

Research Article

# “We Should Be at the Back of the Line”: A Frame Analysis of Old Age Within the Distribution Order of the COVID-19 Vaccine

Laura D. Allen, BS,<sup>1,\*</sup> Idalina Z. Odziemczyk, MA,<sup>2</sup> Jolanta Perek-Białas, PhD,<sup>3</sup> and Liat Ayalon, PhD<sup>1</sup>

<sup>1</sup>Louis and Gabi Weisfeld School of Social Work, Faculty of Social Sciences, Bar-Ilan University, Ramat Gan, Israel. <sup>2</sup>Doctoral School in the Social Sciences (Sociological Sciences), Jagellonian University, Cracow, Poland. <sup>3</sup>Institute of Sociology and Center of Evaluation and Public Policy Analysis, Jagiellonian University, Cracow, Poland.

\*Address correspondence to: Laura D. Allen, BS, Louis and Gabi Weisfeld School of Social Work, Faculty of Social Sciences, Bar-Ilan University, Max and Anna Webb St. Building 213, Ramat Gan 5290002, Israel. E-mail: [laura.allen@biu.ac.il](mailto:laura.allen@biu.ac.il)

Received: March 30, 2021; Editorial Decision Date: June 30, 2021

**Decision Editor:** Barbara J. Bowers, PhD, RN, FAAN, FGSA

## Abstract

**Background and Objectives:** In the fall of 2020, it became clear that the initial doses of the coronavirus disease 2019 (COVID-19) vaccine would be limited, and a priority order would be necessary. This article examines the perceptions of old age in the context of establishing a priority order for the COVID-19 vaccine from the perspective of online newspaper commenters. Two research questions are investigated: (a) How do commenters place older people in line for the COVID-19 vaccine? and (b) What frames and factors do commenters use as reasoning for their proposed position of older adults?

**Research Design and Methods:** This study involves a frame analysis of 440 online comments on an article published by *The New York Times* on December 1, 2020 about the U.S. recommendations for distributing the coronavirus vaccine.

**Results:** Older adults were referenced as belonging to one of the 3 groups: older long-term care residents, older workers, and older adults retired and/or isolating at home. Two frames emerged from the data as criteria for prioritization: social contribution and vulnerability. Older commenters themselves frequently stated that they should be deprioritized so that others can be inoculated earlier.

**Discussion and Implications:** The findings may be interpreted as demonstrative of pervasive ageism throughout the pandemic; older commenters' sacrificial remarks may reflect generativity, internalized ageism, social pressure from online forums, or some combination thereof.

**Keywords:** Ageism, Frame analysis, Internet-based data, Social contribution, Vulnerability

As approval for the initial coronavirus disease 2019 (COVID-19) vaccines began to look promising in the fall of 2020, it became clear that there would not be enough vaccines to inoculate the entire U.S. population at once, and allocation criteria would be needed. On December 1, the Centers for Disease Prevention and Control (CDC) released guidelines for the distribution of the vaccine—the first of-

ficial attempt at answering everyone's question: “who goes first?”—or perhaps more accurately, “when will it be *my* turn?” The CDC expert panel recommended that Phase 1a be limited to health care workers and long-term care (LTC) residents. They proposed that the follow-up phases include (1b) essential workers and (1c) adults 65 and older and adults with high-risk conditions. The panel based their

recommendation on factors including hospitalization, case and death rates, polling, and the overall disproportionate impact of the virus on these groups (Dooling, 2020).

In 2020, research groups sought to understand optimal model-based prioritization strategies for the COVID-19 vaccine (Babus et al., 2020; Buckner et al., 2021; Matrajt et al., 2021). Determining which groups to prioritize depends on estimating variables such as vaccine efficacy rate, allocation rate, and the population with naturally acquired immunity. Optimal vaccine coverage can be based on measures such as number of infections, deaths, or life lost; type and number of hospitalizations; or some combination thereof. For example, the analyses of Matrajt et al. (2021) were based on two different objectives for optimal allocation of vaccine resources: (a) minimizing symptomatic infections and nonintensive care hospitalizations by inoculating younger, higher-transmitting groups and (b) minimizing deaths and intensive care hospitalizations by inoculating the most at-risk, older age group.

Public health entities such as the World Health Organization (WHO) and the Johns Hopkins Bloomberg School of Public Health released ethical framework reports for decision making about vaccine distribution. They based their frameworks on prior research, but also on ethics such as well-being, promoting common good, reciprocity, justice, and equity (Toner et al., 2020; WHO, 2020). Considering the range of evidence- and ethics-based suggestions, policymakers and public health officials were required to weigh multiple objectives and future scenarios when deciding the vaccine allocation order. Although the final prioritization is decided by each state, guidance from the CDC serves as a national recommendation (Goodnough, 2020). We retrospectively know that implementation has been slower and more complicated than expected, but most state plans have observed the guidance so far; for example, all 50 states except West Virginia joined the federal plan for vaccinating nursing home residents (Roubein & Ehley, 2021).

A newspaper article published in *The New York Times*, "Who Will Get the Coronavirus Vaccine First?" (Goodnough, 2020) described the CDC's recommended guidelines (see *Design and Methods* for more thorough description); this study is a frame analysis (Entman, 1993; Goffman, 1974), of the online comments on that article. An individual's framing involves the mental processing of one or more communicating texts, combining those texts with prior understanding of the topic and related concepts, and utilizing reasoning devices to select specific points that create meaning from the text (Entman, 1993; Goffman, 1974; Van Gorp, 2007). Adults aged 65 years and older are at an increased risk of death and serious illness due to COVID-19 (Freed et al., 2020), and since the beginning of the pandemic, health experts and the news media have repeatedly asserted the vulnerability of older people and LTC residents to the virus (Allen & Ayalon, 2021). We investigated the following research questions: (a) How do

commenters place older people in line for the COVID-19 vaccine? and (2) What frames and factors do commenters use as reasoning for their proposed position of older adults in the COVID-19 vaccine distribution order? Analysis of comments on online newspaper articles can provide insight into how commenters socially and discursively construct knowledge (Brodsky, 2019). By examining the commenters' stated criteria for vaccine priority order, we can see not only how the value of older adults' lives and well-being is perceived by a specific audience, but also the potential internalization of messages about older people throughout the pandemic.

## Design and Methods

Comments on online newspaper articles can be valuable data for researchers because of the insight they provide on commenters' social construction of their personal identity and a larger reality (Brodsky, 2019). Analyzing comment data is worthwhile also because of its utility; it is internet-based, publicly available, and inexpensive (free) data that help to alleviate research participants' burden and burnout. Researcher Brodsky (2018) purports that online comment data allow the researcher to observe participants without them knowing, which reduces the chances of participants modifying their behavior knowing they are being studied, known as the Hawthorne effect. However, online commenters are conscientious that their comments will be read and judged by other readers of *The New York Times*. While they may not be aware that their remarks could be systematically studied, commenters may still adapt to patterns considered socially acceptable, or contrastingly, try to draw attention by writing provocative statements.

Many major news outlets such as USA Today, Reuters, and NPR do not allow commenting on their online articles. A newspaper that hosts an online commenting feature runs the risk of negatively affecting readers' attitudes toward the content and the newspaper itself (Anderson et al., 2014; Prochazka et al., 2018). It can also be very costly; NPR's closing of the comment feature in 2016 was partially a result of a large number of financial resources necessary to moderate forums (Jensen, 2016). Given the dwindling number of reputable news sources that allow online comments, we chose to use the comments from an article in *The New York Times* in this study. *The New York Times* is among the top three most circulated national newspapers in the United States (Alliance for Audited Media, 2021) and has a robust gatekeeping process for online comments. To write a comment on an article, the reader must create a free registered account by providing an e-mail, a name which can be full or partial, and a location which is usually a city, but must be at least a state or region (i.e., "Montana" or "West of the Mississippi"). The platform does not function like social media; the commenter does not have a public page linked to their name. The commenting feature closes within 24 h of an article's publication date (*The New York Times*, n.d.a).

Only selected articles in *The New York Times* have the comment feature, determined by their community editing team (Long, 2017). A team of moderators works with the help of machine learning technology to identify and remove bots and inappropriate comments from internet trolls (Etim, 2017). They invite “articulate, well-informed remarks that are relevant to the article” and do not tolerate incivility such as profanity or name-calling (*The New York Times*, n.d.a). Therefore, an understanding of the mission of *The New York Times* and its readership will give important source context to the comments in this study.

Although commenting on *The New York Times* online is free, readers can only access a limited number of free articles each month before they must pay a monthly subscription fee (Gayed et al., 2019). As of November 2020, there are over 7 million subscribers to *The New York Times*, of which over 6 million are digital subscribers, reading the content online (Lee, 2020). Their stated mission is “to seek the truth and help people understand the world” based on a belief that journalism has the power to make society more just and stronger (*The New York Times*, n.d.b). Politically, it is considered to lean-left, meaning that its publications moderately favor social and economic equality, federal laws protecting equal rights, and values of tolerance and empathy (AllSides, 2020). In a 2019 Pew Research survey, of those who indicated *The New York Times* as their primary political news source, 91% identified as democrat/leaning democrat, 51% were male, 72% were college-educated, 71% were White, and 63% were younger than the age of 50 (Grieco, 2020). While these are readers whose main news source is *The New York Times*, these data indicate the majority of the newspaper’s audience: left-leaning, highly educated, younger, and White readers. Relatively little is known about readers who choose to comment on *The New York Times* articles; one study found that only 28% of commenters of identifiable gender were female (Pierson, 2015). We emphasize that the aim of our study is not generalizability, and such conditions of the data source and demographics of readers and commenters should be noted.

The news article titled, “Who Will Get the Coronavirus Vaccine First?” by Abby Goodnough was published on December 1, 2020. The article describes the CDC panel recommendations, pending approval of the CDC director, which first prioritize health care workers and “three million mostly elderly people living in nursing homes and other long-term care facilities” (Goodnough, 2020). It frames the unique risks of each group being considered for prioritization and speculates how individual states may choose to adhere to the CDC guidance strictly or loosely. The article states that essential workers are expected to be recommended next, and adults with medical conditions and adults older than the age of 65 after that, but the article points out that some states may choose to vaccinate those older than 75 before some categories of essential workers. The end of the article addresses common questions about the length of the distribution timeline,

shipping arrangements, and safety and side effects of the vaccines (Goodnough, 2020).

Because this study used publicly available data, it was exempt from comprehensive ethical consideration by the Research Ethics Committee at Bar-Ilan University. The ethics of researching internet-based data are often context-dependent and should be deliberated among the research team to design an ethically informed research process (Franzke et al., 2020; Markham & Buchanan, 2017). Our study was not subject to a full ethical examination; however, we chose to further minimize risk to the commenters by removing all usernames and locations from the comments in our reporting process. As Gibson and Roca-Cuberes (2019) point out, this added layer of caution protects commenters from the exposure of their ideas “outside of the particular context that they produced them in” (Gibson & Roca-Cuberes, 2019, p. 4).

Comment data for this study were extracted from the “New York Times Developers” site (2020) using the “Community” application programming interface on December 10, 2020. The total number of comments was 626. Comments were screened according to relevance to the research aim; included comments were about a suggested order or a prioritization appraisal. Excluded comments discussed the technicalities of vaccine trials, questioned the author directly about reporting, or debated how to show proof after vaccination. Each comment was approximately one to three sentences. The comments were screened by two independent raters (L. D. Allen and I. Z. Odziemczyk) according to the inclusion criteria, and all conflicts ( $n = 23$ ) were decided by a third rater (L. Ayalon), for a total of 440 comments included in the analysis.

## Analysis

Our research inquiry into commenters’ prioritization order of the vaccine and the framing of old age within that order prompted us to conduct a frame analysis (Entman, 1993; Goffman, 1974) and focus on the perception of the place and value of older people in the context of the COVID-19 pandemic and vaccination policy. Goffman (1974) defined a frame as a constructed definition of a situation that supports the audience’s ability to “locate, perceive, identify and label” information that reaches them (Goffman 1974, p. 21). Framing was delineated by Entman (1993) to be a matter of selection and salience:

to frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation. (Entman, 1993, p. 52)

Most empirical work on framing in a media context is rooted in social constructionism, which is the individual’s construction or formation of reality in a social context (Harris, 2010).

Frame analysis frequently concerns the public perception of policy issues and the impact of the media's frames on its audience's interpretation (Semetko & Valkenburg, 2000). News media actively helps the public better understand their position in the world by condensing a larger reality into salient events with meaning (Entman, 1993; Richardson, 2007). Scheufele (1999) suggests that there are both media frames and individual frames, the latter of which is a person's mental processing of reality into a particular, "digestible" version of that reality (Entman, 1993; Van Gorp, 2007). In this way, framing does not solely operate in a top-down direction from media to the audience but is rather a two-way process where the individual and the institution construct reality (Potter, 2004) in a communication process.

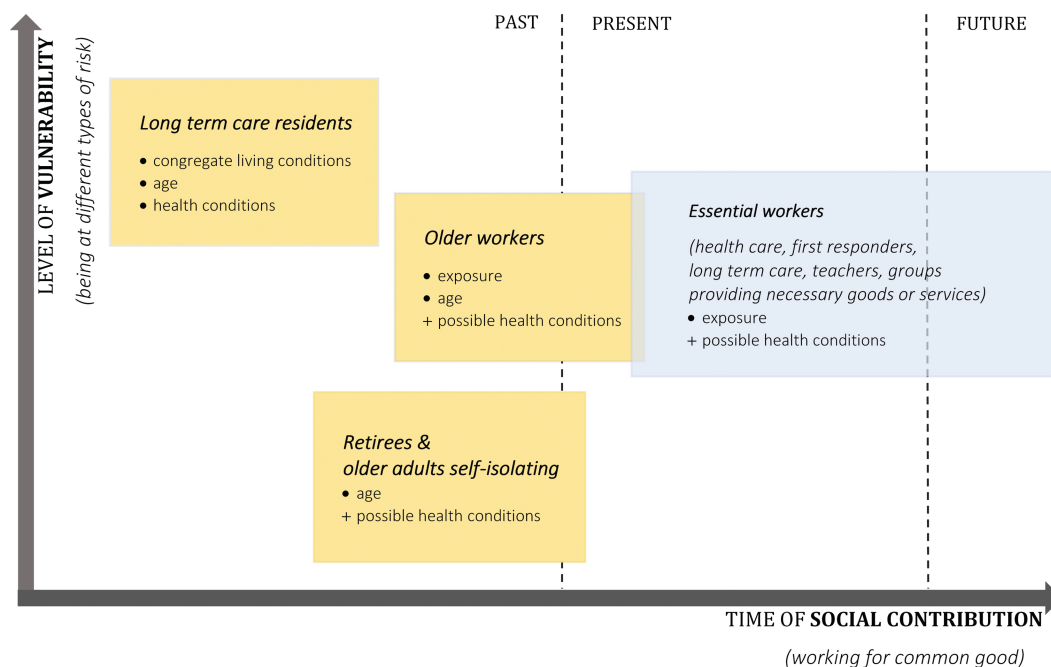
The current analysis focuses on the results of individuals' critical or creative processing on the frames presented in the article (Vliegenthart & van Zoonen, 2011). By commenting on the article, individuals support or negotiate the frames from the article and accept, reject, or combine them with their own framing. Thus, they are employing multiple frameworks to varying degrees (Goffman, 1974) when processing the journalist's frames and establishing their own meaning (Jamieson, 2001).

L. D. Allen and I. Z. Odziemczyk applied an inductive, iterative, qualitative coding process to the data (Thomas, 2006). We used Atlas.ti version 9.0 to code the data. As an initial orientation to the data, we read each comment and created free codes in a bottom-up approach that were relevant to the research questions. The inductive approach provides the opportunity to explore more possible frames

and reduces previous assumptions about conceptions. We met 3 times to combine lists and group the codes into three categories that were appropriate for the research questions: "Order," "Groups," and "Order Justification." We applied codes to the data in three subsequent cycles. For each cycle, we coded every comment with the codes from only one category and then met to compare and discuss before moving on to the next category. In the first cycle, we each coded every comment with only the codes in the "Order" category; the second cycle was the "Groups" codes; and the third cycle was the "Order Justification" codes. This format gave us in-depth immersion into the data and allowed us to give adequate attention to each category, instead of coding all categories at once. The [Supplementary Material](#) includes a description of the three categories, a definition of each code in each category, and quoted examples. After merging our separate projects into one Atlas.ti project, we each reviewed the project and the codes that co-occur among the comments. All four authors met to discuss, refine, and map the findings. See [Figure 1](#) for a map of the social contribution and vulnerability frames.

## Findings

We examine the commenters' framing of older adults by exploring elements of commenters' social reality as they reason and interpret the vaccine priority. In the data, we coded "older adults" to comments that reference older people by title or numerical age, such as "the elderly," "seniors," or people 60 and older. Older people are described mainly in the context of health, COVID-19-related health



**Figure 1.** Commenters' two main frames of vaccine priority among older adults are social contribution and vulnerability. Social contribution moves through time and can be in the past, present, or future. Vulnerability ranges from least vulnerable at the bottom to most vulnerable at the top. Prioritized groups are positioned across time of social contribution and range of vulnerability level.

risks, and proximity to the end of life. Commenters discuss older adults as belonging to one of the three groups in the context of the pandemic: those who are still working, those who are retired and/or isolating at home, and those who live in LTC settings.

As is the nature of online comment data, definitive information can only be gleaned on a commenter's age, employment, lifestyle, etc., if they choose to disclose it. Age, the personal demographic most often self-disclosed ( $n = 34$ ), was primarily given by those 60 and older and used as credibility for their views on vaccine order. Of the 34 total commenters who explicitly state their age, 79.4% ( $n = 27$ ) claim to be either older adults or aged 60 and older. Commenters usually describe a particular group's deserved priority within two larger frames: social contribution and vulnerability, or some combination of the two. Figure 1 is a concept map of these findings.

### Social Contribution Frame

Social contribution is perceived by commenters mainly from the labor market perspective. They depict the public as indebted to contributors who actively benefit the economy by providing goods or services and paying taxes in the workforce. Within this frame, commenters situate groups in a context of time, distinguishing between former and current social contributions. Examples of current contributing groups are those working to alleviate the impacts of the pandemic, including essential workers, health care workers, LTC workers, and emergency responders. "Let those who must go out in order to keep our cities running, those who tend to the sick and aged, those who move our country along, get in line first."

Due to past workforce contribution, older adults are deemed as deserving protection based on a principle of reciprocity. One commenter writes, "that is why my parents deserve to be first so that they can enjoy their very limited number of years left to live. My parents have sacrificed their lives for me and my sister." Commenters agree with the panel recommendation that LTC residents, or as commenters often call them, "elderly people in nursing homes," should be prioritized, partly based on the assumption that all older residents are former workers. The protection of LTC residents sometimes garners emotional responses, for example, "I would certainly want [LTC] residents, employees, vendors, family support visitors, be the first to receive a vaccine. It breaks my heart to see these deaths of those who gave so much to their families and country and the fact we have not been able to protect them."

The social contribution that commenters deem worthy of reciprocity is almost entirely workforce participation; other types such as informal care, volunteering, and civic participation are rarely mentioned. When commenters describe vaccine order as based on occupation, as in health care and essential workers, even among that order, older age is often the first determining factor. For example, statements were

frequently made with a caveat: "health workers should get the vaccine first ... but [*sic*] ONLY health workers over age 50."

This social contribution frame is most prominently found among commenters who self-identify as older and retired and/or isolating at home. They use social contribution as a reason that their own group should be *deprioritized*. Although the article describes old age as a criterion for prioritization, older commenters frequently state they would prefer that workers receive the vaccine first. Consider this comment, "I'm 69 years old and in good health. I would gladly trade my place in line with a cashier at my local grocery store or my mail carrier. These are essential workers in my book." Many comments contain sentiments of generational contribution: "as an older person, I thoroughly [*sic*] agree with you that we should be at the back of the line. We've almost lived out our life spans and done our tango with the world, so let younger people have theirs." One distinction is made by commenters who self-identify as older: they expand the social contribution frame to include contributions beyond working, such as sharing knowledge, volunteering, or providing unpaid care. One commenter writes, "we two, the elderly, will gladly be last in line. Our children are grown, no person depends on us for care, we are not frontline workers, many of us avoid crowds, and most of us wear masks."

### Vulnerability Frame

The second frame is vulnerability to the virus, which commenters designate to either those at risk of exposure and contraction or those with preexisting conditions and at risk of severe symptoms or death. They claim that groups who must stay in contact with others due to work or living conditions are vulnerable and should be vaccinated as soon as possible. Commenters expand on the vulnerability criterion by evaluating whether a group is able to self-isolate. Such proposed groups are essential and health care workers, LTC residents, and prisoners.

Some commenters use statistics such as mortality rates, risk of hospitalization, or the number of older people who could be vaccinated when reasoning a prioritized position of older people. For example, "there are roughly 20 million people in the U.S. over the age of 75—just about the number that can be inoculated with the initial batches of the Pfizer and Moderna vaccines. This age group has a 25×–50× higher risk of hospitalization and death from COVID than the average working-age adult, and they make up about 60% of COVID deaths." Only a few commenters justify their order by referring to other types of epidemiological-based evidence, such as older people's risk of severe disease, the presence or absence of immunological response in older adults, the burden of older people with COVID-19 on the health care system, or the spread of COVID-19 via older adults. Consider the following response, "[Username], good to hear about the anecdote but science still doesn't bear out

that seniors, to your point, spread COVID more than young people. That there are more instances of COVID in nursing homes than schools are borne out by easily available facts.” Frequently a comment simultaneously uses scientifically based reasoning with what they believe to be common sense. In most comments, it is difficult to distinguish a claim from a factual statement. Comments containing blanket phrases, such as “the evidence tells us,” “science still doesn’t bear out,” or “since we know,” do not identify a source on which the statement is based, suggesting they could still be the opinion of the commenter. “This plan is anti-science. We know from the flu vaccine that the best way to protect elderly people is to vaccinate the young. Elderly people are the least likely to respond to the vaccine. We need to build up a critical mass of vaccinated people focusing first on the healthiest, younger population who are the most likely to show a strong response.”

Older adults who live in LTC facilities are deemed uniquely vulnerable in the comments. Their congregate living situation does not allow them to completely isolate; commenters recognize that residents lack the autonomy to socially distance. Commenters also claim that residents are vulnerable to poor care in the LTC system and have been disproportionately affected by intense isolation measures of nursing homes. One commenter writes, “let’s not abandon our seniors again. We failed them—particularly those in nursing homes—already this year.” Consider another example criticizing the current LTC system: “instead of vaccinating, we should be spreading COVID among the elderly in long-term care to give them the sweet release from the horror that is elder care here in America.”

Those still working in public among other people are considered especially vulnerable, while commenters use the autonomy of the retired and/or self-isolating as justification that they should *not* be prioritized. Commenters frequently describe the vulnerability frame in combination with the social contribution frame. One comment states, “the elderly can social distance and aren’t working. We need younger, working Americans to be vaccinated first so we can restart the economy (along with health care workers). Vaccinating retired folks is just silly, even if they are higher risk.” Because they are not in public-facing jobs, they are considered to be in a safe position with the choice to socially distance. Although many older commenters themselves self-identify as being at risk due to their age and/or their underlying conditions, they consider themselves privileged and therefore disqualified from early inoculation. For example, “I am in my 60s, but I would sooner see others in my state who are necessarily in contact with others (healthcare, essential or front line workers) or live in institutional settings (including prisoners) get vaccinated before I do.” While some commenters express poor mental health and loneliness from prolonged isolation, they still convey a willingness to wait until more vulnerable others are vaccinated first. One couple in their 70s with underlying

conditions describes their experience of social distancing for 9 months and concludes, “we are weary of this, so weary, but we can safely wait a few more months. I want our frontline healthcare workers to be first in line.” Their sacrificial reflections are met with praises from other commenters like “you rock” and “thank you!”

While both the vulnerability and social contribution frames are apparent and frequently overlapping, the specific health-related statements and the broad range of justification related to vulnerability advance the vulnerability frame to a more prominent position in the data. See [Supplementary Material](#) for a more in-depth representation of the codes within the frames. Comments generalize all older adults to be at risk because of their age, with frequent references to “elderly,” a term alluding to physical vulnerability. Consequently, a narrow perspective in which old age *equals* vulnerability is conveyed. For example, one commenter writes, “[President] Biden needs to be first. He’s very old and frail.” Someone replies, “if he makes it that long without breaking a hip.”

## Discussion

Our study analyzes online comments on a *New York Times* article to investigate two research questions: (1) How do commenters place older people in line for the COVID-19 vaccine? and (2) What frames and factors do commenters use as reasoning for their proposed position of older adults? The frames presented by a journalist in an article are interpreted by the audience using their own reasoning devices derived from multiple communicating texts and public discourses to form their own frames ([Van Gorp, 2007](#)). Commenters’ references to the age of older people varied (e.g., 60, 65, and 75+), and a single-age criterion is never indicated, demonstrating the mixed messaging about the chronological boundary of “old age” throughout the pandemic ([Previtali et al., 2020](#)). Across the comments, there are references to older adults in three ways, those residing in LTC settings or at home as retirees and those who are working.

Older adults are often represented as one uniform group that holds little variation in experience. The typically negative stereotypes, prejudice, and discrimination assigned toward people because of their age is known as ageism ([Ayalon & Tesch-Romer, 2018](#); [Iversen et al., 2009](#)). [Reynolds \(2020\)](#) suggests that ageism is a biopsychosocial phenomenon, wherein negative attitudes are often held toward being older and the process of aging, while being youthful is largely favored by society (for a detailed description of the biopsychosocial aspects, see [Reynolds, 2020](#)). Throughout the COVID-19 pandemic, older people and LTC residents have been portrayed and perceived in an ageist way ([Allen & Ayalon, 2021](#); [Ayalon et al., 2021](#); [Martikainen & Sakki, 2021](#); [Previtali et al., 2020](#); [Reynolds, 2020](#)). The pandemic has evoked examples of and responses to “calculated ageism” where older lives are deemed expendable ([Barrett et al., 2021](#)). Older adults have been depicted as invariably helpless,

frail, and noncontributors to society (Ayalon et al., 2021), and pandemic-related policies that are based on chronological age (such as 60+, 65+, 70+) maintain such stereotypes of vulnerability and dependency of older people (Previtali et al., 2020). In the current analysis, the frames of vulnerability and social contribution are criteria used by commenters to make sense of the vaccine prioritization. Commenters apply these frames to older adults in a stereotypical way, with little variation. Across the comments, there is a widespread assumption of vulnerability and lack of contribution in older age, and we interpret these findings to be demonstrative of widespread ageism throughout the pandemic. The findings slightly differ from prior evidence in one regard: the frequent mention of some older adults who are indeed still working. While there are many comments claiming older adults do not contribute to society, it is noteworthy that some commenters mention older workers, and it may be considered one step toward a more nuanced representation of this age group.

Comment data can illuminate the construction of reality and identity by commenters (Brodsky, 2019). In our findings, older adults expressed sentiments of sacrificial contribution, which may be reflections of several separate or combined thought processes. Given the public, online context, older commenters may make these remarks out of performance, obligation, desire to be praised, or desire to be provocative. Their sacrificial comments may reflect generativity (Schoklitsch & Baumann, 2012) and/or the model of Succession, Identity, and Consumption (North & Fiske, 2013); they may be somehow empowered and see the limited vaccine supply as a positive opportunity to socially contribute during the current crisis by giving to younger generations (succession) and consuming fewer social resources (consumption; North & Fiske, 2013). Considering the older commenters would still be putting themselves at risk by offering their “place in line” to others, their statements could be interpreted as internalized ageism. As theorized in the Stereotype Embodiment Theory (Levy, 2009), internalized ageism may result from exposure to ageism throughout the life course that develops into negative self-perceptions in older age. Given the ageist messaging throughout the COVID-19 pandemic, these sacrificial comments from older adults may partially reflect the pervasiveness of pandemic-related ageism (Allen & Ayalon, 2021; Ayalon et al., 2021; Barrett et al., 2021; Previtali et al., 2020; Reynolds, 2020).

The social contribution frame and the praise that sacrificial commenters receive mirror the ideology of Western neoliberalism, which values free-market capitalism and idealizes individual contribution, potentially leading to systemic inequalities through privatization. It is suggested that free-market economies can have harmful societal impacts and health consequences for older persons (Airth & Oelke, 2020; Esposito & Perez, 2014). The successful aging model (Rowe & Kahn, 1998) has been criticized for its similarities to neoliberalism in later life and its emphasis on the individual’s responsibility to “age well” (Rubinstein & De Medeiros, 2015).

Finally, commenters’ various reasoning devices, such as epidemiology-based statements, appeal to values like deservedness, or common knowledge assumptions, demonstrate the complex array of factors that can inform frames for vaccine prioritization. The debate of whether to first immunize the most at-risk groups versus the highest-transmitting groups mirrors the public health conversation surrounding the prioritization of vaccination doses. Vaccination objectives may be based on optimization (Babus et al., 2020; Buckner et al., 2021; Matrajt et al., 2021), ethical allocation (Toner et al., 2020; WHO, 2020), or some combination thereof.

## Implications and Limitations

This study may provide a methodological backdrop for future usage of online comment data. Our findings demonstrate the potential pervasiveness of ageism throughout the COVID-19 pandemic. This study prompts additional investigation into internalized ageism throughout the pandemic and the associated cultural narratives, such as the neoliberal focus on individual contribution. As researchers, we would like to highlight the importance of vocalizing support for older people to make their own health care decisions, while also opposing the emphasis on individualism and recognizing the larger social inequalities, particularly for disproportionately impacted groups such as older persons and minorities. Our study has limitations based on the comments on a single newspaper article. The demographics of the readers and commenters of *The New York Times* limit the application of findings to a larger population. Furthermore, comment data analysis relies on the commenter to offer personal information unprompted, inhibiting what can be known about the individual commenters.

## Supplementary Material

Supplementary data are available at *The Gerontologist* online.

## Funding

L. D. Allen., L. Ayalon, and J. Perek-Bialas are part of the EuroAgeism ITN project funded under the European Union’s Horizon 2020 research and innovation program, under the Marie Skłodowska-Curie grant agreement No. 764632.

## Conflict of Interest

None declared.

## Acknowledgments

This article is submitted in partial fulfillment of the doctoral dissertation of the first author, L. D. Allen. We would also like to thank Macy Lethco, Fellow of the Harrison Center for Arts in Indianapolis, Indiana, for her revising assistance of the manuscript.

## References

- Airth, L., & Oelke, N. D. (2020). How neoliberalism, ageism and stigma drive the lack of policy for older adults' mental health. *Journal of Psychiatric and Mental Health Nursing*, 27(6), 838–843. doi:10.1111/jpm.12618
- Allen, L. D., & Ayalon, L. (2021). "It's Pure Panic": The portrayal of residential care in American newspapers during COVID-19. *The Gerontologist*, 61(1), 86–97. doi:10.1093/geront/gnaa162
- Alliance for Audited Media. (2021). *Media intelligence center*. <https://abcas3.auditedmedia.com/MICenter/Home/Index?s=9dd45407-852c-499c-87de-c6f4151eb0aa#8>
- AllSides. (2020). *Media bias ratings*. <https://www.allsides.com/media-bias/media-bias-ratings>
- Anderson, A. A., Brossard, D., Scheufele, D. A., Xenos, M. A., & Ladwig, P. (2014). The "nasty effect": Online incivility and risk perceptions of emerging technologies. *Journal of Computer-Mediated Communication*, 19(3), 373–387. doi:10.1111/jcc4.12009
- Ayalon, L., Chasteen, A., Diehl, M., Levy, B. R., Neupert, S. D., Rothermund, K., Tesch-Römer, C., & Wahl, H. W. (2021). Aging in times of the COVID-19 pandemic: Avoiding ageism and fostering intergenerational solidarity. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, 76(2), 49–52. doi:10.1093/geronb/gbaa051
- Ayalon, L., & Tesch-Römer, C. (2018). Contemporary perspectives on ageism. In L. Ayalon & C. Tesch-Römer (Eds.), *Innovation in aging (Vol. 1)*. Springer Open. doi:10.1093/geroni/igx004.044
- Babus, A., Das, S., & Lee, S. M. (2020). The optimal allocation of COVID-19 vaccines. *MedRxiv*, 1–27. doi:10.1101/2020.07.22.20160143
- Barrett, A. E., Michael, C., & Padavic, I. (2021). Calculated ageism: Generational sacrifice as a response to the COVID-19 pandemic. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, 76(4), 201–205. doi:10.1093/geronb/gbaa132
- Brodsky, A. (2019). Using content analysis of internet news article comments to understand climate change denial. In *SAGE research methods cases* (pp. 1–18). SAGE Publications Ltd. doi:10.4135/9781526483836
- Buckner, J. H., Chowell, G., & Springborn, M. R. (2021). Dynamic prioritization of COVID-19 vaccines when social distancing is limited for essential workers. *Proceedings of the National Academy of Sciences*, 118(16), 1–12.
- Dooling, K. (2020). *ACIP COVID-19 vaccines work group phased allocation of COVID-19 vaccines*. <https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2020-12/slides-12-20/02-COVID-Dooling-508.pdf>
- Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication*, 43(4), 51–58. doi:10.1111/j.1460-2466.1993.tb01304.x
- Esposito, L., & Perez, F. M. (2014). Neoliberalism and the commodification of mental health. *Humanity & Society*, 38(4), 414–442. doi:10.1177/0160597614544958
- Etim, B. (2017). *The Times* sharply increases articles open for comments, using Google's technology. *The New York Times*. <https://www.nytimes.com/2017/06/13/insider/have-a-comment-leave-a-comment.html>
- Franzke, A. s., Bechmann, A., Zimmer, M., Ess, C. M., & The Association of Internet Research. (2020). *Internet research: Ethical guidelines 3.0*. <https://aoir.org/reports/ethics3.pdf>
- Freed, M., Cubanski, J., Neuman, T., Kates, J., & Michaud, J. (2020). *What share of people who have died of COVID-19 are 65 and older—And how does it vary by state?* <https://www.kff.org/coronavirus-covid-19/issue-brief/what-share-of-people-who-have-died-of-covid-19-are-65-and-older-and-how-does-it-vary-by-state/>
- Gayed, J., Ketchman, S., Khliupin, O., Wang, R., & Zheznakovskiy, S. (2019). We re-launched The New York Times paywall and no one noticed. *The New York Times*. <https://open.nytimes.com/we-re-launched-the-new-york-times-paywall-and-no-one-noticed-5cd1f795f76b>
- Gibson, W., & Roca-Cuberes, C. (2019). Constructing blame for school exclusion in an online comments forum: Membership categorisation analysis and endogenous category work. *Discourse, Context and Media*, 32, 100331. doi:10.1016/j.dcm.2019.100331
- Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. Northeastern University Press.
- Goodnough, A. (2020). Who will get the coronavirus vaccine first? *The New York Times*. <https://www.nytimes.com/2020/12/01/health/covid-vaccine-distribution-first.html>
- Grieco, E. (2020). *Americans' main sources for political news vary by party and age*. Pew Research Center. <https://www.pewresearch.org/fact-tank/2020/04/01/americans-main-sources-for-political-news-vary-by-party-and-age/>
- Harris, S. R. (2010). *What is constructionism? Navigating its use in sociology*. Lynne Rienner Publishers.
- Iversen, T. N., Larsen, L., & Solem, P. E. (2009). A conceptual analysis of ageism. *Nordic Psychology*, 61(3), 4–22. doi:10.1027/1901-2276.61.3.4
- Jamieson, K. H. (2001). Issue advocacy in a changing discourse environment. In W. L. Bennett & R. M. Entman (Eds.), *Mediated politics: Communication in the future of democracy* (pp. 323–341). Cambridge University Press.
- Jensen, E. (2016). *NPR Website to get rid of comments*. NPR. <https://www.npr.org/sections/publiceditor/2016/08/17/489516952/npr-website-to-get-rid-of-comments>
- Lee, E. (2020). *New York Times* hits 7 million subscribers as digital revenue rises. *The New York Times*. <https://www.nytimes.com/2020/11/05/business/media/new-york-times-q3-2020-earnings-nyt.html>
- Levy, B. (2009). Stereotype embodiment: A psychosocial approach to aging. *Current Directions in Psychological Science*, 18(6), 332–336. doi:10.1111/j.1467-8721.2009.01662.x
- Long, K. (2017). Keeping the *Times* civil, 16 million comments and counting. *The New York Times*. <https://www.nytimes.com/2017/07/01/insider/times-comments.html>
- Markham, A., & Buchanan, E. (2017). Research ethics in context decision-making in digital research. In M. T. Schäfer & K. van Es (Eds.), *The datafied society: Studying culture through data* (pp. 201–209). Amsterdam University Press. doi:10.25969/mediarep/12445
- Martikainen, J., & Sakki, I. (2021). How newspaper images position different groups of people in relation to the COVID-19 pandemic: A social representations approach. *Journal of Community*



- © *Applied Social Psychology*, 31(4), 465–494. doi:10.1002/casp.2515
- Matrajt, L., Eaton, J., Leung, T., & Brown, E. R. (2021). Vaccine optimization for COVID-19: Who to vaccinate first? *Science Advances*, 7(6), 1–11. doi:10.1126/sciadv.abf1374
- New York Times Developers. (2020). <https://developer.nytimes.com/apis>
- North, M. S., & Fiske, S. T. (2013). A prescriptive intergenerational-tension ageism scale: Succession, identity, and consumption (SIC). *Psychological Assessment*, 25(3), 706–713. doi:10.1037/a0032367
- Pierson, E. (2015). Outnumbered but well-spoken: Female commenters in *The New York Times*. Proceedings of the 18th ACM conference on computer supported cooperative work & social computing, February, Vancouver, Canada, 1201–1213. doi:10.1145/2675133.2675134
- Potter, J. (2004). Discourse analysis. In M. Hardy & A. Bryman (Eds.), *Handbook of data analysis*. SAGE. doi:10.4135/9781848608184.n27
- Previtali, F., Allen, L. D., & Varlamova, M. (2020). Not only virus spread: The diffusion of ageism during the outbreak of COVID-19. *Journal of Aging & Social Policy*, 32(4–5), 506–514. doi:10.1080/08959420.2020.1772002
- Prochazka, F., Weber, P., & Schweiger, W. (2018). Effects of civility and reasoning in user comments on perceived journalistic quality. *Journalism Studies*, 19(1), 62–78. doi:10.1080/1461670X.2016.1161497
- Reynolds, L. (2020). The COVID-19 pandemic exposes limited understanding of ageism. *Journal of Aging & Social Policy*, 32(4–5), 499–505. doi:10.1080/08959420.2020.1772003
- Richardson, J. E. (2007). *Analysing newspapers: An approach from critical discourse analysis*. Palgrave MacMillan. doi:10.1007/978-0-230-20968-8\_5
- Roubein, R., & Ehley, B. (2021). *States taking back Covid shots unused by nursing homes*. Politico. <https://www.politico.com/news/2021/01/25/states-covid-vaccine-nursing-homes-462402>
- Rowe, J. W., & Kahn, R. L. (1998). *Successful aging*. Pantheon Books.
- Rubinstein, R. L., & de Medeiros, K. (2015). “Successful aging,” gerontological theory and neoliberalism: A qualitative critique. *The Gerontologist*, 55(1), 34–42. doi:10.1093/geront/gnu080
- Scheufele, D. A. (1999). Framing as a theory of media effects. *Journal of Communication*, 49(1), 103–122. doi:10.1111/j.1460-2466.1999.tb02784.x
- Schoklitsch, A., & Baumann, U. (2012). Generativity and aging: A promising future research topic? *Journal of Aging Studies*, 26(3), 262–272. doi:10.1016/j.jaging.2012.01.002
- Semetko, H. A., & Valkenburg, P. M. (2000). Framing European politics: A content analysis of press and television news. *Journal of Communication*, 50(2), 93–109. doi: 10.1111/j.1460-2466.2000.tb02843.x
- The New York Times*. (n.d.a). *Comments*. <https://help.nytimes.com/hc/en-us/articles/115014792387-Comments>
- The New York Times*. (n.d.b). *Mission and values*. <https://www.nytimes.com/company/mission-and-values/>
- Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, 27(2), 237–246. doi:10.1177/1098214005283748
- Toner, E., Barnill, A., Krubiner, C., Bernstein, J., Privor-Dumm, L., Watson, M., Martin, E., Potter, C., Hosangadi, D., Connell, N., Watson, C., Schoch-Spana, M., Veenema, T. G., Meyer, D., Biddison, E. L. D., Regenber, A., Inglesby, T., & Cicero, A. (2020). *Interim framework for COVID-19 vaccine allocation and distribution in the United States*. [https://www.centerforhealthsecurity.org/our-work/pubs\\_archive/pubs-pdfs/2020/200819-vaccine-allocation.pdf](https://www.centerforhealthsecurity.org/our-work/pubs_archive/pubs-pdfs/2020/200819-vaccine-allocation.pdf)
- Van Gorp, B. (2007). The constructionist approach to framing: Bringing culture back in. *Journal of Communication*, 57, 60–78. doi:10.1111/j.1460-2466.2006.00329.x
- Vliegthart, R., & van Zoonen, L. (2011). Power to the frame: Bringing sociology back to frame analysis. *European Journal of Communication*, 26(2), 101–115. doi:10.1177/0267323111404838
- WHO. (2020). *WHO SAGE values framework for the allocation and prioritization of COVID-19 vaccination*. <https://www.who.int/publications/i/item/who-sage-values-framework-for-the-allocation-and-prioritization-of-covid-19-vaccination>