
Recently, popular media reporting on vaccination issues has demonstrated a clear bias against voluntary non-vaccinators. Media coverage of the Disneyland measles outbreak of winter 2014-15 indicates that the rhetoric used to describe those who do not follow the Center for Disease Control’s vaccination guidelines is becoming more inflammatory. Authors writing for publications like *Mother Jones* and *Salon.com*, commonly use phrases like “wacky position” and “quackery” to describe individuals and parents who choose not to vaccinate themselves or their children. This observation gives rise to the question of how voluntary non-vaccinators are represented in long established, reputable media outlets with large readerships. Can a shift to inflammatory vaccine discourse be identified in well respected news sources as it is in more niche publications like *Mother Jones* and *Salon.com*? If so, when did this shift occur, and what factors influenced the rise of this style of inflammatory reporting?

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**Background**

Two bastions of print journalism, *The New York Times* and *Time*, have long histories of reporting on vaccination issues. Their rhetorical practices have ranged from being understanding of parents’ fears relating to vaccine side-effects to insulting parents who choose few or no vaccinations for their children. While at times both sources reflect negative public perceptions of voluntary non-vaccinators, *The New York Times’* reporting demonstrates a primarily neutral rhetoric from 1980 to 2013, while *Time* becomes somewhat more sensationalist, often reflecting negative public views on voluntary non-vaccination in the latter half of the 2000s. The differences between these two sources make it difficult to draw conclusive results about rhetorical shifts in all well respected print media. Yet neither source uses language that encourages productive discussion toward a solution on the multi-faceted debate on vaccination.

The journalistic histories of *The New York Times* and *Time* are important to understanding the recent rhetorical shift in their vaccination reporting. Both sources have large readerships in the US and abroad. *Time*, published weekly, had about 3.3 million readers in 2013 (Sasseen, Matsa, and Mitchell). That same year, *The New York Times* had a daily circulation of 1.87 million (Lee). According to a 2014 study by Pew Research Center, *The New York Times* has a more politically left-leaning audience than most mainstream media sources, placing it on par with the audiences of *The Daily Show, NPR,* and *The Colbert Report* (Blake). According to *The New York Times’* publisher, Arthur O. Sulzberger, Jr., “The tumultuous, polyglot metropolitan environment *The [New York] Times* occupies means ‘We’re less easily shocked,’ and that the paper reflects ‘a value system that recognizes the power of flexibility’” (Okrent). This, more than *The New York Times* political stance, has shaped its reporting on vaccines and the vaccine controversy. The flexibility that Sulzberger speaks of is reflected in *The New York Times’* ability to report on hot button issues, including those surrounding vaccinations, in a manner that is neutral and respectful of opposing views.

As a weekly periodical aiming to serve a national population rather than targeting a certain city, *Time* has a different reporting style than *The New York Times*. *Time* describes itself as “one of the most authoritative and informative guides to what is happening in the worlds of health and science, politics, business, society and entertainment" since it was first published in 1923 (“About Time Magazine”).

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While, without a doubt, *The New York Times* and *Time* had much to say about the life-saving, history-changing vaccines of the early twentieth century, this analysis of mainstream media reporting will begin in the 1980s.

**Methods**

*Time* and *The New York Times* are widely read and representative of well respected American print journalism. As such, these news outlets shape the rhetoric and reporting of other publications and influence Americans’ perceptions on a range of issues, including vaccinations. For this reason, these two sources were selected in order to analyze the recent shift toward inflammatory rhetoric in vaccine reporting.

To gather data for this study, I conducted a keyword search using the term “vaccination” in the Factiva database for *The New York Times* and the Ebscohost database for *Time*, spanning a thirty-three year range, from 1980 to 2013. The timeframe ends in 2013 because data collection began mid-2014. Since these titles are published internationally, I selected the United States as the region of publication. The search returned 216 results for *Time* and 1,292 results for *The New York Times*. Of those, I selected 99 *Time* articles and 534 articles from *The New York Times*. Many results contained only the word “vaccination” but did not discuss the topic further. The articles selected for further reading had titles or database synopses indicating vaccinations were their primary topic. Of these, 76 *Time* articles and 197 articles from *The New York Times* were read, summarized, and defined as either neutral or inflammatory. The remaining articles were deemed to be irrelevant in relation to voluntary non-vaccination reporting. In the process of reading the articles, I was able to clearly define neutral and inflammatory articles with those deemed inflammatory constituting a spectrum ranging from mild to severe.

In this context, an article is inflammatory if it references voluntary non-vaccinators in a derogatory way, stereotyping them as ignorant, irresponsible, or science nonbelievers. Inflammatory articles clearly differentiate between parents who choose to vaccinate their children and parents who do not. Additionally, these articles tend to be overly dismissive of parents’ vaccine fears or exaggerate the severity of the disease. Typically, these articles do not cite factual evidence, which would permit readers to interpret data for themselves. Instead inflammatory articles generally reference “science” as the ultimate authority on vaccination, further entrenching the idea that voluntary non-vaccinators are anti-science.

An article is defined as neutral if it gives equal consideration to multiple sides of a vaccine argument. It may be clearly opinionated for or against vaccinations, but it recognizes the validity of its opposing view, such as understanding of the fears of voluntary non-vaccinators. Neutral articles are generally balanced and include references to data from multiple legitimate sources, allowing readers to form their own conclusions.

**Research Findings**

**1980s: LOW VACCINATION RATES, MEASLES OUTBREAKS, AND THE FLU VACCINE**

Reporting in the 1980s covered a range of vaccination topics including rubella, measles outbreaks, and seasonal flu. Yet throughout the 1980s, an era that is marked by several newsworthy vaccination events, reporting on all of these subjects was almost entirely neutral. In New York City, the 1980s began with an effort to increase vaccination rates, primarily among the city’s underprivileged populations. Multiple
articles in The New York Times describe the city's efforts to increase inoculations by barring children from attending city schools until a complete record of vaccination was presented to school officials (Goldman; Kleiman). Although the New York Times supported the city's aggressive vaccination campaign, its reporting was decidedly neutral and represented unvaccinated children as students "lacking" vaccines. The passive language avoids casting blame on students and their parents. Since the pressure to vaccinate was wielded in response to low vaccination rates among low-income, inner-city children with inadequate access to medical care, the reporting on this issue did not use the inflammatory rhetoric that we see today.

Multiple measles outbreaks occurred throughout the 1980s and into the 1990s. In 1981, The New York Times published an article on the Westchester measles outbreak (Evans). Westchester barred unvaccinated children from its schools; however, like reporting on low inner-city vaccination rates, the articles did not condemn the unvaccinated. Rather, they encouraged measles vaccinations, stating that measles can lead to brain damage and, in some cases, death. The article retained its neutral stance by not overstating the dangers of measles, which was once perceived as a mild childhood disease nearly every child was expected to get (Conis).

In 1989, Time published "Return of The Red Spots!" Despite the title's exclamation mark, the article calmly discusses the severity of measles without attempting to cause panic. The author discusses many issues that remain concerns today, including parents who do not vaccinate their children according to the CDC's recommended schedule and an influx of unvaccinated immigrants into the country. While these topics may seem poised to trigger inflammatory rhetoric, the article remains neutral by providing factual information and eschewing attacks on groups or individuals.

Notably, in 1984, the first articles on voluntary non-vaccinators appear within the 1980 to 2013 timeframe. One article discusses a more traditional version of vaccination opposition, that of religious beliefs against vaccination among a group of teenagers who contracted the measles ("56 Teen-agers Refuse Measles Shots"). However, the second reports on philosophically promoted voluntary non-vaccinators, including the group Dissatisfied Parents Together, who represent themselves as parents in favor of safer vaccine standards not, as many people view them, anti-vaccination (Engelberg). This article, "Vaccines: Assessing the Risks and Benefits," depicts these parents as well-intentioned, concerned individuals; thus the news story meets the criteria for a neutral article.

Lastly, the 1980s see an expansion of populations who are recommended to receive the flu vaccine. The CDC expanded their recommendation to include physicians, who are likely to come into contact with the flu and should avoid spreading it to others, especially those at high risk ("US to Recommend Wider Use of Vaccine").

1990s: MEASLES GOES POLITICAL, FAITH-BASED HEALING, MENINGITIS, AND THE HEPATITIS B VACCINATION

The New York Times and Time continued to cover measles outbreaks into the 1990s. In the early to mid-1980s, measles was portrayed as a fairly mild disease that only occasionally caused serious side effects and fatalities. But in the late 1980s and early 1990s, measles reporting began to depict the disease as more serious and, consequently, articles more emphatically promoted the measles vaccine. One 1989 New York Times' article describes measles as "perilous," and then other articles begin to emphasize measles fatalities around the nation (Stevens; Belkin; "Deaths From Measles").
It is also during this time that measles became a political issue. In 1990, *Time* published an opinion piece attacking President George H.W. Bush for the lack of public health funding and, consequently, the measles outbreak, which is “killing children again” (Kinsley). A few months later, a *New York Times* piece ties the measles epidemic to a breakdown in the healthcare system, which is the ultimate responsibility of the federal government (Hilts). By linking vaccines with politics, the discussion became uncoupled from medicine and science. This allowed vaccination reporting to bypass facts and move into the realm of emotions.

In 1993, President Bill Clinton kept vaccines on the national agenda with his proposal to provide free vaccines to every child. He also attacked the pharmaceutical industry, accusing them of driving up vaccine prices to increase their profits (“The President and America’s Children”; Berke; “Pounds of Prevention”). Both Clinton’s vaccine initiative and his accusations were met with mixed but mostly positive reviews in *Time* and *The New York Times*. During the Clinton years, a discourse of blame crept into reporting, especially in *The New York Times*. The blame is subtle but present, pointing fingers at parents who fail to vaccinate their children according to the recommended schedule regardless of their reasons for not vaccinating. One article discusses families who entered the country illegally, saying they are “wary and often avoid contact with all public agencies, even at the expense of their children’s health,” despite confidentiality agreements put in place to protect them (Brenner). Other articles attempt to illustrate the barriers to vaccines that middle and lower class families face. One discusses the hardships of waiting in line for hours at clinics and taking time off work multiple times in a year to receive vaccinations according to schedule (Marks). Other articles state that many parents simply lack the knowledge to get their children vaccinated (Brody). Despite these reasons, most of the reporting at this time insinuates that parents facing challenges and hardships should have tried harder and done more to get their children vaccinated. In the 1980s, these parents had an excuse for not getting their children vaccinated -- the cost of vaccines. But with Clinton’s vaccination initiative, that excuse was negated, and the other reasons were no longer enough to justify not vaccinating.

Yet as the 1990s continued, reporting reverts back to neutral rhetoric. The focus shifts away from Clinton’s vaccination program and moves away from the cost of the shots to advocating for a means to get children vaccinated (Rosenthal; Leary). And after 1995, reporting on vaccinations becomes mostly positive as rates of vaccination increase across the nation, including lower income and minority populations. In the early 1990’s, vaccination rates hovered around 50%, but by 1996, vaccinations were at 75%. The federal government set its sights on 90% of children being fully immunized by the year 2000 (“Immunization Rate For Some Children Is Put At Under 50%”; Pear; Bennet). *The New York Times* attributes these increases primarily to state and local programs, such as the one in Chicago that required parents on welfare to come monthly, rather than quarterly, to receive food vouchers until their children were fully immunized (Noble). Reporting during this time demonstrates an inverse correlation between vaccination rates and inflammatory reporting. As immunization rates rise, the press and general public perceive fewer threats to public health, and fewer inflammatory articles are printed.

A few neutral articles on various communicable disease outbreaks appeared in the second half of the 1990s. These included a measles outbreak in 1996, which *The New York Times* attributed to a previous gap in vaccinations against the disease, and a Rubella outbreak in Hispanic communities in 1998, which was neutrally covered despite disease among immigrant populations typically being a charged topic (“Measles Risk Linked to Gap in Vaccinations”; “Rubella Outbreak Hits Hispanic Immigrant Communities”). In 1999, *Time* published an article on voluntary non-vaccinators. Yet that article, gives
While reporting on the studies themselves was largely neutral, well researched, and factual, the articles focused primarily on attempts to vaccinate those at immediate risk. Given the nature of the outbreak and the non-mandatory meningitis vaccine, this subject did not present an opportunity to discuss voluntary non-vaccinators.

In 2000, *Time* published an article that deviated from the trend. The article, “This Will Only Hurt for a Minute” subtitled “The Antivaccine Movement Would Be Laughable -- If It Weren't So Dangerous” is the first, inflammatory article explicitly about voluntary non-vaccinators published in either of the major media outlets examined (Jaroff). This article directly insults voluntary non-vaccinators, calling their theories “preposterous” and describing them as “quacks,” “fanatics,” and “medically illiterate.” This article is noteworthy not only because of its derogatory language, but also because it is an outlier, with no rhetorically similar articles appearing in *Time* or *The New York Times* before or for a couple years after. In fact, just months before in 1999 *Time* published the “Vaccine Jitters” article, which discussed similar fears neutrally (Jaroff, Blackman, McDowell and Park).

When the September 11, 2001 terrorist attacks occurred, vaccine reporting shifted toward the inflammatory again, as both *Time* and *The New York Times* published articles about the potential of weaponized smallpox and anthrax. Although bioterrorism does not lend itself as a platform for discussing voluntary non-vaccinators, it is an emotionally charged topic, which incited a host of opinionated and alarmist articles on bioterrorism and the government’s role in preventing disease outbreaks. The editorial “Smallpox Shots: Make Them Mandatory” argues, “Today the case for mandatory vaccination is even stronger. This is war. We need to respond as in war ... And the government’s highest calling is to protect society--a calling even higher than protecting individuals” (Krauthammer). Such language aims to inspire fear and completely disregards the possibility of individual opposition to vaccines, explicitly stating the individual is less important than society as a whole.

Once the rhetoric of articles on bioterrorism became inflammatory, that rhetoric became ingrained in vaccination reporting in general. In 2002 *The New York Times* published a host of articles, ranging from mildly inflammatory to inflammatory, discussing vaccine exemptions and the fears of voluntary non-vaccinators. Among these articles are “When Parents Say No to Vaccinations,” which uses mild scare tactics to encourage parents to vaccinate, frequently referencing the CDC, and “Protect the Children,” an editorial which calls for the end of personal belief exemptions, likening not vaccinating children to playing Russian roulette (McNeil; Miller).

It is also during this time that the Wakefield paper begins to lose traction as some of the authors retract their names from the publication (Park, “Do Vaccines Cause Autism?”). Various studies discrediting the link between autism and vaccination were reported in *Time* and *The New York Times* (Hilts; Brody). While reporting on the studies themselves was largely neutral, well researched, and factual, the discredited link between vaccination and autism allowed those advocating for vaccines to dismiss and
attack vaccine skeptics in the name of science. While not all voluntary non-vaccinators oppose vaccines because of the possible autism link, the discredited study became emblematic of the misguided beliefs of vaccine skeptics. This led to the publication of articles such as “Worship Optional: Joining a Church to Avoid Vaccines” in 2003 and “On Autism’s Cause, It’s Parents vs. Research” in 2005 (McNeil; Harris and O’Connor). The titles alone condemn voluntary non-vaccinators. Both articles present voluntary non-vaccinators as conspiracy theorists, wacky and unreasonable in comparison to people in favor of vaccinations. The 2005 article quotes a doctor calling the parents demanding a thimerosal ban “scientifically illiterate,” and the 2003 article quotes the founder of the Congregation of Universal Wisdom who says, “What other people see as Western medicine we see as a state-imposed pagan religion.” The article goes on to describe the founder as a member of the National Rifle Association simply because it “fights government restrictions.” But he does not own a gun and is opposed to war on religious grounds. This serves to present the church and its founder as crazed and disapproving of the American federal government. In response to the 2003 article, a letter to the editor states that vaccine exemptions should only be given for “long standing and deeply held religious beliefs,” which shows that the public endorses religious exemptions covered in “Worship Optional” (Ross).

Letters to the editor, such as this one, commonly become inflammatory, even when the articles they respond to retain a neutral stance. An uptick in the number of emotional, inflammatory letters to the editor and op-eds can be seen in the early and mid-2000s. Another example is a 2005 letter calling the thimerosal-autism link “pseudoscience” (Pasachoff). Although these letters are not directly the voice of The New York Times or Time, by publishing these letters the news outlet gives a larger voice and validity to personal beliefs that would otherwise be less prevalent and influential.

Lastly, in 2005 we see a new type of opposition to voluntary non-vaccinators -- pediatricians refusing to see patients who do not vaccinate (Nagourney). Yet reporting on this issue remains neutral in a New York Times' article that briefly summarizes a poll and ends by saying the majority of pediatricians believe it is better to engage in open discussion about vaccinations with their patients. A Time article also reports neutrally on this subject, citing similar statistics (“Pediatricians to Parents”).

2006-2013: GARDASIL VACCINE AND THE VACCINE-AUTISM LINK

In 2006, the FDA approved Gardasil, a vaccine against certain sexually transmitted strains of human papillomavirus (HPV) that cause cervical cancer and genital warts (Harris, “U.S. Approves Use of Vaccine”). Shortly after Gardasil was approved, a federal vaccine advisory panel voted unanimously to recommend the vaccine for girls ages 11 to 16 (Harris, “Panel Unanimously Recommends Vaccine”). A heated debate followed on whether Gardasil should be recommended or required for adolescents. Because HPV is primarily a sexually transmitted disease and not a communicable disease like the other required childhood vaccinations, debate surrounding this vaccine uses different types of language than previous vaccine controversy.

In 2007, Texas quickly became the first state to mandate Gardasil for 11 and 12 year old girls (with the possibility of a vaccine exemption) after an executive order signed by Governor Rick Perry (Blumenthal). However, only a few months after the order was signed, the legislature passed a bill that undis the mandate (“No Veto On Vaccine Order”). With the politics surrounding Gardasil, one might expect debate to quickly become inflammatory. We do see an uptick in mildly inflammatory, pro-vaccination articles in the Gardasil debate, particularly letters to the editor and editorials, such as one in The New York Times.
with the mildly exaggerated title “A Vaccine to Save Women’s Lives,” which praises Governor Perry and discounts those opposed to the vaccine by stating that “none of these objections seem strong enough to forgo the protection against a devastating disease.”

However, what makes the Gardasil debate more interesting than most other vaccine debates is that for every article in favor of the mandate, The New York Times would publish an article wary of it. Even more interestingly, both sides of the debate have backing by doctors and the general public. During three months in 2007, The New York Times published two articles on doctor’s hesitance at administering vaccinations, one due to cost, the other due to uncertainty on the safety and effectiveness of Gardasil, sandwiched between editorials promoting a mandatory HPV vaccine (Pollack; Saul and Pollack; “A Vaccine to Save Women’s Lives”; “A Necessary Vaccine”). Surprisingly, Time avoided the Gardasil debate for three years. In 2009, it published a neutral article that vaguely supports states waiting for additional safety and efficacy information before mandating the vaccine (Park, “Why HPV is Still Not A Straight Shot”).

Yet after this neutral 2009 article is published, Time sees a sudden uptick in inflammatory articles, beginning with an op-ed piece in which a husband publically debunks his wife’s belief in natural healthcare and opposition to vaccinations. The author writes, “We complain less about the liberal side of anti-science because the women who believe in this stuff are generally hot” (Stein). This statement is inflammatory in several ways, as it is both sexist and clearly making a case that those who oppose vaccines are “anti-science.” Additionally, it stereotypes voluntary non-vaccinators as liberal, when, in fact, voluntary non-vaccinators come from varied political and ideological backgrounds. Time continues publishing mildly to very inflammatory articles and opinion pieces through 2013 (Wallis; Greenfeld; Kluger; Park, “Why Parents Won’t Follow the Rules”; Poniewozik). All of these publications pit non-vaccinating parents against doctors, medical professionals, and a host of organizations that promote childhood vaccinations. At its worst, a 2011 article says, “With the world’s leading medical authorities (the NIH, CDC, WHO) telling you vaccines are safe and Jenny McCarthy (MTV) telling you they’re not, the choice should be easy” (Kluger). Such inflammatory rhetoric continues into 2013 with a similar quote, “On her [Jenny McCarthy’s] side is her anecdotal claim that vaccination gave her son autism, plus a debunked study from 1998. On the other is pretty much the entire pediatric community” (Poniewozik).

Vaccine coverage shifts quickly from HPV, to the vaccine autism link, to Jenny McCarthy’s credibility. Celebrity, like politics, is a catalyst that quickly shifts the vaccine conversation away from medical science and into the realm of emotion.

While Time became a source of inflammatory reporting in the period from 2009 to 2013, The New York Times remained largely neutral excepting a few inflammatory editorials and letters to the editor revolving around the vaccine-autism debate. The shift in both Time and The New York Times from the Gardasil debate to the vaccine-autism debate occurs in early 2009 when a federal vaccine court delivered three verdicts ruling no link between autism and the measles, mumps, and rubella vaccine (“Vaccines Exonerated On Autism”). Even into 2013, The New York Times’ reporting is characteristically neutral on non-vaccinating communities, such as a Texas megachurch that discourages vaccinations (Aaronson). Although this article encourages vaccinations, as The New York Times has historically, it does not personally attack those who do not vaccinate; it merely states that such choices could have detrimental effects on community health.
Analysis
HOT BUTTON ISSUES INTENSIFY REPORTING

Over the course of the three decades from 1980 to 2013, *The New York Times* and *Time* magazine became gradually more inflammatory, with occasional hot button issues causing short periods of intensified, often inflammatory reporting. These hot button issues can be categorized into five primary categories, which present themselves chronologically with some occurring multiple times over three decades. These issues include disease outbreaks, low vaccination rates, politicization of vaccination, bioterrorism, and vaccine risks (most importantly the vaccine-autism connection).

Disease outbreaks lead to inflammatory reporting because they inspire fear. This is first seen in the late 1980s and early 1990s when measles outbreaks occur across the United States. Although the articles remain neutral at first, in the early 1990s measles becomes sensationalized, and the sources begin to increase their depictions of the severity of the disease, correlating to the nation’s fear of contracting the measles. Tt this stage, articles were rarely inflammatory and did not target voluntary non-vaccinators. Yet, these articles could be categorized as alarmist, because they incite a degree of fear but do not target a specific group for creating that fear. Concurrently with the measles outbreaks, reporting, especially in *The New York Times*, focused on low vaccination rates within inner-city schools. Like the measles articles, reporting favored vaccination, but retained a neutral stance because the primary reason for such low rates of vaccination was an inability or lack of knowledge by parents to get their children vaccinated rather than active non-compliance with school vaccination laws. While both of these topics led to intensified vaccination reporting, they did not lead to inflammatory reporting on vaccinations and voluntary non-vaccinators in the same manner as later decades.

The first time that vaccine reporting becomes distinctly inflammatory is in 1993 when President Clinton began his campaign to provide free vaccinations for all children. Setting aside the politics of Clinton's initiative, the fact that vaccinations entered the national political scene gave reporters an entirely new lens through which to see vaccinations. No longer were vaccinations a health and science topic with occasional forays into local and state politics. They became part of the national political agenda. When vaccines stepped onto the national political agenda not only did discussion of vaccines become more personal, which often leads to more intensified and occasionally inflammatory reporting, but also the once multi-faceted vaccine debate became two-sided, just as American politics are two-sided. Although the Clinton program had varied responses and questionable effectiveness, the rapid increase in vaccination rates following the vaccine initiative kept the period of intensified and inflammatory reporting brief. Despite its brevity, a degree of blame was placed on parents of unvaccinated children during this time.

But in the 2000s, vaccine reporting once again intensified quickly. First, in the post-September 11 world, bioterrorism and the threat of anthrax and smallpox were commonly discussed. Shortly after that, the vaccine-autism link was publicly weakened as authors retracted their names from the Wakefield publication, and various studies found no proven link between autism and vaccinations. The compound effect of these two occurrences led to an increase in inflammatory reporting in the mid-2000s. It is also during this time that the media in general begins to narrow its focus to the vaccine-autism link rather than vaccine risks in general. Before 2000, both *Time* and *The New York Times* addressed vaccine risks that, while rare, are recognized by the larger scientific community. In contrast, the vaccine-autism link has been considered disproven by much of the scientific community since the early 2000s. After the
vaccine-autism link lost credibility, all vaccine skeptics lost validity as the media no longer mentioned other vaccine side effects and focused solely on the vaccine-autism link. This led to a positive feedback loop in which the public responded to the focus on the vaccine-autism link with inflammatory opinion pieces and letters to the editor. *Time* especially fed into negative public opinion by publishing news articles with inflammatory rhetoric.

While *Time* and *The New York Times* had similar rhetoric on vaccines and vaccine controversies for most of the three decades, a shift occurred in the late 2000s in which *Time* began to report in an almost exclusively inflammatory fashion while *The New York Times* remained true to its investigative nature and reported primarily neutrally, with a few inflammatory op-ed pieces scattered throughout the 2000s and 2010s. By continuing to respond to the voice of the public by publishing inflammatory op-ed pieces or increasing the sensationalist nature of their articles in response to the public view, the media is contributing to a continuation of the vaccine controversy rather than the search for a resolution.

**Further Research**

From my research, *Time* tends to be a more sensationalist news outlet than *The New York Times*. The primary reason for the differences in vaccination rhetoric between these two publications is that one is a newspaper and the other is a news magazine. In contrast to *The New York Times*, a daily news publication whose aim is to inform readers, *Time* is a weekly publication that entertains as it informs. This is especially true as the internet has changed the way that news is written and delivered. Although it may detract from its credibility, including a personal, argumentative take on a subject like vaccination is an easy way to entertain and engage readers. Additionally, *Time’s* weekly publication means that the magazine picks up on larger trends rather than one-time events, so it is more likely to focus on the wider topic of voluntary non-vaccinators than a single event in vaccine news. However, in order to make broader conclusions on the reasoning behind this apparent shift in *Time’s* reporting, further research must be done into the history of *Time* magazine and its rhetoric on a host of issues, not just vaccination reporting. A larger study could also ascertain whether a periodical’s frequency of publication influences its tone and rhetoric on vaccination.
Works Cited


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