions generated by an advertisement on a web page.[198]

Echo Chamber: An environment where a person only encounters information or opinions that reflect and reinforce their own.[199]

Engagement: Measures of audience involvement with or responsiveness to a particular message. Can include metrics such as likes, retweets, and comments/replies.

Engagement Rate: The percentage of people who engage with a post. Engagement rate is calculated by dividing the number of impressions by the number of engagements.

Filter Bubble: An environment isolated by algorithms that prevent users from being exposed to information and perspectives they haven't already expressed an interest in.[200]

Followers: The total number of users who could potentially see another user's post.

Impressions: The total number of times a post or other piece of content has been displayed to users.[201]

Impression Rate: The percentage of a user's followers who are exposed to a post. Impression rates are unique to each account and are not publicly available. Nonetheless, academic researchers have developed a formula to estimate the impressions rate using follower counts.[202]

Influencers: People with specialized knowledge, authority, or insight into a specific niche or industry that can sway the opinions of a target audience.

Information Cascade: The way information is exchanged on social media networks. After a user posts content to social media, that user's followers observe that behavior and repeat the

197 https://www.investopedia.com/terms/c/cpm.asp
198 https://www.investopedia.com/terms/c/cpm.asp
199 https://edu.gcfglobal.org/en/digital-media-literacy/what-is-an-echo-chamber/1/
200 https://edu.gcfglobal.org/en/digital-media-literacy/how-filter-bubbles-isolate-you/1/
201 https://help.twitter.com/en/managing-your-account/using-the-tweet-activity-dashboard
202 Wang et al., 2016

same process by reposting or sharing the original user's content. Through sharing and reposting, an unbroken chain of messages is formed with a common, singular origin, that keeps extending until individuals stop spreading or reposting it.[203]

Media System: A network of platforms, institutions, practices, and people understood as circulating information, who by interacting with one another, shape each other's opinions.[204]

Network: A system of users connected by exchanges of information.

Network Structure: The number of connections (*e.g.*, followers) one user has and the number of connections that user's connections have.

Person Brand: An actively curated image that projects how a person wants the public to view them. The brand image often consists of the person's unique combination of skills, experience, and personality.[205]

Ranking Algorithm: The algorithm each social media platform relies on to determine what content to display to each user.[206]

Reach: The total number of people who could potentially be exposed to a post or other piece of content.

Retweet Rate: The percentage of a user's followers who retweeted a post. The retweet rate is calculated by dividing the number of retweets by the number of followers.

Social Capital: The quality and quantity of social connections. Social capital can be measured by the number of connections a user has on a social media network. Users with high social capital are able to spread a message broadly and deeply on a network.

Social Media Platform: The websites and applications that focus on communication, community-based input, interaction, content-sharing, and collaboration. Some popular examples of social media platforms include Twitter, Facebook, Reddit, and YouTube.

Source Credibility: The extent to which the persons or entities generating information on social media are perceived to be trustworthy, knowledgeable, and believable.[207]

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203 Vosoughi et al., 2018; Singh et al., 2020 (https://www.sciencedirect.com/science/article/pii/S1877050920315283); https://blogs.cornell.edu/info2040/2016/11/16/information-cascade-in-social-media/

204 https://oxfordre.com/politics/view/10.1093/acrefore/9780190228637.001.0001/acrefore-9780190228637-e-205

205 https://hbr.org/2022/02/whats-the-point-of-a-personal-brand; https://influencermarketinghub.com/what-is-personal-branding/

206 https://sproutsocial.com/insights/social-media-algorithms/

207 Zha et al., 2018

Unique Visitors: The total number of unique visits to a given page. Each visitor to the site is counted once during the reporting period.[208]

[208] https://www.semrush.com/kb/975-traffic-analytics-top-landing-pages

APPENDIX D. WEB IMPRESSIONS MODEL

No.	Title	Author	Publication Date	Website	Unique Monthly Visitors[209]	Bounce Rate[210]	Impressions Estimate[211]
W-1	US writer says Trump sexually assaulted her in mid-1990s[212]	Agence France-Presse (AFP)	6/21/2019	aljazeera.com	3,200,000	0.4052	43,221
W-2	E. Jean Carroll Accuses Trump of Sexual Assault in Her Memoir[213]	Alexandra Alter	6/21/2019	newyorktimes.com	60,400,000	0.4767	959,756
W-3	Trump On E. Jean Carroll Rape Allegation: 'I've Never Met This Person In My Life'[214]	Jenna Amatulli	6/21/2019	huffpost.com	24,200,000	0.5484	442,376
W-4	Trump Responds To Rape Accuser: 'People Should Pay Dearly For Such False Accusations'[215]	Amber Athey	6/21/2019	dailycaller.com	4,600,000	0.4859	74,505
W-5	Trump Says He 'Never Met' Author Who Has Accused Him of Sexual Assault[216]	Brian Bennett	6/21/2019	time.com	12,800,000	0.3216	137,216

209 The total number of unique visitors to a given page in June 2019. Data collected from Semrush.
210 The percentage of users who leave a page without taking any action
211 Impressions estimate calculated using the following formula: (Unique Monthly Visitors/30)*(1-bounce rate)
212 https://www.aljazeera.com/news/2019/6/21/us-writer-says-trump-sexually-assaulted-her-in-mid-1990s
213 https://www.nytimes.com/2019/06/21/books/e-jean-carroll-trump.html
214 https://www.huffpost.com/entry/trump-response-e-jean-carroll-rape-allegation_n_5d0d4a42e4b0a39418626c52
215 https://dailycaller.com/2019/06/21/trump-rape-accusation-false-e-jean-carroll/
216 https://time.com/5612502/trump-jean-carroll-sexual-assault-allegation/

No.	Title	Author	Publication Date	Website	Unique Monthly Visitors[209]	Bounce Rate[210]	Impressions Estimate[211]
W-6	Trump Issues Blistering Denial of E. Jean Carroll's Rape Allegation[217]	Ellie Bufkin	6/21/2019	washingtonexaminer.com	15,400,000	0.2133	109,494
W-7	Noted Advice Columnist Says Trump Raped Her in Manhattan Department Store in the '90s — 'Never Happened,' Trump Responds[218]	Adam Carlson	6/21/2019	people.com	27,400,000	0.3455	315,557
W-8	Trump dismisses new sexual assault allegation[219]	Matthew Choi	6/21/2019	politico.com	14,100,000	0.4098	192,606
W-9	Writer says she was raped by Trump in 1990s[220]	Casey Darnell	6/21/2019	news.yahoo.com	13,900,000	0.4611	213,643
W-10	Writer says she was raped by Trump in 1990s[221]	Casey Darnell	6/21/2019	sports.yahoo.com	11,000,000	0.4943	181,243
W-11	E. Jean Carroll Alleges President Donald Trump Assaulted Her[222]	EJ Dickson	6/21/2019	rollingstone.com	9,800,000	0.4129	134,881
W-12	Trump responds to E Jean Carroll's allegations[223]	-	6/21/2019	theguardian.com	28,100,000	0.4327	405,296

217 https://www.washingtonexaminer.com/tag/donald-trump?source=%2Fnews%2Ftrump-issues-blistering-denial-of-e-jean-carrolls-rape-allegation
218 https://people.com/politics/donald-trump-raped-e-jean-carroll/
219 https://www.politico.com/story/2019/06/21/trump-dismisses-new-sexual-assault-allegation-1376698
220 https://news.yahoo.com/writer-says-she-was-raped-by-trump-in-1990-s-190337681.html
221 https://sports.yahoo.com/writer-says-she-was-raped-by-trump-in-1990-s-190337681.html
222 https://www.rollingstone.com/culture/culture-news/e-jean-carroll-president-donald-trump-sexual-assault-851261/
223 https://www.theguardian.com/us-news/live/2019/jun/21/trump-iran-news-us-latest-tehran-strike-washington-2020?page=with:block-5d0d4b9e8f081e872734c692#block-5d0d4b9e8f081e872734c692

No.	Title	Author	Publication Date	Website	Unique Monthly Visitors[209]	Bounce Rate[210]	Impressions Estimate[211]
W-13	Magazine columnist accuses Trump of sexual assault more than two decades ago, an allegation he denies[224]	Beth Reinhard and Colby Itkowitz	6/21/2019	washingtonpost.com	42,300,000	0.5450	768,450
W-14	E. Jean Carroll: "Trump attacked me in the dressing room of Bergdorf Goodman."[225]	Sarah Jones	6/21/2019	nymag.com	8,100,000	0.4640	125,280
W-15	E. Jean Carroll Says Bringing Rape Charges Against Trump Would Be "Disrespectful" to Migrant Women[226]	Hilary Lewis	6/22/2019	hollywoodreporter.com	11,500,000	0.3343	128,148
W-16	Advice Columnist E. Jean Carroll Accuses Donald Trump Of Sexual Assault[227]	Caitlin Mac Neal	6/21/2019	talkingpointsmemo.com	1,800,000	0.5923	35,538
W-17	Longtime advice columnist E. Jean Carroll accuses Trump of sexual assault in 1990s[228]	Alex Pappas	6/21/2019	foxnews.com	71,500,000	0.4955	1,180,942

224 https://www.washingtonpost.com/politics/magazine-columnist-accuses-trump-of-sexual-assault-more-than-two-decades-ago-an-allegation-he-denies/2019/06/21/2afc6f12-945a-11e9-b58a-a6a9afaa0e3e_story.html

225 https://nymag.com/intelligencer/2019/06/president-donald-trump-faces-new-rape-accusation.html

226 https://www.hollywoodreporter.com/lifestyle/lifestyle-news/writer-e-jean-carroll-no-disrespectful-rape-charges-trump-1220447/

227 https://talkingpointsmemo.com/news/e-jean-carroll-donald-trump-sexual-assault

228 https://www.foxnews.com/politics/longtime-advice-columnist-e-jean-carroll-accuses-trump-of-sexual-assault-in-1990s

No.	Title	Author	Publication Date	Website	Unique Monthly Visitors[209]	Bounce Rate[210]	Impressions Estimate[211]
W-18	Trump Goes on Tirade to Deny Latest Assault Allegation: Women Are "Paid Money" to Make False Claims[229]	Daniel Politi	6/22/2019	slate.com	10,500,000	0.3781	132,335
W-19	Author E. Jean Carroll accuses President Trump of sexual assault in 1990s[230]	Christina Prignano	6/21/2019	bostonglobe.com	3,700,000	0.5045	62,222
W-20	Trump claims he's never met the columnist who just accused him of sexual assault despite photo evidence of them together[231]	Eliza Relman	6/21/2019	insider.com	5,000,000	0.3806	63,433
W-21	Trump denies knowing NY woman accusing him of sexual assault[232]	Darlene Superville	6/22/2019	apnews.com	13,700,000	0.2070	94,530
W-22	Trump Denies New Sexual Assault Allegation By Advice Columnist E. Jean Carroll[233]	Jessica Taylor	6/21/2019	npr.org	40,400,000	0.2309	310,945

229 https://slate.com/news-and-politics/2019/06/trump-slams-e-jean-carroll-accusation-sexual-assault-bergdorg-goodman.html
230 https://www.bostonglobe.com/news/politics/2019/06/21/author-jean-carroll-accuses-president-trump-sexual-assault/g3iN16JP6dqpiK5g0n9OJN/story.html
231 https://www.businessinsider.com/trump-says-e-jean-carroll-falsely-accused-him-sexual-assault-2019-6
232 https://apnews.com/article/politics-ap-top-news-new-york-donald-trump-sexual-assault-899e37de570940a3a88d2245609ee328
233 https://www.npr.org/2019/06/21/734918876/trump-denies-new-sexual-assault-allegation-by-advice-columnist-e-jean-carroll

No.	Title	Author	Publication Date	Website	Unique Monthly Visitors[209]	Bounce Rate[210]	Impressions Estimate[211]
W-23	Columnist E. Jean Carroll Accuses Trump of Sexual Assault in 1990s[234]	Josh Wingrove and Bloomberg	6/21/2019	fortune.com	4,900,000	0.3350	54,717
W-24	Trump dismisses E. Jean Carroll rape allegation as 'fiction'[235]	-	6/22/2019	bbc.com	30,500,000	0.4985	506,808
W-25	Woman Accuses Trump of Sexual Assault at New York Store in 1990s[236]	Josh Wingrove	6/21/2019	bloomberg.com	18,100,000	0.3615	218,105
W-26	Remarks by President Trump Before Marine One Departure[237]	-	6/22/2019	white house	2,100,000	0.3076	21,532
W-27	Trump goes on manic tirade after being asked about new rape allegation: Women get 'paid money to say bad things about me'[238]	Matthew Chapman	6/22/2019	rawstory.com	2,800,000	0.6100	56,933
W-28	Writer E. Jean Carroll made a claim of sexual assault against Trump. Here's what we know[239]	William Cummings	6/25/2019	usatoday.com	43,100,000	0.3823	549,238

234 https://fortune.com/2019/06/21/e-jean-carroll-trump-rape-new-yorker/
235 https://www.bbc.com/news/world-us-canada-48727972
236 https://www.bloomberg.com/news/articles/2019-06-21/e-jean-carroll-accuses-trump-of-sexual-assault#xj4y7vzkg
237 https://trumpwhitehouse.archives.gov/briefings-statements/remarks-president-trump-marine-one-departure-49/
238 https://www.rawstory.com/2019/06/trump-goes-on-manic-tirade-after-being-asked-about-new-rape-allegation-women-get-paid-money-to-say-bad-things-about-me/
239 https://www.usatoday.com/story/news/politics/onpolitics/2019/06/25/e-jean-carroll-what-we-know-sexual-assault-claim-against-trump/1546559001/

No.	Title	Author	Publication Date	Website	Unique Monthly Visitors[209]	Bounce Rate[210]	Impressions Estimate[211]
W-29	George Conway Says Trump's Credibility is 'Annihilated' After President Denies Knowing Alleged Assault Victim[240]	Gillian Edevane	6/22/2019	newsweek.com	13,100,000	0.3319	144,930
W-30	It Hurt. And It Was Against My Will': Trump Accuser Stands By Her Story[241]	Lulu Garcia-Navarro and Daniella Cheslow	6/22/2019	npr.org	40,400,000	0.2309	310,945
W-31	Trump repeats contested claim he does not know latest sexual assault accuser[242]	Amanda Holpuch	6/22/2019	theguardian.com	28,100,000	0.4327	405,296
W-32	Trump compares himself to Kavanaugh in latest sexual assault allegation[243]	Colby Itkowitz, Beth Reinhard and David Weigel	6/22/2019	washingtonpost.com	42,300,000	0.5450	768,450
W-33	Trump denies knowing NY woman accusing him of sexual assault[244]	Darlene Superville	6/22/2019	abcnews.go.com	16,800,000	0.4084	228,704

240 https://www.newsweek.com/george-conway-says-trumps-credibility-annihilated-after-president-denies-knowing-alleged-1445387
241 https://www.npr.org/2019/06/22/735080909/it-hurt-and-it-was-against-my-will-trump-accuser-stands-by-her-story
242 https://www.theguardian.com/us-news/2019/jun/22/trump-sexual-assault-accuser-e-jean-carroll
243 https://www.washingtonpost.com/politics/trump-compares-himself-to-kavanaugh-in-latest-sexual-assault-allegation/2019/06/22/81e2c1b4-9509-11e9-aadb-74e6b2b46f6a_story.html
244 https://abcnews.go.com/Politics/wireStory/trump-faces-sexual-assault-allegation-issues-denial-63873470

No.	Title	Author	Publication Date	Website	Unique Monthly Visitors[209]	Bounce Rate[210]	Impressions Estimate[211]
W-34	Trump Emphatically Denies Sexual Assault Allegation by E. Jean Carroll[245]	Mihir Zaveri	6/22/2019	newyorktimes.com	60,400,000	0.4767	959,756
W-35	Trump on E. Jean Carroll's Assault Allegations: 'She's Not My Type'[246]	Julia Arciga	6/25/2019	thedailybeast.com	24,500,000	0.3059	249,818
W-36	EXCLUSIVE: Trump vehemently denies E. Jean Carroll allegation, says 'she's not my type'[247]	Jordan Fabian and Saagar Enjeti	6/24/2019	thehill.com	17,500,000	0.3991	232,808
W-37	Trump on E. Jean Carroll Sexual Assault Claim: "She's Not My Type"[248]	The Associated Press	6/25/2019	hollywoodreporter.com	11,500,000	0.3343	128,148
W-38	Trump says famed advice columnist who accused him of sexual assault is 'not my type'[249]	The Associated Press	6/24/2019	chicagotribune.com	8,300,000	0.4070	112,603
W-39	Trump: Woman who accused him of sexual assault not his type[250]	The Associated Press	6/24/2019	denverpost.com	3,200,000	0.4071	43,424

245 https://www.nytimes.com/2019/06/22/us/e-jean-carroll-donald-trump.html
246 https://www.thedailybeast.com/trump-on-e-jean-carrolls-assault-allegations-shes-not-my-type
247 https://thehill.com/homenews/administration/450116-trump-vehemently-denies-e-jean-carroll-allegation-shes-not-my-type/
248 https://www.hollywoodreporter.com/news/politics-news/trump-says-accuser-e-jean-carroll-not-my-type-1220818/
249 https://www.chicagotribune.com/nation-world/ct-nw-e-jean-carroll-donald-trump-sexual-assault-allegation-20190625-wqtl77cbtra7fd2fuq64xhs6b4-story.html
250 https://www.denverpost.com/2019/06/24/trump-addresses-sexual-assault-allegations/

No.	Title	Author	Publication Date	Website	Unique Monthly Visitors[209]	Bounce Rate[210]	Impressions Estimate[211]
W-40	Trump Says Columnist Who Accused Him Of Rape Is 'Not My Type'[251]	Amber Athey	6/24/2019	dailycaller.com	4,600,000	0.4859	74,505
W-41	Trump, accused again of sexual misconduct, insults woman who said he assaulted her[252]	Peter Baker and Niel Vigdor	6/25/2019	bostonglobe.com	3,700,000	0.5045	62,222
W-42	Trump On E. Jean Carroll Accusing Him Of Rape: 'She's Not My Type'[253]	Antonia Blumberg	6/24/2019	huffpost.com	24,200,000	0.5484	442,376
W-43	Trump denies woman's sexual assault accusation: 'She's not my type'[254]	Reuters	6/25/2019	insider.com	5,000,000	0.3806	63,433
W-44	Trump denies woman's sexual assault accusation: 'She's not my type'[255]	Reuters	6/25/2019	reuters.com	11,900,000	0.3870	153,510
W-45	I believe the president': GOP stands by Trump on sexual assault allegation[256]	Burgess Everett Melanie Zanona	6/25/2019	politico.com	14,100,000	0.4098	192,606

251 https://dailycaller.com/2019/06/24/trump-e-jean-carroll-rape-not-my-type/

252 https://www.bostonglobe.com/news/nation/2019/06/25/trump-accused-again-sexual-misconduct-insults-woman-who-said-assaulted-her/ebBy7ynB1nOE96gZPbwa4M/story.html

253 https://www.huffpost.com/entry/trump-e-jean-carroll-rape-allegation-denial_n_5d1157dce4b0a39418678e0e

254 https://www.insider.com/trump-denies-womans-sexual-assault-accusation-shes-not-my-type-2019-6

255 https://www.reuters.com/article/usa-trump-women-idUSL2N23W0IF

256 https://www.politico.com/story/2019/06/25/trump-accuse-gop-1382385

No.	Title	Author	Publication Date	Website	Unique Monthly Visitors[209]	Bounce Rate[210]	Impressions Estimate[211]
W-46	Trump says he didn't rape author E. Jean Carroll: "She's not my type"[257]	Rebecca Falconer	6/24/2019	axios.com	4,500,000	0.4717	70,755
W-47	The Real Meaning of Trump's 'She's Not My Type' Defense[258]	Megan Garber	6/25/2019	theatlantic.com	15,600,000	0.2615	135,980
W-48	She's not my type': Trump again denies E. Jean Carroll's sexual misconduct allegation[259]	Rebecca Morin	6/24/2019	usatoday.com	43,100,000	0.3823	549,238
W-49	A Look At President Trump's Pattern Of Responding To Accusations Of Sexual Misconduct[260]	Ari Shapiro and Anna North	6/25/2019	npr.org	40,400,000	0.2309	310,945
W-50	Trump Responds to E. Jean Carroll Rape Allegation: 'She's Not My Type'[261]	Matt Stieb	6/25/2019	thecut.com	5,200,000	0.4347	75,348
W-51	E. Jean Carroll's Accusation Against Donald Trump, and the Raising, and Lowering, of the Bar[262]	Jia Tolentino	6/25/2019	newyorker.com	6,900,000	0.4737	108,951

257 https://www.axios.com/2019/06/24/trump-says-he-didnt-rape-author-e-jean-carroll-shes-not-my-type
258 https://www.theatlantic.com/entertainment/archive/2019/06/trump-e-jean-carroll-rape-allegation-not-my-type-defense/592555/
259 https://www.usatoday.com/story/news/politics/2019/06/24/trump-e-jean-carroll-shes-not-my-type/1554116001/
260 https://www.npr.org/2019/06/25/735930764/a-look-at-president-trumps-pattern-of-responding-to-accusations-of-sexual-miscon
261 https://www.thecut.com/2019/06/trump-on-e-jean-carroll-rape-claim-shes-not-my-type.html
262 https://www.newyorker.com/news/our-columnists/e-jean-carrolls-accusation-against-donald-trump-and-the-raising-and-lowering-of-the-bar

No.	Title	Author	Publication Date	Website	Unique Monthly Visitors[209]	Bounce Rate[210]	Impressions Estimate[211]
W-52	Donald Trump Responds to E. Jean Carroll's Rape Allegation: "She's Not My Type"[263]	Jay Willis	6/25/2019	gq.com	4,300,000	0.5004	71,724
W-53	Trump says sexual assault accuser E Jean Carroll 'not my type'[264]	-	6/25/2019	bbc.com	30,500,000	0.4985	506,808
						TOTAL WEB IMPRESSIONS	**13,922,234**

263 https://www.gq.com/story/trump-not-my-type

264 https://www.bbc.com/news/world-us-canada-48754959

APPENDIX E. SOCIAL MEDIA IMPRESSIONS MODEL

No.	Original Tweet ID[265]	Article Referenced	Primary Followers[266]	Retweets[267]	Average RT Followers[268]	Total Followers[269]	Impression Estimate Equation 2a[270]	Impressions Estimate Equation 2b[271]
S-1	@LauraLitvan[272]	N/A	17,586	597	10,946	28,532	302,891	60,190
S-2	@nytimes[273]	W-2	43,602,518	123	1,062	43,603,580	1,517,403	7,622,861
S-3	@dailycaller[274]	W-4	509,377	82	1,404	510,781	50,916	90,045
S-4	@dailycaller[275]	W-4	509,211	241	4,319	513,530	111,412	98,107
S-5	@dailycaller[276]	W-4	509,023	379	1,846	510,869	97,086	95,090
S-6	@time[277]	W-5	16,073,840	34	702	16,074,542	605,662	2,809,916
S-7	@people[278]	W-7	7,515,391	17	598	7,515,989	310,072	1,313,779

265 Twitter's unique identifier for the original tweet

266 Number of followers of original tweet

267 Total number of retweets (and quote tweets) to the original tweet

268 Estimated average number of followers of all retweets. Estimate is based on retweets accessible via the Twitter API.

269 (Average RT Followers * Retweets) + Primary Followers

270 Equation 2a: 10^(0.7396 log(Total Followers*(1-bot rate)) + 0.0473 log(Primary Followers*(1-bot rate)) + 0.1027 log(Retweets)). Where:
"Bot rate" is an estimate rate of bot activity on Twitter. I'm estimating a 12.6% bot rate.

271 Equation 2b: (primary followers * First Level Impression Rate * (1-bot rate of 12.6%)) + (Retweets * Second Level Impression Rate * (1-bot rate)).
Where:
"First Level Impression Rate" is an estimated impression rate for the original tweet. I'm estimating a 20% First Level Impression Rate.
"Second Level Impression Rate" an estimated impression rate for the retweets of the original tweet. I'm estimating a 1% Second Level Impression Rate.

272 https://twitter.com/LauraLitvan/status/1142179819075121154

273 https://twitter.com/nytimes/status/1142469834170601477

274 https://twitter.com/DailyCaller/status/1143013379558334464

275 https://twitter.com/DailyCaller/status/1142809657653813248

276 https://twitter.com/DailyCaller/status/1142420738865078272

277 https://twitter.com/TIME/status/1142190416256782337

278 https://twitter.com/people/status/1142189984574836736

No.	Original Tweet ID[265]	Article Referenced	Primary Followers [266]	Retweets[267]	Average RT Followers [268]	Total Followers [269]	Impression Estimate Equation 2a[270]	Impressions Estimate Equation 2b[271]
S-8	@politico[279]	W-8	3,838,011	621	8,539	3,846,550	501,872	717,229
S-9	@politico[280]	W-8	3,838,042	168	3,051	3,841,093	253,407	675,370
S-10	@politico[281]	W-8	3,838,042	66	1,727	3,839,769	214,427	671,886
S-11	@politico[282]	W-8	3,838,042	67	1,805	3,839,847	215,038	671,947
S-12	@RollingStone[283]	W-11	6,278,602	16	1,584	6,280,186	268,022	1,097,721
S-13	@washingtonpost[284]	W-13	13,798,619	229	4,023	13,802,642	684,581	2,420,050
S-14	@Slate[285]	W-18	1,778,594	24	1,661	1,780,255	104,961	311,247
S-15	@Slate[286]	W-18	1,778,506	15	10,499	1,789,005	104,756	312,259
S-16	@Slate[287]	W-18	1,778,538	12	3,580	1,782,118	97,870	311,264
S-17	@Slate[288]	W-18	1,778,659	13	5,059	1,783,718	99,595	311,484
S-18	@Slate[289]	W-18	1,778,670	10	2,492	1,781,162	95,355	311,129
S-19	@Slate[290]	W-18	1,778,685	9	7,318	1,786,003	95,909	311,490
S-20	@Slate[291]	W-18	1,778,560	8	1,622	1,780,182	92,734	311,006
S-21	@Slate[292]	W-18	1,778,681	9	464	1,779,145	93,526	310,950

279 https://twitter.com/politico/status/1142187206834081792
280 https://twitter.com/politico/status/1142205734639362048
281 https://twitter.com/politico/status/1142205735553634305
282 https://twitter.com/politico/status/1142205736405131264
283 https://twitter.com/RollingStone/status/1142189715392798720
284 https://twitter.com/washingtonpost/status/1142240399312019458
285 https://twitter.com/Slate/status/1142815602077327361
286 https://twitter.com/Slate/status/1142492014820438016
287 https://twitter.com/Slate/status/1142617601220259840
288 https://twitter.com/Slate/status/1142884945943289856
289 https://twitter.com/Slate/status/1143436727371124737
290 https://twitter.com/Slate/status/1143296495204126723
291 https://twitter.com/Slate/status/1142690168002027520
292 https://twitter.com/Slate/status/1143355260850905089

No.	Original Tweet ID[265]	Article Referenced	Primary Followers [266]	Retweets[267]	Average RT Followers [268]	Total Followers [269]	Impression Estimate Equation 2a[270]	Impressions Estimate Equation 2b[271]
S-22	@Slate[293]	W-18	1,778,697	5	692	1,779,389	88,022	310,946
S-23	@Slate[294]	W-18	1,778,705	3	2,678	1,781,383	83,682	310,988
S-24	@Slate[295]	W-18	1,778,696	5	1,481	1,780,177	88,166	310,981
S-25	@Slate[296]	W-18	1,778,673	7	547	1,779,220	91,129	310,945
S-26	@Slate[297]	W-18	1,778,701	3	1,903	1,780,604	83,601	310,967
S-27	@NPR[298]	W-22	7,770,046	94	956	7,771,002	382,281	1,358,989
S-28	@FortuneMagazine [299]	W-23	2,262,542	1	0	2,262,542	90,034	395,492
S-29	@BBCNews[300]	W-24	10,029,760	31	767	10,030,527	414,204	1,753,410
S-30	@BBCWorld[301]	W-24	25,250,057	66	3,758	25,253,815	930,727	4,415,878
S-31	@BBCWorld[302]	W-24	25,251,777	118	109,206	25,360,983	1,330,634	4,526,637
S-32	@RawStory[303]	W-27	198,447	39	7,764	206,211	38,345	37,335
S-33	@newsweek[304]	W-29	3,333,156	48	1,025	3,334,181	183,730	583,066
S-34	@NPR[305]	W-30	7,770,824	95	1,060	7,771,884	383,118	1,359,220

293 https://twitter.com/Slate/status/1143242046377025538
294 https://twitter.com/Slate/status/1143103358351360001
295 https://twitter.com/Slate/status/1143077862464983040
296 https://twitter.com/Slate/status/1142966568806227968
297 https://twitter.com/Slate/status/1143195574482677761
298 https://twitter.com/NPR/status/1142260932703334400
299 https://twitter.com/FortuneMagazine/status/1142556629906415616
300 https://twitter.com/BBCNews/status/1142225240942141440
301 https://twitter.com/BBCWorld/status/1142220276538720256
302 https://twitter.com/BBCWorld/status/1142380908311453696
303 https://twitter.com/RawStory/status/1142478448746749952
304 https://twitter.com/Newsweek/status/1142781858796703746
305 https://twitter.com/NPR/status/1142824913822244864

No.	Original Tweet ID[265]	Article Referenced	Primary Followers [266]	Retweets[267]	Average RT Followers [268]	Total Followers [269]	Impression Estimate Equation 2a[270]	Impressions Estimate Equation 2b[271]
S-35	@guardiannews[306]	W-31	2,875,794	10	2,203	2,877,997	138,523	502,881
S-36	@washingtonpost[307]	W-32	13,801,157	450	2,709	13,803,866	744,815	2,423,097
S-37	@washingtonpost[308]	W-32	13,802,210	426	7,599	13,809,809	813,052	2,440,919
S-38	@nytimes[309]	W-34	43,606,559	102	3,864	43,610,423	1,495,243	7,625,871
S-39	@thedailybeast[310]	W-35	1,220,166	42	5,081	1,225,247	91,591	215,150
S-40	@thehill[311]	W-36	3,294,185	125	1,681	3,295,866	207,974	577,660
S-41	@thehill[312]	W-36	3,294,122	68	26,072	3,320,194	256,624	591,307
S-42	@thehill[313]	W-36	3,294,403	31	1,554	3,295,957	174,036	576,283
S-43	@thehill[314]	W-36	3,294,049	9	3,448	3,297,497	152,682	576,071
S-44	@dailycaller[315]	W-40	509,572	151	1,738	511,310	63,413	91,367
S-45	@dailycaller[316]	W-40	509,664	17	867	510,531	38,068	89,218
S-46	@huffpost[317]	W-42	11,437,397	266	4,559	11,441,956	615,996	2,009,856
S-47	@politico[318]	W-45	3,840,348	61	14,392	3,854,740	242,492	678,966
S-48	@axios[319]	W-46	277,660	46	1,481	279,141	30,111	49,130

306 https://twitter.com/guardiannews/status/1142535020504113167
307 https://twitter.com/washingtonpost/status/1142492789336346624
308 https://twitter.com/washingtonpost/status/1142615547688955917
309 https://twitter.com/nytimes/status/1142794459052224512
310 https://twitter.com/thedailybeast/status/1143302340235202561
311 https://twitter.com/thehill/status/1143499091789471747
312 https://twitter.com/thehill/status/1143477200148189184
313 https://twitter.com/thehill/status/1143535330164953089
314 https://twitter.com/thehill/status/1143445235445436416
315 https://twitter.com/DailyCaller/status/1143314226095755265
316 https://twitter.com/DailyCaller/status/1143492790329970688
317 https://twitter.com/HuffPost/status/1143300651532898304
318 https://twitter.com/politico/status/1143648348945178624
319 https://twitter.com/axios/status/1143292968771604480

No.	Original Tweet ID[265]	Article Referenced	Primary Followers [266]	Retweets[267]	Average RT Followers [268]	Total Followers [269]	Impression Estimate Equation 2a[270]	Impressions Estimate Equation 2b[271]
S-49	@usatoday[320]	W-48	3,812,700	18	1,852	3,814,552	183,849	666,751
S-50	@thecut[321]	W-50	1,411,305	5	12,513	1,423,818	75,654	247,243
S-51	@GQMagazine[322]	W-52	1,302,850	5	160	1,303,010	68,828	227,745
S-52	@GQMagazine[323]	W-52	1,302,856	3	3,926	1,306,782	65,717	227,842
S-53	@GQMagazine[324]	W-52	1,302,845	4	771	1,303,616	67,356	227,764
S-54	@BBCNews[325]	W-53	10,033,926	104	844	10,034,770	471,389	1,754,697
S-55	@BBCWorld[326]	W-53	25,264,091	362	1,322	25,265,413	1,116,377	4,420,345
TOTAL SOCIAL MEDIA IMPRESSIONS (LOW/HIGH)							**17,218,959**	**63,040,041**

320 https://twitter.com/USATODAY/status/1143375768682160128
321 https://twitter.com/TheCut/status/1143501166678106112
322 https://twitter.com/GQMagazine/status/1143610084611768320
323 https://twitter.com/GQMagazine/status/1143645060262694919
324 https://twitter.com/GQMagazine/status/1143952085978947586
325 https://twitter.com/BBCNews/status/1143451392058830848
326 https://twitter.com/bbcworld/status/1143414344287510528

APPENDIX F. TV IMPRESSIONS MODEL

No.	Title	Date	Time	Network	Ratings Estimate[327]
T-1	Anderson Cooper 360[328]	6/21/2019	5:00pm-6:00pm PDT	CNN (San Francisco)	877,000[329]
T-2	Anderson Cooper 360[330]	6/21/2019	8:00pm-9:00pm PDT	CNN (San Francisco)	N/A
T-3	Cuomo Prime Time[331]	6/21/2019	9:00pm-10:00pm PDT	CNN (San Francisco)	936,000[332]
T-4	CBS Evening News[333]	6/21/2019	6:30pm-7:00pm PDT	KPIX (CBS)	5,863,000[334]
T-5	The Ten O'Clock News on KTVU Fox 2[335]	6/21/2019	10:00pm-10:59pm PDT	KTVU (FOX)	1,401,000[336]
T-6	The Last Word With Lawrence O'Donnell[337]	6/21/2019	10:00pm-11:00pm PDT	MSNBC West	2,010,000[338]

327 I only count ratings for a particular program once in a day. I use "N/A" to denote broadcasts that I am not counting.
328 https://archive.org/details/CNNW_20190622_000000_Anderson_Cooper_360/
329 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/?ver=1663095759923
330 https://archive.org/details/CNNW_20190622_030000_Anderson_Cooper_360/
331 https://archive.org/details/CNNW_20190622_040000_Cuomo_Prime_Time
332 https://www.adweek.com/tvnewser/q2-2019-ratings-cnn-is-a-top-10-basic-cable-network-in-total-day-but-remains-stuck-behind-fox-news-and-msnbc-during-prime-time/407838/
333 https://archive.org/details/KPIX_20190622_013000_CBS_Evening_News
334 https://www.thewrap.com/broadcast-evening-news-ratings-2019-2020/
335 https://archive.org/details/KTVU_20190622_050000_The_Ten_OClock_News_on_KTVU_Fox_2
336 https://press.foxnews.com/2019/12/fox-news-channel-notches-highest-rated-primetime-in-network-history
337 https://archive.org/details/MSNBCW_20190622_050000_The_Last_Word_With_Lawrence_ODonnell
338 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/

No.	Title	Date	Time	Network	Ratings Estimate[327]
T-7	All In With Chris Hayes[339]	6/21/2019	5:00pm-6:00pm PDT	MSNBC West	1,552,000[340]
T-8	The Rachel Maddow Show[341]	6/21/2019	9:00pm-10:01pm PDT	MSNBC West	2,561,000[342]
T-9	CNN Newsroom Live[343]	6/22/2019	1:00am-2:00am PDT	CNN (San Francisco)	628,000[344]
T-10	CNN Newsroom Live[345]	6/22/2019	12:00am-1:00am PDT	CNN (San Francisco)	N/A
T-11	CNN Newsroom With Ana Cabrera[346]	6/22/2019	12:00pm-1:00pm PDT	CNN (San Francisco)	N/A
T-12	New Day Weekend With Victor Blackwell and Christi Paul[347]	6/22/2019	3:00am-4:00am PDT	CNN (San Francisco)	534,000[348]
T-13	New Day Weekend With Victor Blackwell and Christi Paul[349]	6/22/2019	4:00am-5:00am PDT	CNN (San Francisco)	N/A
T-14	New Day Weekend With Victor Blackwell and Christi Paul[350]	6/22/2019	5:00am-6:00am PDT	CNN (San Francisco)	N/A

339 https://archive.org/details/MSNBCW_20190622_000000_All_In_With_Chris_Hayes
340 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/
341 https://archive.org/details/MSNBCW_20190622_040000_The_Rachel_Maddow_Show
342 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/
343 https://archive.org/details/CNNW_20190622_080000_CNN_Newsroom_Live
344 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/?ver=1663095759923
345 https://archive.org/details/CNNW_20190622_070000_CNN_Newsroom_Live
346 https://archive.org/details/CNNW_20190622_190000_CNN_Newsroom_With_Ana_Cabrera
347 https://archive.org/details/CNNW_20190622_100000_New_Day_Weekend_With_Victor_Blackwell_and_Christi_Paul
348 https://www.adweek.com/tvnewser/q2-2019-ratings-cnn-is-a-top-10-basic-cable-network-in-total-day-but-remains-stuck-behind-fox-news-and-msnbc-during-prime-time/407838/
349 https://archive.org/details/CNNW_20190622_110000_New_Day_Weekend_With_Victor_Blackwell_and_Christi_Paul
350 https://archive.org/details/CNNW_20190622_120000_New_Day_Weekend_With_Victor_Blackwell_and_Christi_Paul

No.	Title	Date	Time	Network	Ratings Estimate[327]
T-15	CNN Newsroom With Victor Blackwell and Christi Paul[351]	6/22/2019	7:00am-8:00am PDT	CNN (San Francisco)	N/A
T-16	CNN Newsroom With Fredricka Whitfield[352]	6/22/2019	8:00am-9:00am PDT	CNN (San Francisco)	N/A
T-17	Cavuto Live[353]	6/22/2019	7:00am-9:00am PDT	Fox News West	1,401,000[354]
T-18	America's News HQ[355]	6/22/2019	9:00am-11:00am PDT	Fox News West	1,401,000[356]
T-19	NBC Nightly News With Lester Holt[357]	6/22/2019	5:30pm-5:59pm PDT	KNTV (NBC)	6,769,000[358]
T-20	CBS This Morning[359]	6/22/2019	4:00am-5:59am PDT	KPIX (CBS)	2,700,000[360]
T-21	The Ten O'Clock News on KTVU Fox 2[361]	6/22/2019	10:00pm-10:44pm PDT	KTVU (FOX)	1,401,000[362]

351 https://archive.org/details/CNNW_20190622_140000_CNN_Newsroom_With_Victor_Blackwell_and_Christi_Paul
352 https://archive.org/details/CNNW_20190622_150000_CNN_Newsroom_With_Fredricka_Whitfield
353 https://archive.org/details/FOXNEWSW_20190622_140000_Cavuto_Live
354 https://press.foxnews.com/2019/12/fox-news-channel-notches-highest-rated-primetime-in-network-history
355 https://archive.org/details/FOXNEWSW_20190622_160000_Americas_News_HQ
356 https://press.foxnews.com/2019/12/fox-news-channel-notches-highest-rated-primetime-in-network-history
357 https://archive.org/details/KNTV_20190623_003000_NBC_Nightly_News_With_Lester_Holt
358 https://press.nbcnews.com/2019/07/02/nbc-nightly-news-with-lester-holt-wins-second-quarter-of-2019/
359 https://archive.org/details/KPIX_20190622_110000_CBS_This_Morning
360 https://pagesix.com/2019/06/27/cbs-this-morning-ratings-plunge-after-massive-shake-up/
361 https://archive.org/details/KTVU_20190623_050000_The_Ten_OClock_News_on_KTVU_Fox_2
362 https://press.foxnews.com/2019/12/fox-news-channel-notches-highest-rated-primetime-in-network-history

No.	Title	Date	Time	Network	Ratings Estimate[327]
T-22	KTVU Mornings on 2 at 7am[363]	6/22/2019	7:00am-10:00am PDT	KTVU (FOX)	1,401,000[364]
T-23	Up With David Gura[365]	6/22/2019	5:00am-7:00am PDT	MSNBC West	900,000[366]
T-24	The Rachel Maddow Show[367]	6/22/2019	6:00pm-7:00pm PDT	MSNBC West	2,561,000[368]
T-25	Weekends With Alex Witt[369]	6/22/2019	9:00am-11:00am PDT	MSNBC West	900,000[370]
T-26	Cuomo Prime Time[371]	6/24/2019	10:00pm-11:00pm PDT	CNN (San Francisco)	936,000[372]
T-27	CNN Tonight With Don Lemon[373]	6/24/2019	11:00pm-12:00am PDT	CNN (San Francisco)	833,000[374]

363 https://archive.org/details/KTVU_20190622_140000_KTVU_Mornings_on_2_at_7am
364 https://press.foxnews.com/2019/12/fox-news-channel-notches-highest-rated-primetime-in-network-history
365 https://archive.org/details/MSNBCW_20190622_120000_Up_With_David_Gura
366 https://www.adweek.com/tvnewser/q2-19-ratings-msnbc-remains-one-of-the-most-watched-networks-on-cable-but-saw-a-key-program-slip-in-the-demo/407840/
367 https://archive.org/details/MSNBCW_20190623_010000_The_Rachel_Maddow_Show
368 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/
369 https://archive.org/details/MSNBCW_20190622_160000_Weekends_With_Alex_Witt
370 https://www.adweek.com/tvnewser/q2-19-ratings-msnbc-remains-one-of-the-most-watched-networks-on-cable-but-saw-a-key-program-slip-in-the-demo/407840/
371 https://archive.org/details/CNNW_20190625_050000_Cuomo_Prime_Time
372 https://www.adweek.com/tvnewser/q2-2019-ratings-cnn-is-a-top-10-basic-cable-network-in-total-day-but-remains-stuck-behind-fox-news-and-msnbc-during-prime-time/407838/
373 https://archive.org/details/CNNW_20190625_060000_CNN_Tonight_With_Don_Lemon
374 https://www.adweek.com/tvnewser/q2-2019-ratings-cnn-is-a-top-10-basic-cable-network-in-total-day-but-remains-stuck-behind-fox-news-and-msnbc-during-prime-time/407838/

No.	Title	Date	Time	Network	Ratings Estimate[327]
T-28	CNN Newsroom With Brooke Baldwin[375]	6/24/2019	12:00pm-1:00pm PDT	CNN (San Francisco)	534,000[376]
T-29	Situation Room With Wolf Blitzer[377]	6/24/2019	3:00pm-4:00pm PDT	CNN (San Francisco)	168,000[378]
T-30	New Day With Alisyn Camerota and John Berman[379]	6/24/2019	4:00am-5:00am PDT	CNN (San Francisco)	460,000[380]
T-31	New Day With Alisyn Camerota and John Berman[381]	6/24/2019	5:00am-6:00am PDT	CNN (San Francisco)	N/A
T-32	Anderson Cooper 360[382]	6/24/2019	5:00pm-6:00pm PDT	CNN (San Francisco)	877,000[383]
T-33	Cuomo Prime Time[384]	6/24/2019	6:00pm-7:00pm PDT	CNN (San Francisco)	N/A
T-34	CNN Tonight With Don Lemon[385]	6/24/2019	7:00pm-8:00pm PDT	CNN (San Francisco)	N/A

375 https://archive.org/details/CNNW_20190624_190000_CNN_Newsroom_With_Brooke_Baldwin

376 https://www.adweek.com/tvnewser/q2-2019-ratings-cnn-is-a-top-10-basic-cable-network-in-total-day-but-remains-stuck-behind-fox-news-and-msnbc-during-prime-time/407838/

377 https://archive.org/details/CNNW_20190624_220000_Situation_Room_With_Wolf_Blitzer

378 https://www.adweek.com/tvnewser/q2-2019-ratings-cnn-is-a-top-10-basic-cable-network-in-total-day-but-remains-stuck-behind-fox-news-and-msnbc-during-prime-time/407838/

379 https://archive.org/details/CNNW_20190624_110000_New_Day_With_Alisyn_Camerota_and_John_Berman

380 https://www.adweek.com/tvnewser/q2-2019-ratings-cnn-is-a-top-10-basic-cable-network-in-total-day-but-remains-stuck-behind-fox-news-and-msnbc-during-prime-time/407838/

381 https://archive.org/details/CNNW_20190624_120000_New_Day_With_Alisyn_Camerota_and_John_Berman

382 https://archive.org/details/CNNW_20190625_000000_Anderson_Cooper_360

383 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/?ver=1663095759923

384 https://archive.org/details/CNNW_20190625_010000_Cuomo_Prime_Time

385 https://archive.org/details/CNNW_20190625_020000_CNN_Tonight_With_Don_Lemon

No.	Title	Date	Time	Network	Ratings Estimate[327]
T-35	Anderson Cooper 360[386]	6/24/2019	9:00pm-10:00pm PDT	CNN (San Francisco)	N/A
T-36	The Last Word With Lawrence O'Donnell[387]	6/24/2019	10:00pm-11:00pm PDT	MSNBC West	2,010,000[388]
T-37	First Look[389]	6/24/2019	2:00am-3:00am PDT	MSNBC West	385,000[390]
T-38	Morning Joe[391]	6/24/2019	3:00am-6:00am PDT	MSNBC West	1,033,000[392]
T-39	Andrea Mitchell Reports[393]	6/24/2019	9:00am-10:00am PDT	MSNBC West	839,000[394]
T-40	CNN Tonight With Don Lemon[395]	6/25/2019	12:00am-1:00am PDT	CNN (San Francisco)	833,000[396]
T-41	Early Start With Christine Romans and Dave Briggs[397]	6/25/2019	2:00am-3:00am PDT	CNN (San Francisco)	534,000[398]

386 https://archive.org/details/CNNW_20190625_040000_Anderson_Cooper_360
387 https://archive.org/details/MSNBCW_20190625_050000_The_Last_Word_With_Lawrence_ODonnell
388 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/
389 https://archive.org/details/MSNBCW_20190624_090000_First_Look
390 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/
391 https://archive.org/details/MSNBCW_20190624_100000_Morning_Joe
392 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/
393 https://archive.org/details/MSNBCW_20190624_160000_Andrea_Mitchell_Reports
394 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/
395 https://archive.org/details/CNNW_20190625_070000_CNN_Tonight_With_Don_Lemon
396 https://www.adweek.com/tvnewser/q2-2019-ratings-cnn-is-a-top-10-basic-cable-network-in-total-day-but-remains-stuck-behind-fox-news-and-msnbc-during-prime-time/407838/
397 https://archive.org/details/CNNW_20190625_090000_Early_Start_with_Christine_Romans_and_Dave_Briggs
398 https://www.adweek.com/tvnewser/q2-2019-ratings-cnn-is-a-top-10-basic-cable-network-in-total-day-but-remains-stuck-behind-fox-news-and-msnbc-during-prime-time/407838/

No.	Title	Date	Time	Network	Ratings Estimate[327]
T-42	New Day With Alisyn Camerota and John Berman[399]	6/25/2019	3:00am-4:00am PDT	CNN (San Francisco)	N/A
T-43	New Day With Alisyn Camerota and John Berman[400]	6/25/2019	4:00am-5:00am PDT	CNN (San Francisco)	460,000[401]
T-44	CNN Newsroom with Poppy Harlow and Jim Sciutto[402]	6/25/2019	7:00am-8:00am PDT	CNN (San Francisco)	534,000[403]
T-45	World News Now[404]	6/25/2019	2:42am-4:00am PDT	KGO (ABC)	3,929,000[405]
T-46	ABC World News Tonight With David Muir[406]	6/25/2019	5:30pm-6:00pm PDT	KGO (ABC)	9,390,000[407]
T-47	Good Morning America[408]	6/25/2019	7:00am-9:00am PDT	KGO (ABC)	3,920,000[409]

399 https://archive.org/details/CNNW_20190625_100000_New_Day_With_Alisyn_Camerota_and_John_Berman
400 https://archive.org/details/CNNW_20190625_110000_New_Day_With_Alisyn_Camerota_and_John_Berman
401 https://www.adweek.com/tvnewser/q2-2019-ratings-cnn-is-a-top-10-basic-cable-network-in-total-day-but-remains-stuck-behind-fox-news-and-msnbc-during-prime-time/407838/
402 https://archive.org/details/CNNW_20190625_140000_CNN_Newsroom_with_Poppy_Harlow_and_Jim_Sciutto
403 https://www.adweek.com/tvnewser/q2-2019-ratings-cnn-is-a-top-10-basic-cable-network-in-total-day-but-remains-stuck-behind-fox-news-and-msnbc-during-prime-time/407838/
404 https://archive.org/details/KGO_20190625_094200_World_News_Now
405 https://www.adweek.com/tvnewser/morning-show-ratings-q2-2019-week-of-june-24/407846/
406 https://archive.org/details/KGO_20190626_003000_ABC_World_News_Tonight_With_David_Muir
407 https://deadline.com/2020/09/abc-news-world-news-tonight-viewership-2019-20-1234582089/
408 https://archive.org/details/KGO_20190625_140000_Good_Morning_America
409 https://www.adweek.com/tvnewser/morning-show-ratings-q2-2019-week-of-june-24/407846/

No.	Title	Date	Time	Network	Ratings Estimate[327]
T-48	The Late Show With Stephen Colbert[410]	6/25/2019	11:35pm-12:37am PDT	KPIX (CBS)	3,800,000[411]
T-49	KPIX 5 News at 6:00PM[412]	6/25/2019	6:00pm-6:30pm PDT	KPIX (CBS)	5,468,000[413]
T-50	CBS Evening News[414]	6/25/2019	6:30pm-7:00pm PDT	KPIX (CBS)	5,863,000[415]
T-51	CBS This Morning[416]	6/25/2019	7:00am-9:00am PDT	KPIX (CBS)	2,700,000[417]
T-52	Deadline: White House[418]	6/25/2019	1:00pm-2:00pm PDT	MSNBC West	1,378,000[419]
T-53	First Look[420]	6/25/2019	2:00am-3:00am PDT	MSNBC West	385,000[421]
T-54	Morning Joe[422]	6/25/2019	3:00am-6:00am PDT	MSNBC West	1,033,000[423]

410 https://archive.org/details/KPIX_20190626_063500_The_Late_Show_With_Stephen_Colbert
411 https://www.nytimes.com/2019/03/05/business/media/colbert-fallon-ratings-nielsen.html?login=email&auth=login-email&login=email&auth=login-email#:~:text=The%20latest%20season-to-date,viewers%20in%20that%20same%20period.
412 https://archive.org/details/KPIX_20190626_010000_KPIX_5_News_at_600PM
413 https://www.adweek.com/tvnewser/morning-show-ratings-q2-2019-week-of-june-24/407846/
414 https://archive.org/details/KPIX_20190626_013000_CBS_Evening_News
415 https://www.thewrap.com/broadcast-evening-news-ratings-2019-2020/
416 https://archive.org/details/KPIX_20190625_140000_CBS_This_Morning
417 https://pagesix.com/2019/06/27/cbs-this-morning-ratings-plunge-after-massive-shake-up/
418 https://archive.org/details/MSNBCW_20190625_200000_Deadline_White_House
419 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/
420 https://archive.org/details/MSNBCW_20190625_090000_First_Look
421 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/
422 https://archive.org/details/MSNBCW_20190625_100000_Morning_Joe
423 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/

No.	Title	Date	Time	Network	Ratings Estimate[327]
T-55	MSNBC Live With Stephanie Ruhle[424]	6/25/2019	6:00am-7:00am PDT	MSNBC West	984,000[425]
T-56	MSNBC Live With Hallie Jackson[426]	6/25/2019	7:00am-8:00am PDT	MSNBC West	887,000[427]
T-57	MSNBC Live With Craig Melvin[428]	6/25/2019	8:00am-9:00am PDT	MSNBC West	800,000[429]
T-58	Andrea Mitchell Reports[430]	6/25/2019	9:00am-10:00am PDT	MSNBC West	839,000[431]
T-59	Late Night With Seth Meyers[432]	6/26/2019	12:37am-1:37am PDT	KNTV (NBC)	1,293,000[433]
T-60	CBS Overnight News[434]	6/26/2019	3:12am-4:00am PDT	KPIX (CBS)	2,986,000[435]
T-61	At This Hour With Kate Bolduan[436]	6/27/2019	8:00am-9:00am PDT	CNN (San Francisco)	534,000[437]

424 https://archive.org/details/MSNBCW_20190625_130000_MSNBC_Live_With_Stephanie_Ruhle
425 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/
426 https://archive.org/details/MSNBCW_20190625_140000_MSNBC_Live_With_Hallie_Jackson
427 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/
428 https://archive.org/details/MSNBCW_20190625_150000_MSNBC_Live_With_Craig_Melvin
429 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/
430 https://archive.org/details/MSNBCW_20190625_160000_Andrea_Mitchell_Reports
431 https://www.adweek.com/tvnewser/here-are-the-top-cable-news-shows-of-q2-2019/407842/
432 https://archive.org/details/KNTV_20190626_073700_Late_Night_With_Seth_Meyers
433 https://thecomicscomic.com/2020/05/26/late-night-tv-ratings-for-2019-2020/
434 https://archive.org/details/KPIX_20190626_101200_CBS_Overnight_News
435 https://www.adweek.com/tvnewser/morning-show-ratings-q2-2019-week-of-june-24/407846/
436 https://archive.org/details/CNNW_20190627_150000_At_This_Hour_With_Kate_Bolduan
437 https://www.adweek.com/tvnewser/q2-2019-ratings-cnn-is-a-top-10-basic-cable-network-in-total-day-but-remains-stuck-behind-fox-news-and-msnbc-during-prime-time/407838/

No.	Title	Date	Time	Network	Ratings Estimate[327]
T-62	ABC World News Tonight With David Muir[438]	6/27/2019	3:30pm-4:00pm PDT	KGO (ABC)	9,390,000[439]
T-63	NBC Nightly News With Lester Holt[440]	6/27/2019	7:00pm-7:30pm EDT	WRC (NBC)	6,769,000[441]
	TOTAL TV IMPRESSIONS ESTIMATE				**108,580,000**

438 https://archive.org/details/KGO_20190627_223000_ABC_World_News_Tonight_With_David_Muir
439 https://deadline.com/2020/09/abc-news-world-news-tonight-viewership-2019-20-1234582089/
440 https://archive.org/details/WRC_20190627_230000_NBC_Nightly_News_With_Lester_Holt
441 https://press.nbcnews.com/2019/07/02/nbc-nightly-news-with-lester-holt-wins-second-quarter-of-2019/

APPENDIX G. PRINT IMPRESSIONS MODEL

No.	Article Title	Publication	Date	Circulation[442]
P-1	Donald Trump accused of sexually assaulting writer E Jean Carroll	The Guardian	6/21/2019	N/A
P-2	N.Y. writer says Trump assaulted her in the '90s	Washington Post	6/22/2019	229,475[443]
P-3	Trump Repeatedly Denies Sexual Assault Claim by an Advice Columnist	New York Times	6/23/2019	454,861[444]
P-4	Trump Calls His New Accuser a Liar And Says, 'No. 1, She's Not My Type'	New York Times	6/25/2019	454,861[445]
P-5	Trump says latest accuser is 'lying'	Washington Post	6/25/2019	229,475[446]
P-6	If this nation cared about sexual assault, Trump would not be president	Boston Globe	6/25/2019	92,515[447]
P-7	Don't ignore latest Trump rape allegation	USA Today	6/25/2019	544,002[448]
P-8	Why did the media downplay the latest sexual assault allegation against Trump?	The Guardian	6/25/2019	N/A
P-9	Latest sex assault allegation against Trump draws muted political reaction	Washington Post	6/26/2019	229,475[449]
P-10	America, listen to Ms. Carroll	Washington Post	6/26/2019	229,475[450]
P-11	Latest sex allegation against Trump draws muted reaction	Chicago Tribune	6/26/2019	149,093[451]
		TOTAL PRINT IMPRESSIONS		**2,613,232**

442 I use "N/A" for publications for which I do not have circulation data.
443 Audited Report for Washington Post (12 months ended September 30, 2019), Alliance for Audited Media.
444 Audited Report for New York Times (12 months ended March 31, 2020), Alliance for Audited Media.
445 Audited Report for New York Times (12 months ended March 31, 2020), Alliance for Audited Media.
446 Audited Report for Washington Post (12 months ended September 30, 2019), Alliance for Audited Media.
447 Audited Report for Boston Globe (12 months ended March 31, 2020), Alliance for Audited Media.
448 Audited Report for USA Today (12 months ended December 31, 2019), Alliance for Audited Media.
449 Audited Report for Washington Post (12 months ended September 30, 2019), Alliance for Audited Media.
450 Audited Report for Washington Post (12 months ended September 30, 2019), Alliance for Audited Media.
451 Audited Report for Chicago Tribune (12 months ended March 31, 2020), Alliance for Audited Media.

APPENDIX H. EXAMPLES OF NEGATIVE COMMENTS AND POSTS ABOUT MS. CARROLL

[Produced in Native Format]

APPENDIX I. EXAMPLES OF DIRECT MESSAGES AND EMAILS TO MS. CARROLL

[Produced in Native Format]

APPENDIX J. IMPACT MODEL

Category	No.	Percent Republican[452]	Receptive Republicans[453]	Percent Receptive Republicans[454]	Impression Estimate (Low)[455]	Impression Estimate (High)[456]	Receptive Impressions Estimate (Low)[457]	Receptive Impressions Estimate (High)[458]
Web	W-1			25.45%	43,221	43,221	10,999	10,999
Web	W-2	16.30%	76.00%	12.39%	959,756	959,756	118,895	118,895
Web	W-3	14.80%	76.00%	11.25%	442,376	442,376	49,758	49,758
Web	W-4	90.30%	76.00%	68.63%	74,505	74,505	51,131	51,131
Web	W-5	21.00%	76.00%	15.96%	137,216	137,216	21,900	21,900
Web	W-6	65.70%	76.00%	49.93%	109,494	109,494	54,673	54,673
Web	W-7			25.45%	315,557	315,557	80,301	80,301
Web	W-8	22.40%	76.00%	17.02%	192,606	192,606	32,789	32,789
Web	W-9			25.45%	213,643	213,643	54,366	54,366
Web	W-10			25.45%	181,243	181,243	46,122	46,122
Web	W-11			25.45%	134,881	134,881	34,324	34,324
Web	W-12	19.20%	76.00%	14.59%	405,296	405,296	59,141	59,141

452 Percent of a publications' audience that are Republican, based on data from Pew Research. Cell is empty when data for the relevant publication is not available.

453 Republicans receptive to the claims (.76, YouGov). Cell is empty when Percent Republican data is not available for the relevant publication.

454 Calculated using the following formula: Percent Republicans * Receptive Republicans. When Percent Republican data is not available, I rely on the average Percent Receptive Republicans (25.25%)

455 The impressions estimate calculated in the Impressions Model. For social media posts, the high estimate is calculated using Equation 2a.

456 The impressions estimate calculated in the Impressions Model. For social media posts, the low estimate is calculated using Equation 2b.

457 Calculated using the following formula: Percent Republicans * Receptive Republicans * Impressions Estimate. If data related to Percent Republicans is not available, the equation is as follows: Average Percent Receptive Republicans (25.25%) * Impressions Estimate. The high receptive impressions estimate is based on the impressions estimate incorporating Equation 2a.

458 Calculated using the following formula: Percent Republicans * Receptive Republicans * Impressions Estimate. If data related to Percent Republicans is not available, the equation is as follows: Average Percent Receptive Republicans (25.25%) * Impressions Estimate. The low Receptive Impressions Estimate is based on the impressions estimate incorporating Equation 2b.

Category	No.	Percent Republican[452]	Receptive Republicans[453]	Percent Receptive Republicans[454]	Impression Estimate (Low)[455]	Impression Estimate (High)[456]	Receptive Impressions Estimate (Low)[457]	Receptive Impressions Estimate (High)[458]
Web	W-13	18.10%	76.00%	13.76%	768,450	768,450	105,708	105,708
Web	W-14			25.45%	125,280	125,280	31,880	31,880
Web	W-15			25.45%	128,148	128,148	32,610	32,610
Web	W-16			25.45%	35,538	35,538	9,043	9,043
Web	W-17	69.80%	76.00%	53.05%	1,180,942	1,180,942	626,466	626,466
Web	W-18			25.45%	132,335	132,335	33,676	33,676
Web	W-19			25.45%	62,222	62,222	15,834	15,834
Web	W-20	31.50%	76.00%	23.94%	63,433	63,433	15,186	15,186
Web	W-21			25.45%	94,530	94,530	24,055	24,055
Web	W-22			25.45%	310,945	310,945	79,127	79,127
Web	W-23			25.45%	54,717	54,717	13,924	13,924
Web	W-24			25.45%	506,808	506,808	128,969	128,969
Web	W-25			25.45%	218,105	218,105	55,502	55,502
Web	W-26			25.45%	21,532	21,532	5,479	5,479
Web	W-27			25.45%	56,933	56,933	14,488	14,488
Web	W-28	34.90%	76.00%	26.52%	549,238	549,238	145,680	145,680
Web	W-29	34.90%	76.00%	26.52%	144,930	144,930	38,441	38,441
Web	W-30			25.45%	310,945	310,945	79,127	79,127
Web	W-31	19.20%	76.00%	14.59%	405,296	405,296	59,141	59,141
Web	W-32	18.10%	76.00%	13.76%	768,450	768,450	105,708	105,708
Web	W-33	34.70%	76.00%	26.37%	228,704	228,704	60,314	60,314
Web	W-34	16.30%	76.00%	12.39%	959,756	959,756	118,895	118,895
Web	W-35			25.45%	249,818	249,818	63,572	63,572
Web	W-36	32.10%	76.00%	24.40%	232,808	232,808	56,796	56,796
Web	W-37			25.45%	128,148	128,148	32,610	32,610
Web	W-38			25.45%	112,603	112,603	28,655	28,655
Web	W-39			25.45%	43,424	43,424	11,050	11,050
Web	W-40	90.30%	76.00%	68.63%	74,505	74,505	51,131	51,131

Category	No.	Percent Republican[452]	Receptive Republicans[453]	Percent Receptive Republicans[454]	Impression Estimate (Low)[455]	Impression Estimate (High)[456]	Receptive Impressions Estimate (Low)[457]	Receptive Impressions Estimate (High)[458]
Web	W-41			25.45%	62,222	62,222	15,834	15,834
Web	W-42	14.80%	76.00%	11.25%	442,376	442,376	49,758	49,758
Web	W-43	31.50%	76.00%	23.94%	63,433	63,433	15,186	15,186
Web	W-44			25.45%	153,510	153,510	39,064	39,064
Web	W-45	22.40%	76.00%	17.02%	192,606	192,606	32,789	32,789
Web	W-46	22.40%	76.00%	17.02%	70,755	70,755	12,045	12,045
Web	W-47			25.45%	135,980	135,980	34,603	34,603
Web	W-48	34.90%	76.00%	26.52%	549,238	549,238	145,680	145,680
Web	W-49			25.45%	310,945	310,945	79,127	79,127
Web	W-50			25.45%	75,348	75,348	19,174	19,174
Web	W-51			25.45%	108,951	108,951	27,725	27,725
Web	W-52			25.45%	71,724	71,724	18,252	18,252
Web	W-53			25.45%	506,808	506,808	128,969	128,969
Social	S-1			25.45%	302,891	60,190	77,078	15,317
Social	S-2	16.30%	76.00%	12.39%	1,517,403	7,622,861	187,976	944,320
Social	S-3	90.30%	76.00%	68.63%	50,916	90,045	34,943	61,796
Social	S-4	90.30%	76.00%	68.63%	111,412	98,107	76,460	67,329
Social	S-5	90.30%	76.00%	68.63%	97,086	95,090	66,628	65,259
Social	S-6	21.00%	76.00%	15.96%	605,662	2,809,916	96,664	448,463
Social	S-7			25.45%	310,072	1,313,779	78,905	334,322
Social	S-8	22.40%	76.00%	17.02%	501,872	717,229	85,439	122,101
Social	S-9	22.40%	76.00%	17.02%	253,407	675,370	43,140	114,975
Social	S-10	22.40%	76.00%	17.02%	214,427	671,886	36,504	114,382
Social	S-11	22.40%	76.00%	17.02%	215,038	671,947	36,608	114,392
Social	S-12			25.45%	268,022	1,097,721	68,205	279,341
Social	S-13	18.10%	76.00%	13.76%	684,581	2,420,050	94,171	332,902
Social	S-14			25.45%	104,961	311,247	26,710	79,204
Social	S-15			25.45%	104,756	312,259	26,658	79,462

Category	No.	Percent Republican[452]	Receptive Republicans[453]	Percent Receptive Republicans[454]	Impression Estimate (Low)[455]	Impression Estimate (High)[456]	Receptive Impressions Estimate (Low)[457]	Receptive Impressions Estimate (High)[458]
Social	S-16			25.45%	97,870	311,264	24,905	79,208
Social	S-17			25.45%	99,595	311,484	25,344	79,264
Social	S-18			25.45%	95,355	311,129	24,265	79,174
Social	S-19			25.45%	95,909	311,490	24,406	79,266
Social	S-20			25.45%	92,734	311,006	23,598	79,143
Social	S-21			25.45%	93,526	310,950	23,800	79,128
Social	S-22			25.45%	88,022	310,946	22,399	79,128
Social	S-23			25.45%	83,682	310,988	21,295	79,138
Social	S-24			25.45%	88,166	310,981	22,436	79,136
Social	S-25			25.45%	91,129	310,945	23,190	79,127
Social	S-26			25.45%	83,601	310,967	21,274	79,133
Social	S-27			25.45%	382,281	1,358,989	97,280	345,827
Social	S-28			25.45%	90,034	395,492	22,911	100,642
Social	S-29			25.45%	414,204	1,753,410	105,404	446,196
Social	S-30			25.45%	930,727	4,415,878	236,845	1,123,723
Social	S-31			25.45%	1,330,634	4,526,637	338,611	1,151,908
Social	S-32			25.45%	38,345	37,335	9,758	9,501
Social	S-33	23.10%	76.00%	17.56%	183,730	583,066	32,256	102,363
Social	S-34			25.45%	383,118	1,359,220	97,493	345,885
Social	S-35	19.20%	76.00%	14.59%	138,523	502,881	20,213	73,380
Social	S-36	18.10%	76.00%	13.76%	744,815	2,423,097	102,457	333,321
Social	S-37	18.10%	76.00%	13.76%	813,052	2,440,919	111,843	335,773
Social	S-38	16.30%	76.00%	12.39%	1,495,243	7,625,871	185,231	944,693
Social	S-39			25.45%	91,591	215,150	23,308	54,750
Social	S-40	32.10%	76.00%	24.40%	207,974	577,660	50,737	140,926
Social	S-41	32.10%	76.00%	24.40%	256,624	591,307	62,606	144,255
Social	S-42	32.10%	76.00%	24.40%	174,036	576,283	42,458	140,590
Social	S-43	32.10%	76.00%	24.40%	152,682	576,071	37,248	140,538

Category	No.	Percent Republican[452]	Receptive Republicans[453]	Percent Receptive Republicans[454]	Impression Estimate (Low)[455]	Impression Estimate (High)[456]	Receptive Impressions Estimate (Low)[457]	Receptive Impressions Estimate (High)[458]
Social	S-44	90.30%	76.00%	68.63%	63,413	91,367	43,519	62,703
Social	S-45	90.30%	76.00%	68.63%	38,068	89,218	26,125	61,229
Social	S-46	14.80%	76.00%	11.25%	615,996	2,009,856	69,287	226,069
Social	S-47	22.40%	76.00%	17.02%	242,492	678,966	41,282	115,587
Social	S-48			25.45%	30,111	49,130	7,662	12,502
Social	S-49	34.90%	76.00%	26.52%	183,849	666,751	48,764	176,849
Social	S-50			25.45%	75,654	247,243	19,252	62,917
Social	S-51			25.45%	68,828	227,745	17,515	57,955
Social	S-52			25.45%	65,717	227,842	16,723	57,980
Social	S-53			25.45%	67,356	227,764	17,140	57,960
Social	S-54			25.45%	471,389	1,754,697	119,956	446,524
Social	S-55			25.45%	1,116,377	4,420,345	284,088	1,124,860
Print	P-1					0	0	0
Print	P-2	18.10%	76.00%	13.76%	229,475	229,475	31,567	31,567
Print	P-3	16.30%	76.00%	12.39%	454,861	454,861	56,348	56,348
Print	P-4	16.30%	76.00%	12.39%	454,861	454,861	56,348	56,348
Print	P-5	18.10%	76.00%	13.76%	229,475	229,475	31,567	31,567
Print	P-6			25.45%	92,515	92,515	23,543	23,543
Print	P-7	34.90%	76.00%	26.52%	544,002	544,002	144,291	144,291
Print	P-9	18.10%	76.00%	13.76%	229,475	229,475	31,567	31,567
Print	P-8					0	0	0
Print	P-10	18.10%	76.00%	13.76%	229,475	229,475	31,567	31,567
Print	P-11			25.45%	149,093	149,093	37,940	37,940
TV	T-1	34.70%	76.00%	26.37%	9,390,000	9,390,000	2,476,331	2,476,331
TV	T-2	34.70%	76.00%	26.37%	9,390,000	9,390,000	2,476,331	2,476,331
TV	T-3	20.50%	76.00%	15.58%	1,552,000	1,552,000	241,802	241,802
TV	T-4	69.80%	76.00%	53.05%	1,401,000	1,401,000	743,202	743,202
TV	T-5	23.60%	76.00%	17.94%	877,000	877,000	157,299	157,299

Category	No.	Percent Republican[452]	Receptive Republicans[453]	Percent Receptive Republicans[454]	Impression Estimate (Low)[455]	Impression Estimate (High)[456]	Receptive Impressions Estimate (Low)[457]	Receptive Impressions Estimate (High)[458]
TV	T-7	23.60%	76.00%	17.94%	877,000	877,000	157,299	157,299
TV	T-8					0	0	0
TV	T-9	20.50%	76.00%	15.58%	839,000	839,000	130,716	130,716
TV	T-10	20.50%	76.00%	15.58%	839,000	839,000	130,716	130,716
TV	T-11	23.60%	76.00%	17.94%	534,000	534,000	95,778	95,778
TV	T-12	69.80%	76.00%	53.05%	1,401,000	1,401,000	743,202	743,202
TV	T-13	33.70%	76.00%	25.61%	5,863,000	5,863,000	1,501,632	1,501,632
TV	T-14	33.70%	76.00%	25.61%	5,863,000	5,863,000	1,501,632	1,501,632
TV	T-15	33.70%	76.00%	25.61%	2,986,000	2,986,000	764,774	764,774
TV	T-16	33.70%	76.00%	25.61%	2,700,000	2,700,000	691,524	691,524
TV	T-17	33.70%	76.00%	25.61%	2,700,000	2,700,000	691,524	691,524
TV	T-18	23.60%	76.00%	17.94%	628,000	628,000	112,638	112,638
TV	T-19					0	0	0
TV	T-20					0	0	0
TV	T-21	23.60%	76.00%	17.94%	534,000	534,000	95,778	95,778
TV	T-22					0	0	0
TV	T-23	23.60%	76.00%	17.94%	534,000	534,000	95,778	95,778
TV	T-24					0	0	0
TV	T-25	23.60%	76.00%	17.94%	833,000	833,000	149,407	149,407
TV	T-26					0	0	0
TV	T-27	23.60%	76.00%	17.94%	833,000	833,000	149,407	149,407
TV	T-28	23.60%	76.00%	17.94%	936,000	936,000	167,881	167,881
TV	T-29	23.60%	76.00%	17.94%	936,000	936,000	167,881	167,881
TV	T-30					0	0	0
TV	T-31	20.50%	76.00%	15.58%	1,378,000	1,378,000	214,692	214,692
TV	T-32	23.60%	76.00%	17.94%	534,000	534,000	95,778	95,778
TV	T-33	20.50%	76.00%	15.58%	385,000	385,000	59,983	59,983
TV	T-34	20.50%	76.00%	15.58%	385,000	385,000	59,983	59,983

Category	No.	Percent Republican[452]	Receptive Republicans[453]	Percent Receptive Republicans[454]	Impression Estimate (Low)[455]	Impression Estimate (High)[456]	Receptive Impressions Estimate (Low)[457]	Receptive Impressions Estimate (High)[458]
TV	T-35	34.70%	76.00%	26.37%	3,920,000	3,920,000	1,033,782	1,033,782
TV	T-36	33.70%	76.00%	25.61%	5,468,000	5,468,000	1,400,464	1,400,464
TV	T-37	69.80%	76.00%	53.05%	1,401,000	1,401,000	743,202	743,202
TV	T-38	31.00%	76.00%	23.56%	1,293,000	1,293,000	304,631	304,631
TV	T-39	20.50%	76.00%	15.58%	1,033,000	1,033,000	160,941	160,941
TV	T-40	20.50%	76.00%	15.58%	1,033,000	1,033,000	160,941	160,941
TV	T-41	20.50%	76.00%	15.58%	800,000	800,000	124,640	124,640
TV	T-42	20.50%	76.00%	15.58%	887,000	887,000	138,195	138,195
TV	T-43	20.50%	76.00%	15.58%	984,000	984,000	153,307	153,307
TV	T-44	31.00%	76.00%	23.56%	6,769,000	6,769,000	1,594,776	1,594,776
TV	T-45	31.00%	76.00%	23.56%	6,769,000	6,769,000	1,594,776	1,594,776
TV	T-46	23.60%	76.00%	17.94%	534,000	534,000	95,778	95,778
TV	T-47					0	0	0
TV	T-48					0	0	0
TV	T-49	23.60%	76.00%	17.94%	460,000	460,000	82,506	82,506
TV	T-50					0	0	0
TV	T-51					0	0	0
TV	T-52	23.60%	76.00%	17.94%	460,000	460,000	82,506	82,506
TV	T-53	23.60%	76.00%	17.94%	168,000	168,000	30,132	30,132
TV	T-54	20.50%	76.00%	15.58%	2,010,000	2,010,000	313,158	313,158
TV	T-55	20.50%	76.00%	15.58%	2,010,000	2,010,000	313,158	313,158
TV	T-56	33.70%	76.00%	25.61%	3,800,000	3,800,000	973,256	973,256
TV	T-57	20.50%	76.00%	15.58%	2,561,000	2,561,000	399,004	399,004
TV	T-58	20.50%	76.00%	15.58%	2,561,000	2,561,000	399,004	399,004
TV	T-59	69.80%	76.00%	53.05%	1,401,000	1,401,000	743,202	743,202
TV	T-60	69.80%	76.00%	53.05%	1,401,000	1,401,000	743,202	743,202
TV	T-61	20.50%	76.00%	15.58%	900,000	900,000	140,220	140,220
TV	T-62	20.50%	76.00%	15.58%	900,000	900,000	140,220	140,220

Category	No.	Percent Republican[452]	Receptive Republicans[453]	Percent Receptive Republicans[454]	Impression Estimate (Low)[455]	Impression Estimate (High)[456]	Receptive Impressions Estimate (Low)[457]	Receptive Impressions Estimate (High)[458]
TV	T-63	34.70%	76.00%	26.37%	3,929,000	3,929,000	1,036,156	1,036,156
TOTAL RECEPTIVE IMPRESSIONS (LOW/HIGH)							**34,075,512**	**42,936,354**

APPENDIX K. DAMAGES MODEL

High Impression Estimate, 1x Attitude Change Multiplier

Impression Target:[459] 42,936,354
Attitude Change Multiplier: 1x
Impression Rate: 5%
Bounce Rate: 90%

Ad Category	Media Type	Weight[460]	Target Impressions[461]	Adjusted Impressions[462]	CPM (per 1,000 impressions)	Total Cost[463]
Native	Twitter Promoted Tweets	6.50%	2,790,863	2,790,863	$6.46[464]	$18,028.98
	Facebook Native Ads - Promoted Posts	6.50%	2,790,863	2,790,863	$14.40[465]	$40,188.43
Influencer	Web Blog Influencer	5.00%	2,146,818	21,468,177	$60.00[466]	$1,288,090.62
	Twitter Influencer	7.00%	3,005,545	60,110,896	$2.00[467]	$120,221.79
	Facebook Influencer	7.00%	3,005,545	60,110,896	$25.00[468]	$1,502,772.39
	YouTube Influencer	4.60%	1,975,072	39,501,446	$20.00[469]	$790,028.91
Traditional	Broadcast TV (Excluding Primetime)	29.60%	12,709,161	12,709,161	$16.00[470]	$203,346.57
	Cable TV (Excluding Primetime)	21.30%	9,145,443	9,145,443	$10.00[471]	$91,454.43
	Podcasts	5.00%	2,146,818	2,146,818	$19.00[472]	$40,789.54
	Radio	4.10%	1,760,391	1,760,391	$4.00[473]	$7,041.56
	Print newspapers	3.40%	1,459,836	1,459,836	$67.00[474]	$97,809.01
	Total	**100.00%**	**42,936,354**			**$4,199,772.24**

459 The impressions estimate from the Impressions Model.
460 The percentage of impressions allocated to different media types. Allocations based on Trump supporters most common way of getting political and election news.
463 Calculated using the following formula: (Adjusted Impressions / 1000) * CPM.

462 The number of impressions allocated to the media type, taking into account the impression rate for Twitter, Facebook, and YouTube influencers and the bounce rate for web blog influencers. For all other media types the Adjusted Impressions are the same as the Target Impressions.
463 Calculated using the following formula: (Adjusted Impressions / 1000) * CPM.
464 https://blog.hootsuite.com/twitter-statistics/
465 https://www.wordstream.com/blog/ws/2021/07/12/facebook-ads-cost
466 https://www.webfx.com/social-media/pricing/influencer-marketing/
467 https://www.webfx.com/social-media/pricing/influencer-marketing/
468 https://www.webfx.com/social-media/pricing/influencer-marketing/
469 https://www.webfx.com/social-media/pricing/influencer-marketing/
470 https://oaaa.org/Portals/0/2022_01%20Solomon%27s%20US%20Major%20Media%20CPM%20ComparisonvOAAA.pdf
471 https://oaaa.org/Portals/0/2022_01%20Solomon%27s%20US%20Major%20Media%20CPM%20ComparisonvOAAA.pdf
472 https://oaaa.org/Portals/0/2022_01%20Solomon%27s%20US%20Major%20Media%20CPM%20ComparisonvOAAA.pdf
473 https://oaaa.org/Portals/0/2022_01%20Solomon%27s%20US%20Major%20Media%20CPM%20ComparisonvOAAA.pdf
474 https://www.gaebler.com/Washington+Examiner-DC-Newspaper-Advertising-Costs++12549

High Impression Estimate, 3x Attitude Change Multiplier

Impression Target: 42,936,354
Attitude Change Multiplier: 3x
Impression Rate: 5%
Bounce Rate: 90%

Ad Category	Media Type	Weight	Target Impressions	Adjusted Impressions	CPM (per 1,000 impressions)	Total Cost
Native	Twitter Promoted Tweets	6.50%	8,372,589	8,372,589	$6.46	$54,086.93
	Facebook Native Ads - Promoted Posts	6.50%	8,372,589	8,372,589	$14.40	$120,565.28
Influencer	Web Blog Influencer	5.00%	6,440,453	64,404,531	$60.00	$3,864,271.86
	Twitter Influencer	7.00%	9,016,634	180,332,687	$2.00	$360,665.37
	Facebook Influencer	7.00%	9,016,634	180,332,687	$25.00	$4,508,317.17
	YouTube Influencer	4.60%	5,925,217	118,504,337	$20.00	$2,370,086.74
Traditional	Broadcast TV (Excluding Primetime)	29.60%	38,127,482	38,127,482	$16.00	$610,039.72
	Cable TV (Excluding Primetime)	21.30%	27,436,330	27,436,330	$10.00	$274,363.30
	Podcasts	5.00%	6,440,453	6,440,453	$19.00	$122,368.61
	Radio	4.10%	5,281,172	5,281,172	$4.00	$21,124.69
	Print newspapers	3.40%	4,379,508	4,379,508	$67.00	$293,427.04
	Total	**100.00%**	**128,809,062**			**$12,599,316.71**

High Impression Estimate, 5x Attitude Change Multiplier

Impression Target: 42,936,354
Attitude Change Multiplier: 5x
Impression Rate: 5%
Bounce Rate: 90%

Ad Category	Media Type	Weight	Target Impressions	Adjusted Impressions	CPM (per 1,000 impressions)	Total Cost
Native	Twitter Promoted Tweets	6.50%	13,954,315	13,954,315	$6.46	$90,144.88
	Facebook Native Ads - Promoted Posts	6.50%	13,954,315	13,954,315	$14.40	$200,942.14
Influencer	Web Blog Influencer	5.00%	10,734,089	107,340,885	$60.00	$6,440,453.10
	Twitter Influencer	7.00%	15,027,724	300,554,478	$2.00	$601,108.96
	Facebook Influencer	7.00%	15,027,724	300,554,478	$25.00	$7,513,861.95
	YouTube Influencer	4.60%	9,875,361	197,507,228	$20.00	$3,950,144.57
Traditional	Broadcast TV (Excluding Primetime)	29.60%	63,545,804	63,545,804	$16.00	$1,016,732.86
	Cable TV (Excluding Primetime)	21.30%	45,727,217	45,727,217	$10.00	$457,272.17
	Podcasts	5.00%	10,734,089	10,734,089	$19.00	$203,947.68
	Radio	4.10%	8,801,953	8,801,953	$4.00	$35,207.81
	Print newspapers	3.40%	7,299,180	7,299,180	$67.00	$489,045.07
	Total	**100.00%**	**214,681,770**			**$20,998,861.18**

Low Impression Estimate, 1x Attitude Change Multiplier

Impression Target: 34,075,512
Attitude Change Multiplier: 1x
Impression Rate: 5%
Bounce Rate: 90%

Ad Category	Media Type	Weight	Target Impressions	Adjusted Impressions	CPM (per 1,000 impressions)	Total Cost
Native	Twitter Promoted Tweets	6.50%	2,214,908	2,214,908	$6.46	$14,308.31
	Facebook Native Ads - Promoted Posts	6.50%	2,214,908	2,214,908	$14.40	$31,894.68
Influencer	Web Blog Influencer	5.00%	1,703,776	17,037,756	$60.00	$1,022,265.36
	Twitter Influencer	7.00%	2,385,286	47,705,717	$2.00	$95,411.43
	Facebook Influencer	7.00%	2,385,286	47,705,717	$25.00	$1,192,642.92
	YouTube Influencer	4.60%	1,567,474	31,349,471	$20.00	$626,989.42
Traditional	Broadcast TV (Excluding Primetime)	29.60%	10,086,352	10,086,352	$16.00	$161,381.62
	Cable TV (Excluding Primetime)	21.30%	7,258,084	7,258,084	$10.00	$72,580.84
	Podcasts	5.00%	1,703,776	1,703,776	$19.00	$32,371.74
	Radio	4.10%	1,397,096	1,397,096	$4.00	$5,588.38
	Print newspapers	3.40%	1,158,567	1,158,567	$67.00	$77,624.02
	Total	**100.00%**	**34,075,512**			**$3,333,058.72**

Low Impression Estimate, 3x Attitude Change Multiplier

Impression Target: 34,075,512
Attitude Change Multiplier: 3x
Impression Rate: 5%
Bounce Rate: 90%

Ad Category	Media Type	Weight	Target Impressions	Adjusted Impressions	CPM (per 1,000 impressions)	Total Cost
Native	Twitter Promoted Tweets	6.50%	6,644,725	6,644,725	$6.46	$42,924.92
	Facebook Native Ads - Promoted Posts	6.50%	6,644,725	6,644,725	$14.40	$95,684.04
Influencer	Web Blog Influencer	5.00%	5,111,327	51,113,268	$60.00	$3,066,796.08
	Twitter Influencer	7.00%	7,155,858	143,117,150	$2.00	$286,234.30
	Facebook Influencer	7.00%	7,155,858	143,117,150	$25.00	$3,577,928.76
	YouTube Influencer	4.60%	4,702,421	94,048,413	$20.00	$1,880,968.26
Traditional	Broadcast TV (Excluding Primetime)	29.60%	30,259,055	30,259,055	$16.00	$484,144.87
	Cable TV (Excluding Primetime)	21.30%	21,774,252	21,774,252	$10.00	$217,742.52
	Podcasts	5.00%	5,111,327	5,111,327	$19.00	$97,115.21
	Radio	4.10%	4,191,288	4,191,288	$4.00	$16,765.15
	Print newspapers	3.40%	3,475,702	3,475,702	$67.00	$232,872.05
	Total	**100.00%**	**102,226,536**			**$9,999,176.17**

Low Impression Estimate, 5x Attitude Change Multiplier

Impression Target: 34,075,512
Attitude Change Multiplier: 5x
Impression Rate: 5%
Bounce Rate: 90%

Ad Category	Media Type	Weight	Target Impressions	Adjusted Impressions	CPM (per 1,000 impressions)	Total Cost
Native	Twitter Promoted Tweets	6.50%	11,074,541	11,074,541	$6.46	$71,541.54
	Facebook Native Ads - Promoted Posts	6.50%	11,074,541	11,074,541	$14.40	$159,473.40
Influencer	Web Blog Influencer	5.00%	8,518,878	85,188,780	$60.00	$5,111,326.80
	Twitter Influencer	7.00%	11,926,429	238,528,584	$2.00	$477,057.17
	Facebook Influencer	7.00%	11,926,429	238,528,584	$25.00	$5,963,214.60
	YouTube Influencer	4.60%	7,837,368	156,747,355	$20.00	$3,134,947.10
Traditional	Broadcast TV (Excluding Primetime)	29.60%	50,431,758	50,431,758	$16.00	$806,908.12
	Cable TV (Excluding Primetime)	21.30%	36,290,420	36,290,420	$10.00	$362,904.20
	Podcasts	5.00%	8,518,878	8,518,878	$19.00	$161,858.68
	Radio	4.10%	6,985,480	6,985,480	$4.00	$27,941.92
	Print newspapers	3.40%	5,792,837	5,792,837	$67.00	$388,120.08
	Total	**100.00%**	**170,377,560**			**$16,665,293.62**

Summary of Calculated Damages:

Attitude Change Multiplier	1x	3x	5x
Low Receptive Impression Estimate	**$3,333,058.72**	**$9,999,176.17**	**$16,665,293.62**
High Receptive Impression Estimate	**$4,199,772.24**	**$12,599,316.71**	**$20,998,861.18**

APPENDIX L. LIST OF CONSERVATIVE STEPS TAKEN

IMPRESSIONS MODEL	
Online News Articles Considered	• Online news impressions are limited to the articles cited in the Complaint. I did not count other online news articles that covered or discussed the Statements. • Further, some of the articles from the Complaint were authored by the Associated Press and Reuters.[475] It is likely that identical (or very similar) versions of these articles appeared in multiple publications. For instance, the June 25, 2019 Hollywood Reporter article, titled "Trump on E. Jean Carroll Sexual Assault Claim: 'She's Not My Type,'" appeared in at least 20 additional publications.[476] Further, the June 22, 2019 Associated press article, titled "Trump Denies Knowing NY Woman Accusing

[475] The analysis incorporates two versions of the same Reuters article: Doina Chiacu, Trump Denies Woman's Sexual Assault Accusation: "She's Not My Type", BUS. INSIDER (June 25, 2019); and Doina Chiacu, Trump Denies Woman's Sexual Assault Accusation: "She's Not My Type", REUTERS (June 25, 2019).

[476] https://www.pbs.org/newshour/politics/trump-says-woman-who-accused-him-of-sexual-assault-is-not-his-type; https://www.insider.com/trump-woman-who-accused-him-of-sexual-assault-not-his-type-2019-6; https://abcnews.go.com/Politics/wireStory/trump-woman-accused-sexual-assault-type-63921054; https://www.localsyr.com/news/politics/trump-woman-who-accused-him-of-sexual-assault-not-his-type/; https://libn.com/2019/06/25/trump-says-woman-accusing-him-of-sexual-assault-not-my-type; https://www.ksbw.com/article/shes-not-my-type-president-trump-denies-sexually-assaulting-author-in-store/28180018#; https://www.abqjournal.com/1332620/trump-woman-who-accused-him-of-sexual-assault-not-his-type.html; https://lasvegassun.com/news/2019/jun/24/trump-woman-who-accused-him-of-sexual-assault-not/; https://www.deseret.com/2019/6/24/20676380/trump-woman-who-accused-him-of-sexual-assault-not-his-type; https://wjla.com/news/nation-world/trump-woman-who-accused-him-of-sexual-assault-not-his-type; https://www.kcci.com/article/shes-not-my-type-president-trump-denies-sexually-assaulting-author-in-store/28180018; https://www.wvtm13.com/article/shes-not-my-type-president-trump-denies-sexually-assaulting-author-in-store/28180018#; https://www.theguardian.com/us-news/2019/jun/25/donald-trump-says-assault-accuser-e-jean-carroll-not-my-type; https://www.fox35orlando.com/news/trump-said-woman-who-accused-him-of-sexual-assault-not-his-type.amp; https://www.abc27.com/news/us-world/politics/trump-woman-who-accused-him-of-sexual-assault-not-his-type/; https://www.wtae.com/article/shes-not-my-type-president-trump-denies-sexually-assaulting-author-in-store/28180018#; https://www.kmbc.com/article/shes-not-my-type-president-trump-denies-sexually-assaulting-author-in-store/28180018#; https://www.kcra.com/article/shes-not-my-type-president-trump-denies-sexually-assaulting-author-in-store/28180018#; https://www.nbcboston.com/news/politics/trump-e-jean-carroll/108391/; and https://www.necn.com/news/local/trump-e-jean-carroll/220418/.

	Him of Sexual Assault" appeared in at least 7 additional publications.[477]
Social Media Posts Considered	• I limited social media impressions to those generated from Tweets published by the primary account of the publisher or the article author. I did not consider, for example, retweets of quote tweets, any tweets from other publishers of stories covering Mr. Trump's Statements, tweets from users who shared links to the 52 articles (or other articles containing the Statements), or tweets in which users repeated or otherwise amplified the Statements. • Additionally, due to the opacity of other platforms, I do not account for impressions generated on any other social media platform, despite there being evidence the articles considered in the impressions analysis were spread widely online.
Print Articles Considered	• When identifying print articles, I limited the analysis to publications that published an online news article that was cited in the Complaint. • The 11 articles I found are an undercount of all print articles published that covered the Statements. I was able to find 33 print articles via ProQuest published between June 22, 2019, and September 28, 2022, that referenced the Statements.[478] None of these articles overlapped with the 14 articles I considered in my analysis.

[477] https://www.marketwatch.com/story/new-york-advice-columnist-claims-trump-sexually-assaulted-her-in-mid-1990s-2019-06-22; https://www.gazettenet.com/Carroll-26480259; https://www.usnews.com/news/best-states/new-york/articles/2019-06-21/trump-faces-new-sexual-assault-allegation-he-issues-denial?context=amp; https://www.pressherald.com/2019/06/23/trump-denies-knowing-ny-woman-accusing-him-of-sexual-assault/; https://www.ksl.com/article/46579012/trump-denies-knowing-ny-woman-accusing-him-of-sexual-assault; https://www.courthousenews.com/trump-denies-knowing-ny-woman-accusing-him-of-sexual-assault/; and https://www.wwltv.com/article/news/trump-issues-denial-after-new-sexual-assault-allegation/507-33064ca1-b511-40e2-bbe2-57e7d672fc9f.

[478] Proquest search query of US Newstream: (e jean carroll) AND (stype.exact("Newspapers") AND ps.exact("Carroll, E Jean"))

	• Only 9 of the 11 articles I found contributed to the impressions estimate as I was unable to find publicly available circulation for all 11 articles.
TV Broadcasts Considered	• I only considered TV broadcasts contained in the Internet Archive's TV News Archive database from the following broadcasters: ABC, Fox, NBC, MSNBC, CBS, and CNN. • Among the broadcasts I found on the TV News Archive, I only included broadcasts that included direct quotes from the Statements. Broadcasts that only included paraphrases of the Statements were not included. For example, The Tucker Carlson Show (ratings: 2,822,000) covered the issue for 12 minutes on June 25, 2019, but I did not include it. • I only counted ratings for a particular program once in a day, even if a program was aired multiple times in day. I also did not consider the number of times a Statement was mentioned during a broadcast, even though multiple mentions of a Statement generate multiple impressions.
Other Sources of Impressions Not Considered	• I did not include impressions generated from podcasts or radio broadcasts that covered the Statements. There is anecdotal evidence that these claims were discussed on popular podcasts.[479] • I did not include impressions generated from people who were exposed to the Statements in article headlines while browsing Google News,

[479] See, for example, the June 27, 2019 broadcast of *The Daily* (https://www.listennotes.com/podcasts/the-daily/corroborating-e-jean-carroll-PfFq5DHZoag/) and two June 26, 2019 broadcasts of *The Kevin Jackson Show* (https://www.listennotes.com/podcasts/the-kevin-jackson/20190626-h1-s1-e-jean-FQEPcIrl3Rk/; https://www.listennotes.com/podcasts/the-kevin-jackson/20190626-h1-s2-e-jean-4OxWMCNKko_/)

	Apple News, or other news aggregating applications. • I did not consider the impact of word-of-mouth on the transmission of the Statements.
Social Media Impression Calculation	• Since tweets are seen only by a subset of a user's followers, I incorporated an impression rate into the impressions model. When selecting an impression estimate, I relied on a model developed by information scientists who relied on data collected from Buzzfeed's accounts. Using their model, I relied on Buzzfeed's impression rate as the high end for impression rates despite the fact Buzzfeed is less prominent than many of the sources included in my impression calculation.
Online News Impressions Calculation	• I incorporated a website's bounce rate when calculating online news impressions to exclude users who navigated to a website without performing any actions. Nonetheless, it's possible that users could have navigated directly to the relevant article on the website and been exposed the Statement without taking any additional actions.
QUANTITATIVE IMPACT MODEL	
Negative Associations are Harmful	• Any impression generated that linked Ms. Carroll's person brand with the content of the Statements is harmful. Person brands need to be protected and any information that connects a person brand to 'lying' and other negative information is harmful, even if the person's fans or followers do not believe the claims. Nonetheless, I limited my estimate of the quantitative impact to potential readers and viewers who identify as Trump supporters and/or are Republicans who may find Trump's Statements credible.
Limited Set of Impressions as an Input	• The impact model relies on the impressions estimate and therefore does not account for the impact associated with impressions generated from additional online and print articles, TV

	broadcasts, and social media posts covering the Statements.
DAMAGES MODEL	
Impressions and Impact as Inputs	• The damages model also relies on the impact model and therefore does not account for impressions generated by additional online and print articles, TV broadcasts, and social media posts that covered the Statements. • The damages model also relies on the impact model and therefore is limited to the costs needed to repair the impressions generated by people who are likely to be receptive to the Statements.
Production Costs	• The damages model does not incorporate the production and operating costs associated with running the campaign.
Attitude Change Multiplier	• When calculating damages, I included attitude change multipliers (1x, 3x, and 5x) to account for the fact that it takes multiple impressions to change an attitude. I estimate that 3 exposures would be most appropriate. • I incorporated the 1x attitude change multiplier to account for the fact that the same person may have been exposed to multiple impressions. Empirical data suggests that a multiplier of 1 is overly conservative, especially because Mr. Trump's supporters are more likely to use only one news source.