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Vaccines, Values, and Visibility: Moral Framing and Group Salience in Austrian
Covid-19 News

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Introduction

Few events in recent history have so thoroughly entangled biological threat and social transformation as the outbreak of Covid-19. With the spread of the virus came an urgent demand for orientation, met by news media organizations as central brokers of trustworthy information and meaning (Knudsen et al., 2023; Nielsen et al., 2020; Vermeer et al., 2022). News media outlets thus actively participated in the construction of crisis narratives and public reassurance.

The traditional watchdog role of journalism often shifts toward functions of social mobilization and cooperative communication during times of societal crisis (Klemm et al., 2019; Hallin et al., 2023). Journalists are thus no passive conveyors of information, but specifically called upon to foster cohesion, relay government messaging, and maintain public calm (Hallin et al., 2023). In times of crisis, they act as transmitters of normative orientation and actively shape public understanding by contextualizing events, emphasizing certain aspects over others, and even employing morally charged language to underscore the perceived stakes (Feldman & Hart, 2021; Morse, 2018; Perreault & Perreault, 2021; Skog & Lundström, 2022). This realignment raises a critical question: How does journalism report on socially divisive issues when the aim is not solely to inform and critically scrutinize, but to preserve order and promote compliance?

It is within this reconfigured journalistic environment of crisis that the portrayal of vaccine-related divisions gains particular significance. The Covid-19 vaccination debate quickly transcended medical discourse, transforming into a moral and political fault line across the globe. Diverging attitudes towards vaccination began to shape new social groups, defined by individuals' decisions to either receive or refuse the vaccine (Wagner & Eberl, 2024). As vaccination campaigns accelerated, emerging group identities, often simplified as “vaccinated” and “unvaccinated” or “vaccine sceptic”, became emotionally and normatively charged. These identities reflected broader social imaginaries of altruism versus selfishness, trust versus

skepticism, and compliance versus resistance. Government-imposed measures such as vaccine mandates and lockdowns further intensified these tensions (Sprengholz et al., 2024). Austria, like many other countries, witnessed significant public unrest as the social groups around the Covid-19 vaccines solidified. Protests by anti-vaccine groups, political polarization, and even the introduction (and subsequent repeal) of mandatory vaccination laws contributed to the national debate (DW, 2022). Populist parties like the Freedom Party (FPÖ) vocally opposed vaccination mandates, further politicizing and intensifying the divisions between the vaccinated and unvaccinated parts of the general public.

Such starkly polarized group dynamics can narrow the space for pluralism and mutual understanding (Pauly, 2021; Karafillakis et al., 2022). The tendency for group polarization poses severe risk for democratic societies, as the mistrust fuelling outgroup animosity can result in lower institutional trust and democratic backsliding (Arbatli & Rosenberg, 2021; McCoy et al., 2018). In this context, the role of journalistic work emerges as particularly delicate, caught between mirroring societal divisions and mitigating them (Rojas-Caldéron, 2024). Pandemic journalism of the Covid-19 age finds itself in a dilemma: it must reflect emerging societal rifts but also help manage the collective health crisis. How exactly news media outlets represented the vaccine-related social groups of Covid-19 thus becomes a pivotal site of investigation.

Despite the importance of this issue, little empirical research has examined how frequently vaccinated/pro-vaccine and unvaccinated/anti-vaccine groups were portrayed in news media, or how moral and affective language was used in doing so. This thesis addresses this gap by conducting a classic quantitative content analysis of Austrian news coverage during the Covid-19 pandemic. Drawing on dictionary-based methods, it analyzes to what extent vaccinated and unvaccinated groups were visible and framed in terms of moral and sentiment-laden language. Furthermore, it aims to examine whether quality newspapers and tabloids navigated this communicative terrain differently.

In doing so, the following pages seek to contribute to a deeper understanding of journalism's normative power during health crises, particularly how media may reinforce, challenge, or reshape group boundaries in times of societal stress.

Conceptual Foundations and Literature

Social group formation and its polarizing effects

Social Identity Theory (SIT), developed by Tajfel and Turner (1979), is a seminal framework in social psychology that explores how individuals derive their self-concept from membership in social groups. According to SIT, people categorize themselves and others into social groups to a) simplify and b) make sense of their social environment. These categorizations form the basis for social identities which are crucial for understanding intergroup behavior.

The SIT proposes three core processes: I. Social categorization, II. Social identification, and III. Social comparison (Tajfel & Turner, 1979). During the phase of social categorization, individuals classify themselves and others into groups based on shared characteristics, such as ethnicity, gender, or mutual beliefs. These categories help individuals navigate complex social interactions and can lead to the formation of in-groups ("us") and out-groups ("them") (McCoy et al., 2018). Once categorized, individuals start to socially identify with the norms, values, and behaviors of their in-group as part of their self-concept. This identification fosters a sense of belonging and emotional attachment to the collective, contributing to group loyalty and cohesion (Brewer, 2001). Finally, individuals socially compare their own kin relative to others, often in a way that favors the in-group to enhance self-esteem (Rudolph & Hetherington, 2021). This can result in positive distinctiveness, where the in-group is seen as superior to out-groups, leading to intergroup biases and potential discrimination (Hogg et al., 1995). SIT further posits that individuals strive to achieve a positive social identity. This drive explains why members of an in-group may emphasize their group's favorable attributes while devaluing or stereotyping out-groups (Basavaraj et al., 2021). In contexts of conflict or competition, these processes can further escalate into polarization, where intergroup boundaries become more rigid and interactions more adversarial.

Polarization within societies can take multiple forms, with particularly concerning implications arising from its affective form. Unlike political or elite polarization, which is predominantly centered on disagreements over specific policies, affective polarization refers to a deep-seated emotional dislike or distrust between members of opposing groups, rooted in identity rather than substantive issues (Iyengar & Westwood, 2015; Kleinfeld, 2023). Research has shown that social identity is a primary driver of affective polarization, due to its tendency to foster outgroup derogation (Mackie et al., 2000; Mason, 2015; Huddy et al., 2015). Instead of engaging on the basis of ideas or evidence, group members often evaluate each other through emotional lenses, fostering feelings of hostility, distrust, or even disgust toward out-groups (Basavaraj et al., 2021; Kleinfeld, 2023).

Affective polarization has furthermore been found to undermine democratic principles by fostering a willingness among individuals to accept or overlook antidemocratic actions if these are perceived to benefit the ingroup or weaken the outgroup. Research suggests that highly polarized groups are more likely to prioritize partisan loyalty over democratic norms, particularly when they fear the opposing side might break the rules first (Braley et al., 2022). Studies further indicate that citizens who overestimate the degree of dehumanization or dislike from people belonging to the opposing political party exhibit lower trust in civic institutions and are more inclined to support measures that prioritize their group's advantage over the collective good (Beyond Conflict, 2020). Moreover, the phenomenon of polarization has been found to contribute to democratic backsliding (Somer & McCoy, 2018).

Polarization's capacity to erode trust in civic institutions and weaken democratic principles poses significant risks to societal stability. By prioritizing group loyalty over collective well-being, polarized groups can perpetuate cycles of mistrust and undermine the foundations of democratic governance (McCoy et al., 2018; Somer & McCoy, 2019, Svolik, 2019). This is why understanding the societal construction, representation and reproduction of social identities

and groups through research seems quintessential to identify pathways that can mitigate polarization's detrimental effects and foster more inclusive and resilient democratic processes.

Vaccination Status as maker of group affiliation before and during COVID-19

Social identity formation is particularly dynamic in times of uncertainty and threat, as individuals seek stability and meaning through group affiliation (Tajfel & Turner, 1979). This dynamic is further amplified when group distinctions are imbued with moral or ideological significance, fostering a stronger emotional attachment to one's in-group. Health-related behaviors and choices in response to perceived health threats such as the Covid-19 pandemic can thus be seen as powerful drivers of group identity, fostering emotional attachment and reinforcing boundaries between in- and out-groups (e.g. Basavaraj et al. 2021; Pauly, 2021).

Before Covid, vaccination behaviors were already subject of significant public and scholarly attention, particularly in relation to the emergence of social identities tied to vaccine skepticism. Motta et al. (2023) show that individuals in opposition to vaccines can develop a distinct anti-vaccine social identity, defined not merely by vaccine hesitancy but a psychological attachment to a broader anti-vaccine movement. Such vaccine-hesitant identities rally around ideas such as skepticism toward vaccine safety, while simultaneously heightening distrust toward out-group authorities; this tendency leads to the perception of key advocates of vaccination, including medical and public health experts, as being in opposition to the values or beliefs of anti-vaccine groups (Capurro et al., 2018; Dubé et al., 2014; Green et al., 2021). Furthermore, so-called anti-vaxxers, ("a colloquial term used to characterise people who refuse vaccines", Rozbroj et al., 2019) have been found to rely heavily on conspiracy theories to justify their positions (Kata, 2010; Smith & Graham, 2019, Winter et al. 2022). Ultimately, these dynamics result in individuals with strong anti-vaccine sentiments being less receptive to counterarguments and

more likely to resist vaccination campaigns, as they sought to avoid the cognitive dissonance of challenging their deeply held values and group affiliations (Kahan, 2017; Motta et al. 2023). Similarly, pro-vaccination or vaccine-accepting groups have existed alongside their vaccine-sceptical counterparts for as long as vaccines first were introduced to the public (Blume, 2006; Kaufman, 1967). Within this group, Nichter (1995) distinguishes between active demand for and passive acceptance of vaccines, with active demand describing the “adherence to vaccination programs by an informed public which perceives the benefits of and need for specific vaccinations”, while passive acceptance entails a compliant surrender to “recommendations and social pressure”. Emphasizing the health benefits of vaccines and striving to protect individuals and communities from preventable diseases, distinct pro-vaxx demands often include higher vaccination rates, access to vaccines for all population groups, and the promotion of safety and efficacy of vaccination programs (McKenzie & Attwell, 2023). Vaccination advocates such as health-care professionals may actively work on combating misinformation and vaccine hesitancy through enhancing public understanding of vaccines (Herrera-Peco et al., 2021; Pluviano et al., 2017).

Both pro- and anti-vaccination groups developed distinct perceptions of each other, often shaped by negative outgroup attitudes. Pro-vaccine individuals may perceive vaccine-refusing people as “selfish, uninformed and uncaring” (McKenzie & Attwell, 2023). As Rozbroj et al. (2019) show, Australians who hold pro-vaccine attitudes tend to attribute negative character traits such as “lack of intelligence, (and) [...] skill, such as poor scientific literacy” to anti-vaxxers, furthermore framing them as dangerous, poorly informed, foolish and deceived. In turn, vaccine-critical groups tend to view their vaccinated outgroup as conforming to industrialized societal norms that prioritize convenience over health (Attwell et al., 2018). This pre-existing foundation of vaccine-based group affiliations and their related outgroup biases

offers a crucial lens for understanding the evolution of vaccination status into an impactful social signifier of the Covid-19 crisis.

During the COVID-19 pandemic, discussions surrounding potential solutions to the global health emergency became increasingly politicized, providing fruitful ground for the rise of vaccine-related social groups (Peretti-Watel et al., 2020; Wagner & Eberl, 2024). Due to intense conflicts emerging between parts of society who welcomed the jab as an effective treatment for Covid-19 and those who remained sceptical or opposed, vaccination status once again evolved to a prominent marker of social group affiliation (Abrams et al., 2021, Motta et al., 2023, Sprengholz et al., 2024). Individuals categorized themselves and others based on their perceived stance toward vaccination and the decision to get vaccinated or not, fueling prejudice and bias between groups (Henkel et al. 2023). These divides were exacerbated during periods of strict public health measures, during which the vaccinated parts of society often advocated for mandatory vaccination and stronger measures to protect public health, while unvaccinated groups framed such policies as paternalistic overreach and a suppression of individual freedoms, often responding with protests and petitions (DW 2022, Sprengholz et al., 2024).

News media in times of (health) crisis

Crises and disasters such as the Covid-19 outbreak create an urgent demand for reliable information as they disrupt societal norms and create uncertainty (Houston et al., 2015; Spialek et al., 2016). As noted by the Media System Dependency theory, mass media, in particular traditional news media, have consistently been recognized as credible sources of information during crises due to their capacity to provide accurate and timely information (Ball-Rokeach & Defleur, 1976; Houston et al., 2015; Rodríguez et al., 2007; Van Aelst et al., 2021; Vermeer et al., 2022).

In such contexts, journalism assumes a pivotal role within the disaster communication ecology by acting as a bridge between elites—such as policymakers, experts, or public health officials—and the general public (Christians et al., 2010; Perreault & Perreault, 2021). This function is further pronounced during epidemics and health outbreaks. Resolving public health crises requires active media participation, as journalists can shape public discourse, risk perception and health behaviors by highlighting key themes that require collective action (Christians et al., 2010; Kitzinger & Reilly, 1997; Nielsen et al., 2020; Perreault & Perreault, 2021; Rodríguez et al., 2007; Thompson, 2019). Furthermore, journalists covering health crises often adopt an explicitly mobilizing stance. Rather than adhering strictly to a watchdog role, many reporters described their function as that of a public mobilizer, which includes encouraging self-protective behaviors, promoting solidarity, and countering stigma and division (Klemm et al. 2019). This shift also entails greater cooperation with health authorities and a heightened focus on responsibility and unity in public communication. In such coverage, journalists can be seen as agents with a normative duty to guide, warn, and unite (*ibid.*).

Covid-19 exemplifies the critical importance of news media in times of global crisis. Nielsen et al. (2020) highlight that in six countries with diverse media and political systems, namely Argentina, Germany, South Korea, Spain, the UK, and the US, a majority of respondents identified news media as essential source to understand the pandemic and providing help, making “news organisations [...] the single most widely identified source of news and information about coronavirus” (*ibid.*). Knudsen et al. (2023) further identified that the pandemic led to a long-lasting increase of trust in news media among Norwegian citizens, underscoring the relevance of journalism during moments of social disruption.

In shaping how the public understands health risks and appropriate behaviors, journalism also shapes how people perceive themselves and others within society. This dynamic is particularly relevant in the context of Covid-19 vaccinations, where group belonging and identity proved to

be central. However, despite a rich literature on vaccine attitudes and advocacy, little attention has been paid to how vaccine-related social groups were represented in Covid-19 news. To address this gap, a first research guiding question can be stated:

RQ1: *To what extent were vaccine-related social groups salient in Austrian media coverage of Covid-19 vaccinations?*

(Moralized) News framing and the moralization of the pandemic

Framing theory, as outlined by Entman (1993), examines the process by which communicators select and emphasize certain aspects of reality to construct meaning. Entman describes framing as a selective and purposeful process in which particular characteristics of an issue are made more visible in order “to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation” (ibid.).

Frames emphasize particular attributes, narratives, or values while downplaying or omitting others, thereby shaping not only what is thought about, but also how it is thought about by manipulating the salience of pieces of information (Pan & Kosicki, 1993, Semetko & Valkenburg, 2000). Salience refers to the prominence or relevance of specific elements within a message. Increasing the salience of a part of information means altering it in a way that makes it “more noticeable, meaningful or memorable to audiences” (Entman, 1993). With greater salience, information is more likely to be observed, understood, and internalized by its recipients (Fiske & Taylor, 1991). This logic not only highlights specific elements of a perceived reality, but also provides a structured lens through which audiences interpret and respond to information (Lee et al., 2008). Frames thus serve as cognitive tools that guide the organization, interpretation, and prioritization of complex or ambiguous topics.

Contemporary research has dedicated significant attention to how media framing shapes public discourse and influences societal responses in times of crisis. During the 2015 increase in migration, media coverage of migration dynamics varied significantly across European countries, employing distinct framing strategies that not only influenced public opinion but also contributed to shifts in foreign policy, as seen in Germany (Futák-Campbell & Pütz, 2022; Heidenreich et al., 2019). Similarly, in the context of climate change, framing choices have been shown to impact public engagement and policy support. Koehler and Brewer (2016) demonstrated that false balance in media coverage can distort perceptions of expert consensus, while crisis and emergency frames have been found to enhance the perceived urgency of climate action (Feldman & Hart, 2021). Moreover, framing climate mitigation in terms of economic benefits such as job creation through renewable energy has been linked to increased public support for sustainability policies (Spence & Pidgeon, 2010; Stoddart et al., 2023). This broader impact of framing also encompasses moral dimensions.

As Brugman (2023) notes, “moral framing can be defined as selecting aspects of a perceived reality that the sender considers ‘right’ or ‘wrong’, and making them salient in communication.” Moral frames operate by embedding moral judgments within narratives, shaping how issues, events, or groups are interpreted and evaluated (Semetko & Valkenburg, 2000). These frames serve as compelling rhetorical mechanisms, where moral concerns are often positioned as the underlying force shaping the narrative (Feinberg & Willer, 2019). In short, they can be interpreted as central organizing principles within messages (Gamson & Modigliani, 1989). By elevating specific moral elements, such as justice, harm, or loyalty, moral framing not only influences the salience of these values but also shapes the interpretative lens through which audiences perceive and process information.

To contextualize the mechanisms underlying moral framing, it is helpful to consider insights from Moral Foundations Theory (MFT, Haidt, 2012). It proposes that individuals’ moral

judgments are shaped by innate psychological foundations, core principles that guide their sense of right and wrong (Graham et al., 2009). These moral foundations encompass care/harm, fairness/cheating, loyalty/betrayal, authority/subversion, and purity/degradation. Although these foundations can be used universally, their prioritization differs among different groups. Research shows that politically liberal individuals may prioritize care and fairness, while conservatives often emphasize loyalty, authority, and purity (Atari et al., 2023; Graham et al., 2009).

Moral framing inherently conveys an evaluative direction by highlighting what is morally right or wrong. Some scholars distinguish between moral obligation and moral violation frames, which emphasize either virtuous adherence or condemnable misconduct (Brugman, 2023; Pavey et al., 2024; Weintrobe, 2020). More broadly, such evaluations can be understood as expressions of valence, referring to the positive or negative orientation of meaning attributed to actors or issues (van Atteveldt et al., 2008). This positive or negative sentiment of discourse plays a crucial role in the interpretation and effects of moralized communication strategies (Mäntylä et al., 2018; McDonald et al., 2021; Sahlgren et al., 2007).

The concept of moral framing has long enjoyed scholarly attention due to its potential to shape attitudes, reinforce ideological divisions, and drive public engagement. Valenzuela et al. (2017) found that news articles employing moral framing were significantly more likely to be shared on social media, highlighting its influence on audience interaction. Moreover, research suggests that moralized frames can entrench ideological divides by reinforcing pre-existing moral convictions. As Kodapanakkal et al. (2022) show, moral frames reduce individuals' willingness to compromise, as issues framed in moral terms are perceived as absolute, rather than open to negotiation.

Moralized framing strategies also influence the stability of moral judgments. Experimental findings indicate that exposure to moralized messaging can lead to judgment shifts and

reversals, affecting how individuals evaluate ethical dilemmas (Rehren & Sinnott-Armstrong, 2021). Research further suggests that moral framing can bridge or reinforce ideological divides, depending on the moral foundations used in messaging. In the context of environmental communication, Wolsko et al. (2016) highlight that conservatives, who typically show lower engagement with climate action, responded more favorably to pro-environmental messages framed in terms of patriotism, purity, and authority. This suggests that tailored moral appeals can shift attitudes by aligning with individuals' core moral values.

The moralization of public health measures became particularly salient during the Covid-19 pandemic. Zhang (2024) demonstrated that framing vaccination as a moral obligation, especially when combined with fear and guilt appeals, increased vaccination intentions. Similarly, moral obligation frames were widely used in a U.S. Covid-19 vaccine campaign, often accompanied by guilt-based appeals (Zannat et al., 2024). Contrarily, a UK-based study by Pavay et al., (2024) found that the use of moral obligations triggered reactance effects in vaccine-hesitant participants. In the context of moralized frames in scientific discourse, Skog et al. (2025) show that researcher identities and scientific truth claims were embedded in moralized narratives that framed both lax government policies and non-compliant citizens as public threats. However, moralized messaging is not only used to promote vaccination but has also played a role in vaccine hesitancy and resistance. Vaccine-hesitant individuals were found to be more likely to base their opposition on purity and liberty moral foundations, rather than harm or fairness, reinforcing ideological divisions in vaccine attitudes (Amin et al. 2017). Furthermore, studies indicate that vaccine hesitancy was heightened when messages framed vaccination in political or moralizing terms, as this led to increased skepticism (Palm et al., 2021; Borah et al., 2021).

The increasingly antagonistic vaccination group dynamics emerging from the Covid-19 pandemic were not only political in nature but carried strong moral undertones. Both sides of

the vaccination debate framed their own stance as ethically justified, while portraying the opposing group as morally flawed (Hatchman et al., 2024). As a result, vaccination status evolved from a mere health-related choice into a symbol of virtue or transgression, embedded in broader moral narratives about responsibility, care, and civic duty.

Moralization, here, refers to “the process through which personal preferences are transformed into values” (Rozin, 1999). Unlike conventional preferences, moralized convictions are perceived as inherently virtuous (Ryan, 2019). Deducted from this idea, moral values often display universality and objectivity in guiding behavior, and can be understood as mechanisms for addressing cooperation and coordination dilemmas (Curry, 2016; Skitka, 2010). Violations oftentimes evoke stark emotional responses and boost the motivation to penalize wrongdoers (Fiske & Tetlock, 1997). This turns moral condemnation and collective judgement into quintessential mechanisms of behavioural regulation (DeScioli & Kurzban, 2009).

Vaccination serves a dual purpose as both a biomedical tool for individual protection and as a key mechanism in managing public health and has thus proved to be a focal point for moral regulation (Connel & Hunt, 2010). As Korn et al. (2020) note, vaccination can furthermore be viewed as a social contract in which individuals have a moral obligation to protect vulnerable populations through herd immunity, thus acting in the collective interest. This turns willingful deviations into highly questionable behaviors that undermine collective well-being and social cohesion as a whole, whereas the decision to vaccinate is publicly framed as an expression of responsible citizenship and altruism (Capurro et al., 2018).

In journalism, framing plays a pivotal role in shaping public discourse by determining which aspects of an event or issue are highlighted. Journalistic framing can be defined as manifold templates that journalists use in different ways to package and present information (de Vreese, 2005; Semetko & Valkenburg, 2000). News frames oftentimes align with or express broader societal values, norms, or ideologies, further amplifying their persuasive power (Feldman &

Hart, 2021). Katz (1989) further argues that journalism functions as a societal surveillance mechanism, reinforcing dominant norms by highlighting perceived threats to collective stability. This process extends to journalistic gatekeeping. Pauly (2021) notes that mainstream media tend to marginalize perspectives that challenge prevailing narratives, often reframing them as sociological or psychological anomalies rather than legitimate viewpoints.

Health crises can thus be expected to rarely be framed neutrally in news media. Instead, coverage tends to reflect dominant public health priorities, portraying interventions like vaccination as moral imperatives. Capurro et al. (2018) illustrate this dynamic by analyzing media coverage surrounding the 2014–15 measles outbreak linked to Disneyland. Their findings demonstrate that news outlets framed the measles outbreak through a moralized lens, portraying vaccination as an unquestioned public duty and its detractors as a direct threat to collective well-being. Coverage overwhelmingly emphasized the role of vaccines as a form of "protection" and "social responsibility," while measles itself was framed as a highly contagious and dangerous disease. In contrast, those who refused vaccination were not merely depicted as skeptics, but as active risks to public health, described as “criminals” engaged in a “dangerous campaign against childhood vaccinations” (Capurro et al., 2018). Media narratives did not offer a platform for balanced debate; instead, journalists reinforced the authority of medical experts and government officials as primary definers of the issue, while vaccine-hesitant individuals were delegitimized as irrational, selfish, and scientifically uninformed (ibid.).

Mass media similarly have played a crucial role in reinforcing moral narratives surrounding the Covid-19 pandemic. Just as Capurro et al. (2018) demonstrated that media coverage of the measles outbreak constructed a clear moral dichotomy between responsible citizens and vaccine-hesitant individuals, research on Covid-19 reporting suggests a continuation of this trend. Ogbodo et al. (2020) found that international news media framed the pandemic through moral and religious narratives, while human interest and fear-based appeals dominated

coverage. Similarly, Zhou et al. (2024) identified moral framing as a key driver of public engagement with government vaccine messaging, with audience responses varying along ideological lines. Liberal audiences engaged more with fairness and care frames, while conservative audiences responded to loyalty and authority appeals.

While most studies on moral framing during Covid-19 have focused on government messaging or public health campaigns, Žažar (2022) conducted one of the few analyses of moral discourse within news media itself. Examining Croatian news coverage, he identified recurring moral dichotomies, such as responsible/irresponsible, selfish/altruistic, and moral/immoral, which were used to encourage public compliance with health measures and delegitimize those who did not follow. However, this analysis was limited to the broader pandemic discourse and did not systematically examine how moral frames were applied to specific vaccine-related groups.

The mentioned findings underscore that the media's role in vaccination debates extends beyond information dissemination to active moral positioning. Moral framing in Covid-19 news coverage, whether in traditional outlets or government messaging, has contributed to the construction of clear normative expectations regarding vaccination, reinforcing social divisions between those who comply with public health measures and those who do not.

While previous research has extensively examined how gain and loss frames shape vaccine attitudes (Reinhardt & Rossmann, 2021; Palm et al., 2021), the moralization of vaccine reporting has received far less attention. Given the potential for moral narratives to heighten polarization and reinforce group boundaries, further research is needed to explore how journalistic framing practices have contributed to the discursive construction of vaccine-related social groups. This study seeks to address this gap by investigating how moralized language was used to portray vaccine groups in journalistic coverage. Accordingly, our second guiding research question asks:

RQ2: *To what extent and with what valence were vaccinated/pro-vaccine and unvaccinated/anti-vaccine groups associated with moral frames in Austrian news coverage during Covid-19?*

Journalistic framing patterns have furthermore been studied to vary systematically between quality and tabloid newspapers. Semetko and Valkenburg (2000) found that quality newspapers tend to emphasize conflict and responsibility frames, focusing on political actors and systemic accountability, whereas tabloid newspapers more frequently employ human-interest frames, personalizing issues and presenting them in a more emotionally engaging manner. However, research by Greussing and Boomgaarden (2017) also indicates that in times of major, unforeseen crisis, these distinctions can blur, with both media types converging in their framing strategies during peak crisis moments amidst the so-called 2015 European refugee crisis. Similarly, news media in highly individualistic societies across 17 countries exhibited low levels of diversity in Covid-19-related coverage (Ng & Tan, 2021).

Tabloid journalism is widely recognized for its focus on emotion and personalization (Semetko & Valkenburg, 2000). This tendency is also apparent in pandemic coverage, with tabloid outlets showing an inclination to dramatize health-related information (Rossmann et al., 2018). However, other corpi of research suggest that the distinctions between quality and tabloid press may weaken in times of crisis (Greussing & Boomgaarden, 2017; Ng & Tan, 2021). This raises the question of whether Austrian media maintained traditional distinctions between quality and tabloid reporting in their coverage of the Covid-19 pandemic. To empirically test this tension, the following research question is formulated:

RQ3: *Which differences and similarities in the newspaper coverage of vaccine-related social groups can be identified between tabloid and quality press?*

By superimposing our three outlined research questions onto real news media articles, this study aims to shed light on the discursive construction of vaccine-related social groups in Austrian news media during the Covid-19 pandemic. By investigating how often such groups were mentioned (RQ1), to what extent and with what sentiment they were connected with moralized language (RQ2), and which differences and similarities emerged between journalistic outlet types (RQ3), this study provides an empirical foundation for understanding how journalism may have contributed to the public perception of social groups emerging from societal crises.

The Case of Austria

As a country marked by concentrated media ownership, high levels of news consumption, and a highly polarized vaccine debate, Austria offers a rich empirical setting typifying the Democratic Corporatist Model described by Hallin and Mancini (2004; Labio-Bernal, 2024). During the Covid-19 pandemic, Austria became the first European country to implement a nationwide vaccine mandate. The law, announced in November 2021, officially took effect on February 1, 2022. However, enforcement was postponed, and by June 2022, the mandate was officially revoked. The obligatory vaccination sparked widespread public dissent, leading to some of the largest protests seen in the country in decades (DW, 2022). These protests were further fueled by political opposition, particularly from the far-right Freedom Party of Austria (FPÖ), which actively supported vaccine-hesitant individuals and positioned itself against the vaccine mandate and other Covid-19 health measures (ORF.at, 2022). The outlined divergent perspectives not only shaped individual health decisions but also reinforced affective polarization along vaccine-related social identities (Wagner & Eberl, 2024).

Austrian media coverage during the early phase of the pandemic was largely shaped by a rally-around-the-flag effect, with government voices dominating the public discourse, leaving little room for oppositional or civil society voices (Eisele et al., 2022). Over time, this early-stage

consensus eroded: public approval of government measures declined, and polarization tendencies in public discourse became more apparent (Melischek & Seethaler, 2023). Meanwhile, the inclusion of diverse expert voices in the media occasionally led to dissonant or contradictory messages, further complicating public understanding (ibid.). Overall, Austrian media coverage thus evolved from an initial phase of unity to a more fragmented and polarized communication environment as the pandemic progressed.

Against this background, Austria offers a fruitful context for examining media performance during the pandemic. As a country with high media concentration, strong public trust in news, and polarized public discourse on vaccination, it provides valuable empirical ground for the following study.

Data and Method

This study employed a computer-assisted quantitative content analysis (van Atteveldt et al., 2008) of Austrian news media articles to examine the salience, moral framing and sentiment of vaccine-related social groups during the Covid-19 pandemic. All annotations, statistical analyses and visualizations were conducted in Python 3.13.0.

Data collection

This study focused on four Austrian newspapers: two quality newspapers, *Die Presse* and *Der Standard*, and two tabloids, *Kronen Zeitung* and *Heute*. This combination of high-circulation tabloids with quality outlets known for their editorial rigor allowed for a nuanced comparison that reflects the broader Austrian media landscape and captures the distinction between prominent representatives of tabloid and quality press.

The dataset used included $N = 28,188$ articles retrieved from the *Austrian Press Agency's* (APA) media archive, covering the period from November 2020 to May 2022. The distribution of the total N of articles per media outlet is displayed in the following table:

Media outlet	Total N of articles per Medium
<i>Kronen Zeitung</i>	6,470
<i>Heute</i>	5,944
<i>Der Standard</i>	6,461
<i>Die Presse</i>	8,313

Access to the whole data corpus was facilitated through the APA-UNIVIE Data Project. The chosen timeframe is deliberately broad to capture critical phases of the public vaccination discourse in Austria. To retrieve articles relevant to the study, a Boolean search string was

developed based on key terms related to Covid-19 vaccinations. The optimized search string is as follows:

(*Covid-19* OR *CORONA*) AND (*impf*)

Preprocessing

Before annotation, the articles were cleaned by removing metadata as well as standardizing whitespace and punctuation to minimize distortions in the analysis and ensure that annotation could run on coherent and comparable linguistic input. Additionally, articles were divided into individual sentences to enable a consistent and fine-grained analysis (N= 584,449).

Operationalization and Analysis

The annotation was performed using a rule-based Python pipeline. This approach allowed for the transparent and replicable application of the extended dictionaries and ensured consistent coding across the entire corpus. Analyses were also conducted through Python (version 3.13.0), either on sentence or article level, depending on the nature of each research question.

Mentions of vaccine-related social identities, specifically vaccinated/pro-vaccine, unvaccinated/anti-vaccine, and mixed references, were identified using a custom dictionary developed by the author. Group salience (RQ1) was measured by counting the number of sentences in which each group appeared (N = 584,449) In addition, articles were categorized based on whether they contained any group mentions, enabling a comparison of article-level inclusion rates (N= 28,188). Descriptive statistics were used to capture group visibility across the corpus, and chi-square tests were applied at the article level to examine whether salience distributions differed significantly between quality and tabloid newspapers.

To examine moral framing (RQ2), all sentences referencing at least one group were scanned for co-occurring moral language based on the German-translated *Extended Moral Foundations Dictionary* (MFD) by Bos and Minihold (2022). Each moral term was assigned to one of five foundations, *Care/Harm*, *Fairness/Cheating*, *Loyalty/Betrayal*, *Authority/Subversion*, or *Purity/Degradation*, as well as the overarching category of Morality General. To better capture the specific framing patterns of the Covid-19 discourse, the dictionary was expanded to include corpus-relevant terms such as *solidarisch*, *unsolidarisch*, and *Rücksicht*, which were assigned to the *Loyalty/Betrayal* and *Care/Harm* foundations based on their contextual meaning. To test for significant differences in moral framing and evaluative tone, chi-square tests and Welch's t-tests were conducted for group–foundation combinations across outlet types.

In addition, sentiment scores were calculated using the Rauh German Sentiment Dictionary (2018, Appendix 6), measuring the valence of each sentence on a continuous scale from –1 to +1. Sentiment was only analyzed for sentences in which vaccine-related groups were mentioned, allowing for a fine-grained investigation of evaluative tone in moralized coverage.

To answer RQ3, all annotations were grouped by media type (quality press vs. tabloid press). Comparisons focused on the relative salience of vaccine-related groups, their co-occurrence with moral language, and the sentiment of group-related sentences. Selected analyses were further stratified by group type to allow for a more detailed comparison between vaccinated, unvaccinated, and jointly referenced groups across media categories. Significance tests included chi-square and Welch's t-tests, as well as phi coefficients, to identify statistically relevant differences in framing and sentiment between media types.

Analytical Levels and Aggregation Strategy

Although annotation was performed at sentence level, the analytical approach varied depending on the research question. For **RQ1**, group salience was assessed by measuring both the

frequency of group mentions across sentences and the proportion of articles that included group-related content. This dual perspective allowed for a more comprehensive and comparable understanding of group visibility in news coverage.

For **RQ2**, sentence-level analysis was retained to identify the co-occurrence of social group mentions and moral language, which can only be meaningfully interpreted within the same sentence. Sentiment analysis was likewise conducted at the sentence level to evaluate the affective framing of each group.

For **RQ3** and the associated hypotheses, sentence-level annotations were aggregated by media type (quality vs. tabloid newspapers) to compare the use and frequency of moral framing and sentiment across outlets. This approach made it possible to identify systematic differences in framing strategies between types of newspapers.

Results

RQ1 asked to what extent vaccine-related social groups were salient in Austrian media coverage. Out of the 28,188 articles analyzed in total, 15,169 contained at least one reference to a vaccine-related group, indicating that group references appeared in 53.8 % of the coverage (Figure 1).

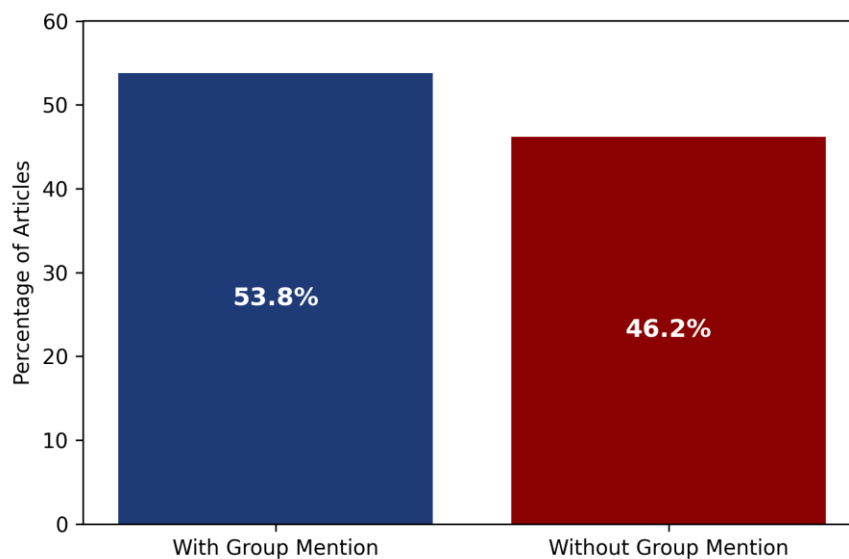


Figure 1: Share of articles with and without vaccine-related group mentions (N = 28,188).

Furthermore, a distinct majority of the articles referred exclusively to vaccinated/pro-vaccine individuals (53.9 %), while 20.5% solely focused on unvaccinated/anti-vaccine groups. A quarter (25.5 %) of all articles mentioned both. These patterns suggest that vaccinated/pro-vaccine individuals were by far the more frequently represented social group within news discourse.

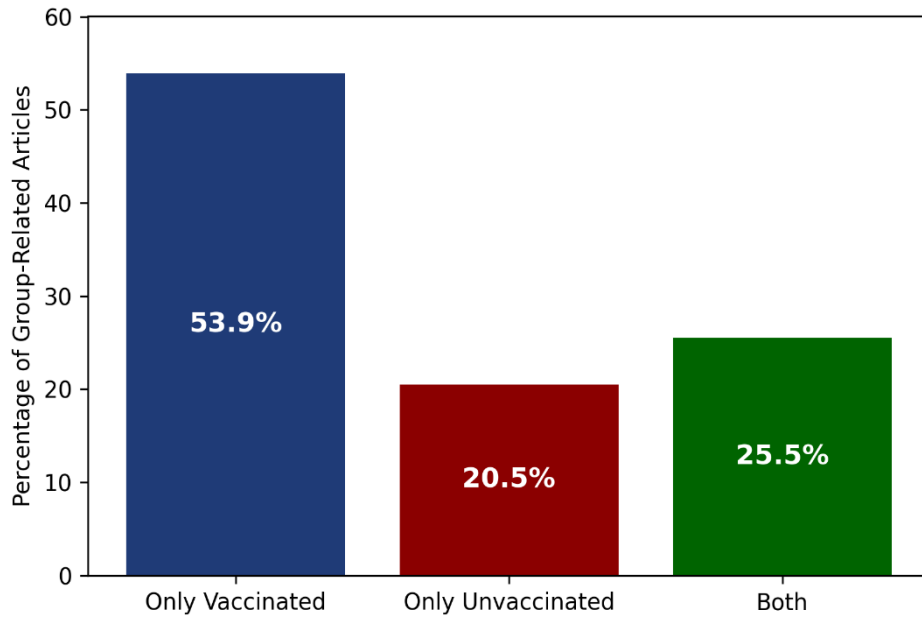


Figure 2: Distribution of group mentions among group-related articles ($N = 15,169$).

Our second research question examined the extent to which vaccinated and unvaccinated groups were linked to moral language in Austrian news media. Among the 15,169 articles that referenced vaccine-related groups, 56.9 % (=8,627) also contained moralized language, as identified through the *Extended Moral Foundations Dictionary* (Figure 3). Moral framing was thus present in a majority of group-related coverage.

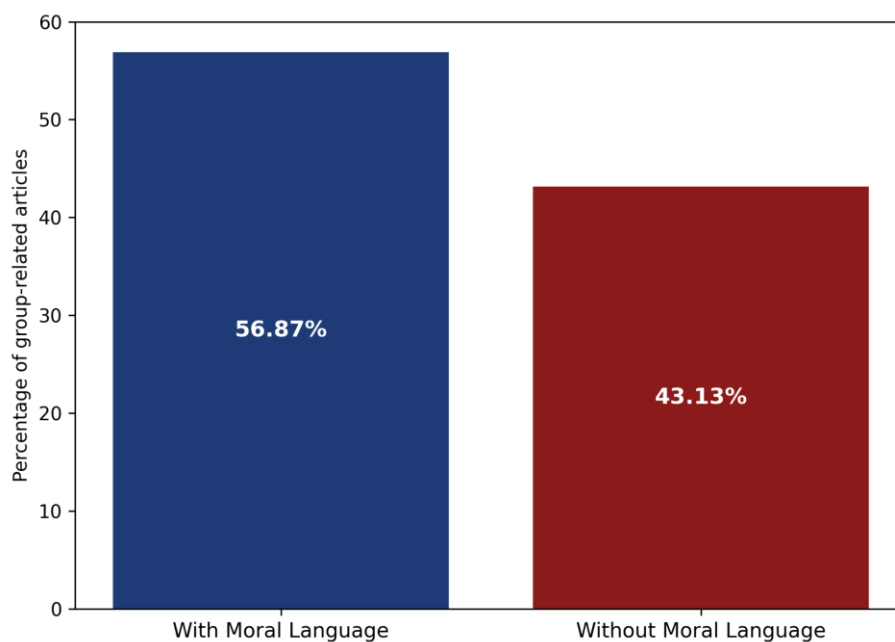


Figure 3: Share of group-mentioning articles containing moral foundations ($N = 15,169$).

On the sentence level, moral framing differed significantly between references to vaccinated and unvaccinated groups, even though both were most frequently associated with the same three moral foundations. Sentences referring to vaccinated groups with moral foundations (N = 8,954) most frequently contained *Purity/Degradation* frames (40.1 %), followed by *Morality General* (37.4%) and *Care/Harm* (37.3 %). Similarly, sentences mentioning the unvaccinated/anti-vaccine groups (N = 5,822) were also most often associated with *Purity/Degradation* (35.4%), *Care/Harm* (35.3 %), and *Morality General* (34.6 %) (Figure 4).

Chi-square tests confirmed significant group-based differences for all but one moral foundation. *Purity/Degradation* ($\chi^2 = 33.42$, $p < .001$), *Morality General* ($\chi^2 = 11.96$, $p < .001$), and *Care/Harm* ($\chi^2 = 5.86$, $p < .05$) occurred more frequently in sentences referencing vaccinated individuals. In contrast, *Loyalty/Betrayal* ($\chi^2 = 51.05$, $p < .001$) and *Authority/Subversion* ($\chi^2 = 50.25$, $p < .001$) were significantly more common in sentences referencing unvaccinated individuals. *Fairness/Cheating* did not differ significantly ($\chi^2 = 1.06$, $p > .05$). This rather consistent pattern of significant differences across most moral domains suggests that moral framing was not random but systematically varied between the vaccinated/pro-vaccine and unvaccinated/anti-vaccine groups. One possible explanation for this distribution may lie in the different discursive contexts in which each group was addressed. References to vaccinated individuals might have appeared more frequently in narratives emphasizing the benefits and protection of vaccinations, as one article by *Der Standard* exemplifies: “*Dreifach Geimpfte sind nach wie vor gut vor Hospitalisierung geschützt*” (18.02.2022). By contrast, unvaccinated individuals may have been more commonly discussed in relation to government-imposed mandates or restrictions on public life, as well as penalties for non-compliance, contexts that could activate moral concerns related to authority, loyalty, and perceived social cohesion.

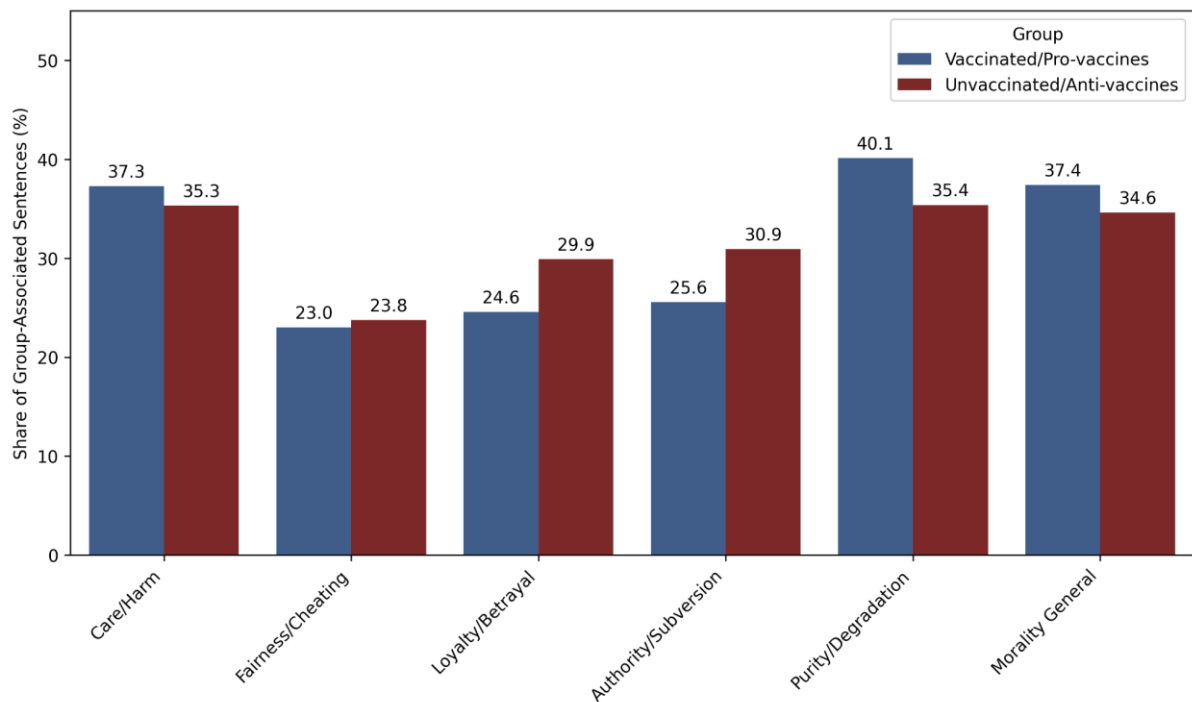


Figure 4: Share of group-related sentences associated with each moral foundation per group ($N = 14,776$).

Finally, sentiment analysis provides an additional analytical perspective to RQ2 by examining the emotional tone associated with the respective groups. On average, sentences referring to the vaccinated/pro-vaccines were significantly more positively valenced ($M = +0.15$, $SD = 0.65$, $N = 19,663$) than those referencing the unvaccinated/anti-vaccines ($M = -0.11$, $SD = 0.63$, $N = 10,990$; $p < .001$), indicating a consistent polarity gap in the emotional framing of both groups. Sentences mentioning both groups displayed a mildly negative tone ($M = -0.04$, $SD = 0.62$, $N = 1,340$), and were also significantly less negative than those mentioning only the unvaccinated ($p < .001$). This pattern could be linked to the unvaccinated being subjected to news coverage discussing laws and restrictions targeting non-compliant individuals, as illustrated by this example: “*Neben den saftigen Geldstrafen droht Impfverweigerern aber auch der Jobverlust*” (Heute, 13.12.2021).

Despite relatively large standard deviations, the standard errors (visualized as error bars) were small due to the large number of observations, indicating stable group means and meaningful differences (Figure 5).

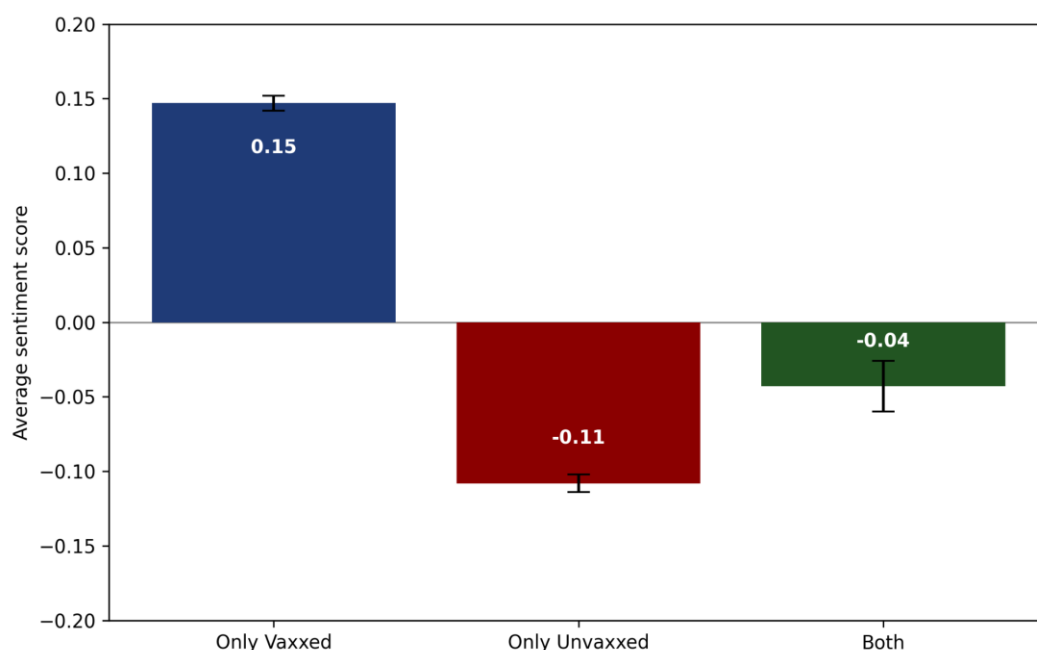


Figure 5: Average sentiment scores of sentences referencing vaccine-related groups (N = 32,995). Error bars represent standard errors.

The third and final research question addressed whether differences and similarities in the newspaper coverage of vaccine-related social groups could be identified. Analysis included potential variation in group salience, moral framing, and valence/sentiment across quality newspapers and tabloids.

A first point of comparison was the distribution of group mentions across media types. Among all quality press articles that referenced vaccine-related groups, 56.6 % exclusively referred to vaccinated or pro-vaccine individuals, while in tabloid newspapers, this share was slightly lower at 51.2 %. Conversely, mentions of unvaccinated or anti-vaccine groups were more prevalent in tabloids (22.3 %) than in quality outlets (18.8 %). Articles referencing both groups appeared with comparable frequency in both outlet types (24.6 % in quality and 26.5 % in tabloid newspapers), suggesting an overall balanced exposure across outlets (Figure 6). These

coverage patterns suggest that quality newspapers emphasized vaccinated individuals more consistently, whereas tabloid outlets devoted comparatively more attention to the unvaccinated. The article-level results are descriptive and were not subjected to statistical testing.

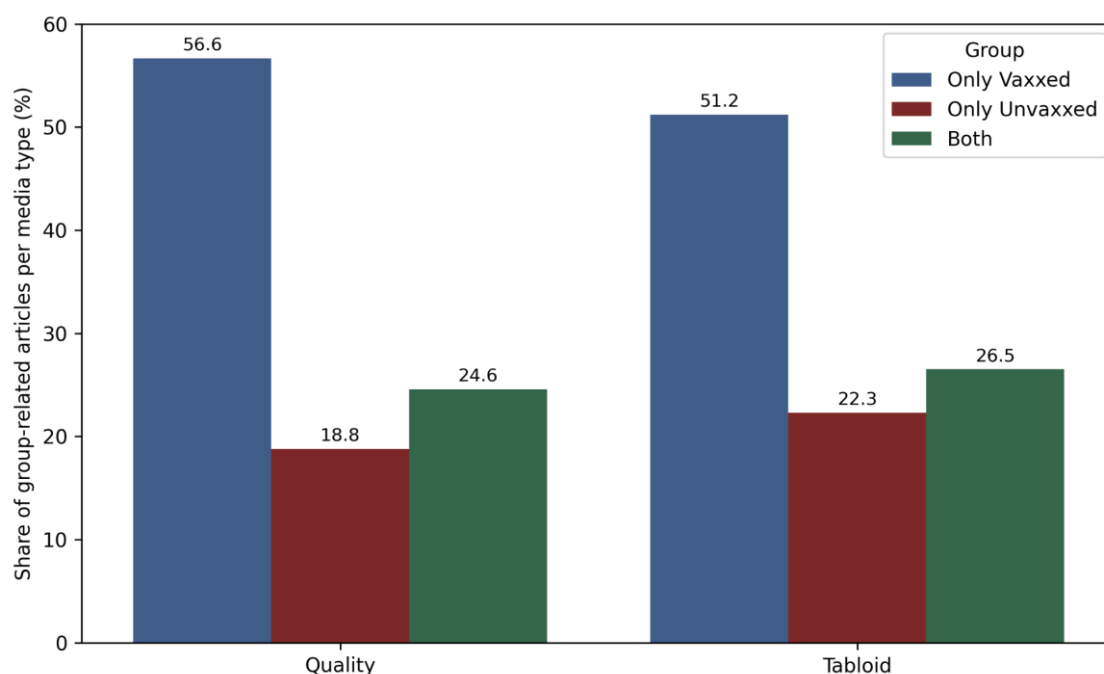


Figure 6: Distribution of vaccine-related group mentions across media types ($N = 15,169$).

A descriptive comparison of article-level moral framing revealed similar proportions across outlet types. Among articles referencing vaccine-related groups, 57.2 % of quality newspaper articles contained moral language, compared to 56.5 % in tabloids, showing only a marginal difference in the prevalence of moralized content (Figure 7).

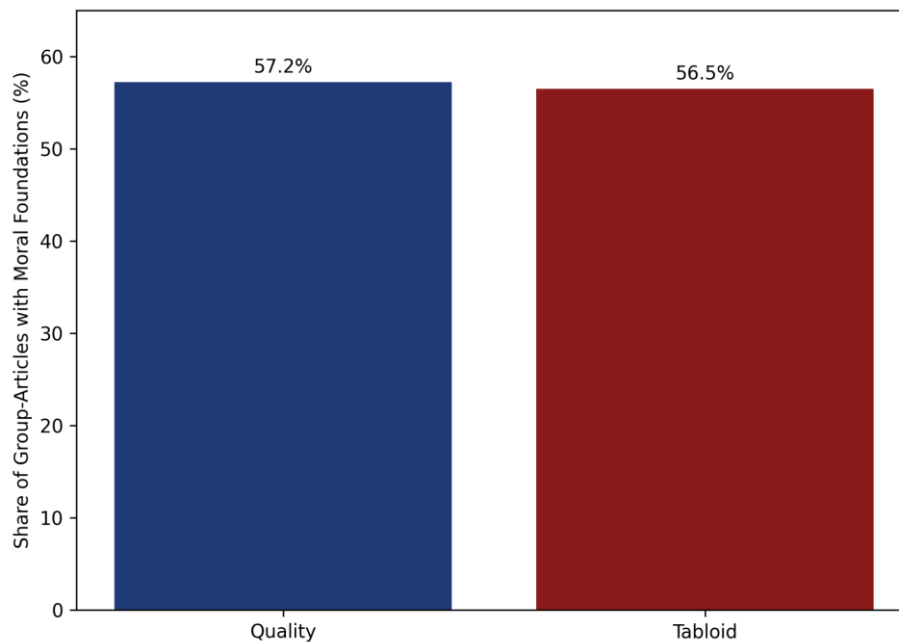


Figure 7: Share of group-related articles with moral language separated by media type ($N = 15,169$).

A chi-square test comparing the share of group-related articles containing any moral language revealed no significant difference between the two outlet types ($\chi^2 = 0.72$, $p > .05$, $N = 15,169$). However, a Welch's t-test comparing the average number of moral terms per sentence showed that quality newspapers used significantly more moralized vocabulary ($M = 0.80$, $SD = 1.22$, $N = 18,148$) than tabloids ($M = 0.76$, $SD = 1.19$, $N = 15,958$), with $t = -2.83$, and $p < .01$. When broken down by group, this significant difference persisted only for sentences referencing unvaccinated or anti-vaccine individuals ($t = -6.06$, $p < .001$), where quality newspapers applied moralized language more intensively ($M = 0.91$, $SD = 1.30$, $N = 5,862$) than tabloid outlets ($M = 0.77$, $SD = 1.19$, $N = 5,746$) (Figure 8). This tendency is illustrated by statements in quality newspapers that draw on strong normative language, e.g.: “Die Frage, ob wir tatsächlich bereits in einer postaufklärerischen (oder besser: unaufgeklärten), unsolidarischen, postfaktischen Gesellschaft leben, wird mit der 'Öffentlichkeitsarbeit' der Impfverweigerer fast schon täglich mit Ja beantwortet” (Der Standard, 06.02.2022).

No significant differences were observed for sentences referring to the vaccinated or both groups simultaneously. While tabloid outlets were not more likely to use moral language overall, quality newspapers used slightly more moralized vocabulary per sentence. Even though this difference was statistically significant, the gap in average usage remained relatively small, suggesting a limited but nevertheless consistent tendency for quality outlets to employ moral language more densely.

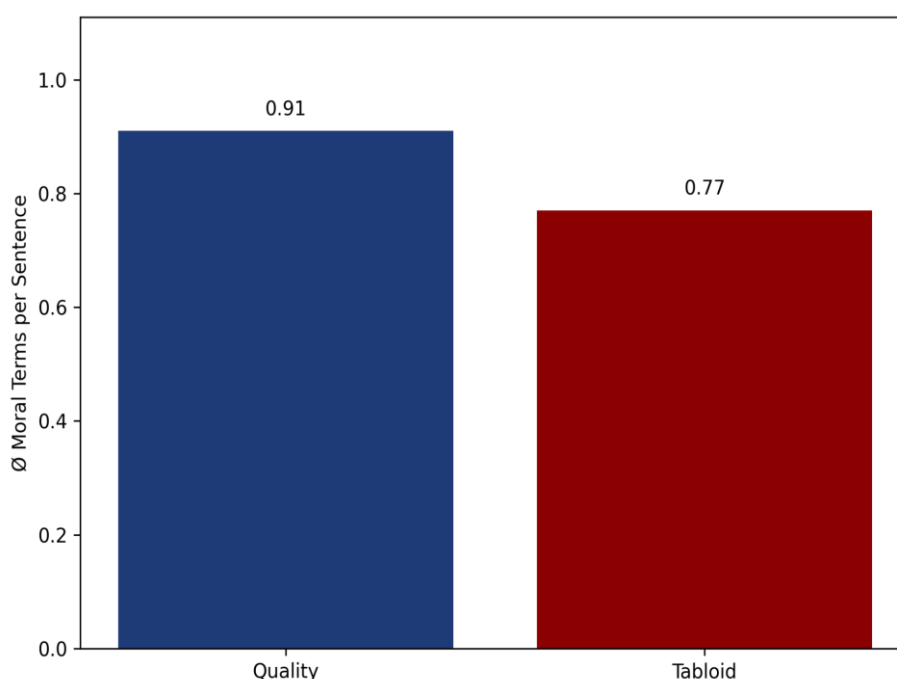


Figure 8: Average number of moral terms per sentence referencing unvaccinated groups per media type (N=11,608).

A more detailed inspection of the moral foundations involved in quality vs. tabloid reporting reveals notable similarities as well as statistically supported differences. In quality newspapers, sentences about vaccinated/pro-vaccine groups were most often associated with *Purity/Degradation* (21.22 %), *Morality General* (20.89 %), and *Care/Harm* (18.29 %). Tabloid coverage mirrored these three moral foundations, albeit with slightly higher shares for *Care/Harm* (21.94 %) and *Purity/Degradation* (21.85 %), and a somewhat lower share for *Morality General* (19.16 %). When reporting on unvaccinated/anti-vaccine groups, quality

newspapers emphasized *Morality General* (19.15 %), *Care/Harm* (17.55 %), and *Authority/Subversion* (17.36 %), while tabloid outlets leaned more towards *Purity/Degradation* (20.70 %), *Care/Harm* (19.86 %), with *Morality General* also playing a somewhat less dominant role (17.29 %) (Figure 9).

Statistical association tests (χ^2 and ϕ) confirmed several of these differences to be significant. For vaccinated individuals, foundations such as *Care/Harm* ($\phi = .045$, $p < .001$), *Loyalty/Betrayal* ($\phi = .024$, $p < .01$), and *Morality General* ($\phi = .021$, $p < .01$) varied significantly across outlet types. Among unvaccinated groups, significant differences were found for *Purity/Degradation* ($\phi = .051$, $p < .001$), *Fairness/Cheating* ($\phi = .031$, $p < .01$), *Care/Harm* ($\phi = .029$, $p < .01$), and *Morality General* ($\phi = .024$, $p < .05$). No significant differences were observed for *Authority/Subversion* in either group. These findings suggest that while both media types rely on similar moral foundations, tabloids tend to emphasize *Care/Harm* and *Purity/Degradation* more strongly, whereas quality newspapers assign relatively more weight to general moral appeals and *Authority/Subversion*. The differences in moral framing across outlet types were small but systematic, with significant variation particularly evident in the portrayal of unvaccinated groups.

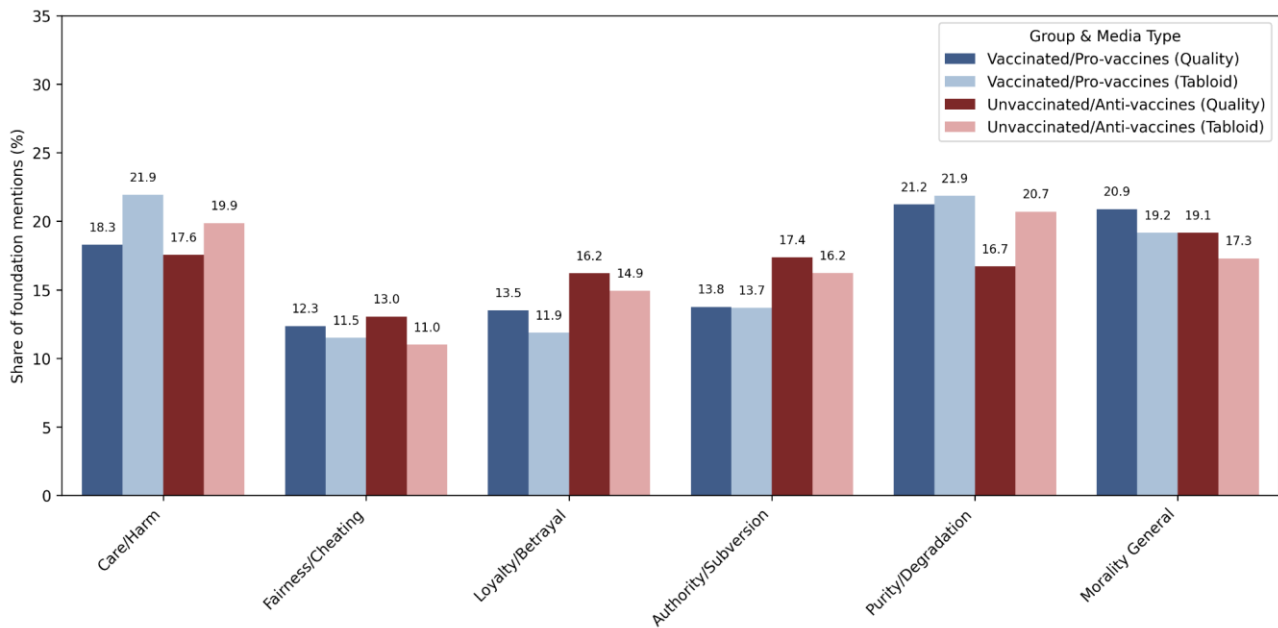


Figure 9: Distribution of moral foundations associated with each group per media type ($N = 25,221$ moralized sentences with single-group mentions).

Average sentiment scores revealed consistent differences in how vaccine-related groups were portrayed across media types (Figure 10). Sentences referring exclusively to vaccinated individuals showed more positive sentiment in both outlet types, with higher scores in tabloid coverage ($M = 0.16$) than in quality newspapers ($M = 0.13$). This difference was statistically significant ($p < .05$), suggesting a more favorable framing of pro-vaccine groups in tabloid outlets. In contrast, unvaccinated groups were associated with more negative sentiment, particularly in quality outlets ($M = -0.12$) compared to tabloids ($M = -0.10$), although this difference was not statistically significant ($p > .05$). Mentions of both groups appeared slightly negative and remained stable across outlets (Quality: $M = -0.04$; Tabloid: $M = -0.04$), with no significant difference detected ($p > .05$).

These results indicate that affective asymmetries in reporting were more pronounced in the portrayal of vaccinated individuals. While sentiment toward unvaccinated groups was consistently negative across outlets, only the representation of pro-vaccine groups varied significantly by media type, suggesting that differences in tone were largely driven by how

positively the vaccinated were portrayed, rather than by how negatively the unvaccinated were framed. Again, the positive valence of vaccinated group mentions is likely connected to the positive evaluation of the vaccine itself: “*Wer geimpft ist und eine Infektion gut überstanden hat, erhält das Beste aus beiden Welten, einen hybriden Immunschutz*” (Kronen Zeitung, 04.04.2022), though such statements may also have inadvertently contributed to the normalization of infection and can be interpreted as part of misinformative narratives (author’s note).

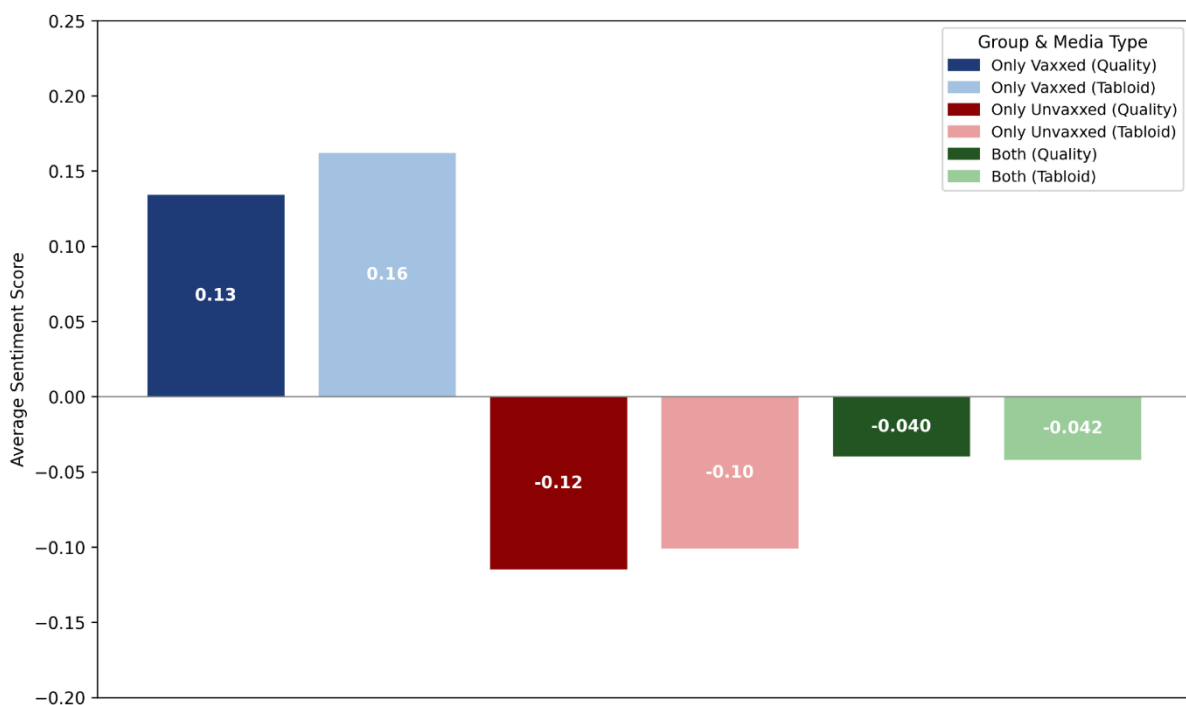


Figure 10: Average sentiment scores per group and media type (N = 31,993).

Further analysis investigated whether this affective asymmetry also varied by moral foundation and outlet type. Sentiment was most positive when vaccinated individuals were framed through the lens of *Morality General* in quality newspapers (M = +0.37, SD = 0.494, N = 1,750), and most negative when unvaccinated individuals were framed via *Loyalty/Betrayal* in quality outlets (M = -0.14, SD = 0.533, N = 841). Tabloid outlets followed broadly similar patterns, with sentiment values generally closer to zero (e.g., *Morality General*, vaccinated: M = +0.34; *Loyalty/Betrayal*, unvaccinated: M = -0.09).

To further assess potential affective divergence across media types, sentiment differences were computed by subtracting the average sentiment score in tabloids from that in quality newspapers (Quality – Tabloid) for each group–foundation combination (Figure 11). The divergence plot revealed only small sentiment differences were small and without clear patterns for vaccinated individuals (ranging from $\Delta = -0.035$ to $\Delta = +0.013$). At the same time, a consistent directional trend for unvaccinated individuals unfolded: sentences in quality newspapers expressed more negative sentiment than those in tabloid outlets across most moral foundations. The most pronounced gaps emerged in *Fairness/Cheating* ($\Delta = -0.055$), *Loyalty/Betrayal* ($\Delta = -0.052$), and *Care/Harm* ($\Delta = -0.037$). However, none of these differences reached conventional levels of statistical significance, as confirmed by Welch’s t-tests (all $p > .05$).

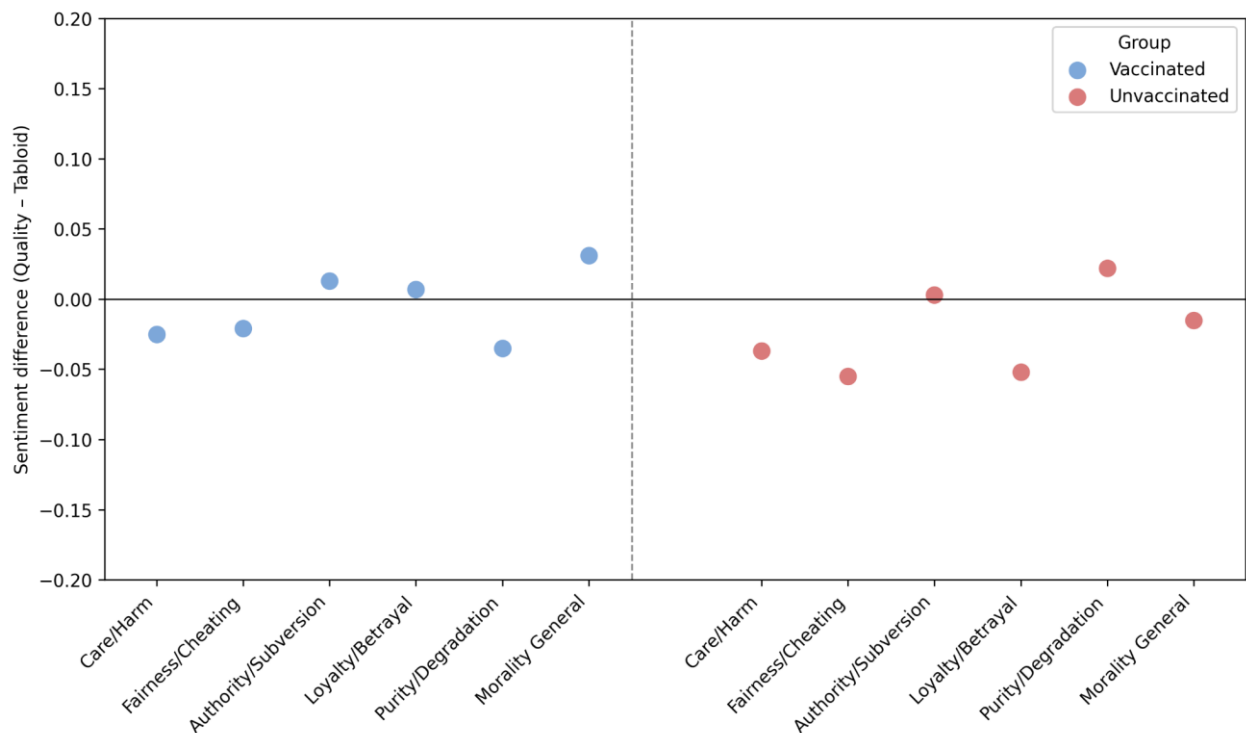


Figure 11: Average sentiment differences between quality and tabloid per moral foundation and group ($N = 23,986$).

In summary, although most sentiment and moral framing differences between media types did not reach statistical significance, the results consistently point to a pattern: quality newspapers employed moralized language more prominently when referring to unvaccinated individuals. The findings suggest that quality outlets more consistently associated unvaccinated groups with negative sentiment, particularly when invoking moral foundations such as *Loyalty/Betrayal*, *Care/Harm*, and *Fairness/Cheating*. These findings run counter to the initial assumption that tabloid media would rely more heavily on negative and moralized portrayals. Instead, this tendency was more pronounced in quality newspapers. This pattern may indicate that quality outlets, despite their normative aspiration to balance and objectivity, engaged more actively in normative boundary-setting, possibly reflecting a stronger alignment with public health imperatives and the defense of collective responsibility during the pandemic.

Discussion and Conclusion

The results of our study point to a nuanced but consistent pattern in how vaccine-related social groups were framed during the Covid-19 pandemic in Austrian media. Across the large corpus of news articles, over half made reference to either vaccinated or unvaccinated groups. Among those, the vaccinated were far more prominent than the unvaccinated, and moral language was used in the majority of cases where such group labels appeared. In this sense, our findings affirm that news coverage definitely contributed to the visibility of vaccine-related social groups in public discourse and predominantly subjected them to moralized vocabulary.

At the heart of this lies a broader journalistic shift that has been observed in health crises more generally: the transition from a detached watchdog to a more engaged, mobilizing actor. In line with the literature on journalistic role conceptions in crises (Klemm et al., 2019; Hallin et al., 2023), Austrian quality news outlets appeared to embrace this cooperative stance somewhat more consistently. This is reflected in the fact that they employed moralized language more densely than tabloid outlets, particularly in reporting on unvaccinated or anti-vaccine groups. The intensification of moral and emotional language in quality outlets aligns with the notion of journalists acting as social mobilizers, especially in contexts where public health compliance and collective responsibility are at stake. Rather than observers from afar, journalists in this setting may have seen themselves as participants in a societal effort to contain and mend the crisis.

This shift in role is further illustrated by the differentiated use of moral foundations. While both vaccinated and unvaccinated groups were most frequently associated with *Care/Harm*, *Purity/Degradation*, and *Morality General*, statistically significant group-based differences emerged across most foundations. *Purity/Degradation*, *Morality General*, and *Care/Harm* occurred more frequently in sentences referencing vaccinated individuals, while

Authority/Subversion and *Loyalty/Betrayal* were more common in references to unvaccinated groups. In the context of pandemic reporting, these foundations could reflect concerns about adherence to public health measures and perceived solidarity with the collective. While the data do not allow for definitive conclusions about intent or interpretation, the prominence of those two specific frames suggests that the portrayal of unvaccinated/anti-vaccine groups was more strongly tied to questions of norm adherence and solidarity with fellow citizens.

Our sentiment analysis complements these findings. On average, sentences referencing the vaccinated were more positively valenced, while those mentioning unvaccinated or anti-vaccine groups displayed more negative sentiment. These differences were consistent across outlet types but were most pronounced in quality newspapers. However, statistically significant differences in sentiment between media types were only found for the vaccinated. Here, tabloid outlets expressed more positive sentiment than quality outlets. While effect sizes remained small throughout, the consistent direction of the findings suggests that differences in tone were more strongly driven by positive portrayals of pro-vaccine groups than by negative portrayals of the unvaccinated.

This pattern has several implications. First, it calls for a more nuanced understanding of how different media outlets navigated their journalistic responsibilities during the pandemic. While quality newspapers employed more frequent and affectively charged moral language, particularly in relation to unvaccinated/anti-vaccine groups, the overall differences between outlet types remained moderate. Both quality and tabloid media referenced vaccine-related groups in morally coded language, suggesting that the framing of social behavior through a normative lens was a common feature of crisis reporting. From this perspective, both outlet types can be seen as having fulfilled their informational and societal function during the pandemic: to act as intermediaries between experts and the public, shape risk perception, and

highlight themes that demand collective action (Christians et al., 2010; Perrault & Perreault, 2021; Rodríguez et al., 2007), albeit with varying emphasis in tone and intensity.

The prevalence of moralized language may thus be interpreted not solely as a sign of bias, but also as a reflection of the cooperative role journalism often assumes in times of public health emergency. As prior research suggests (Klemm et al., 2019; Hallin et al., 2023), crises tend to reconfigure journalistic role conceptions, encouraging a shift from detached observation toward active societal engagement. Against this backdrop, the use of moral appeals appears less as an expression of partisanship and more as an attempt to mobilize collective responsibility.

While our study offers valuable insights into the moral framing of vaccine-related groups, certain inherent limitations remain. One key concern lies in the context-dependence of moral meaning. As Grimmer and Stewart (2013) point out, individual words can vary greatly in their connotation depending on the domain and communicative setting. This presents a fundamental challenge for general-purpose dictionaries like the *Moral Foundations Dictionary*: unless carefully tailored, they risk misrepresenting the intended tone and meaning of a text. To mitigate this risk, we supplemented our analysis with an additional sentiment dictionary (Rauh, 2018), allowing us to capture affective valence more directly and compensate for some of the semantic ambiguity in word-level annotation.

Furthermore, The MFD was not developed with pandemic-related media coverage in mind, and its categories may not fully align with the ways in which moral language was deployed during the Covid-19 crisis. Moreover, no external validation of dictionary matches was conducted in this study, a rather pragmatic decision given the scale of the dataset, but one that limits the precision with which individual annotations can be interpreted.

Further challenges stem from the internal logic of the MFD itself. Many words appear in multiple categories, which introduces interpretive overlap and blurs the conceptual boundaries

between moral foundations. These ambiguities are compounded by longstanding critiques of the underlying structure of Moral Foundations Theory, with some scholars advocating for the inclusion of additional moral domains, while others call for a reduction and consolidation of the existing ones (e.g. Atari et al., 2023; Wormley et al., 2025). Our findings reflect this conceptual tension: particularly the category Morality General, while useful as a broad indicator of moralized discourse, offers little analytical traction for identifying specific normative dimensions. This illustrates the difficulty of clearly assigning moral meaning within the current framework. Against this backdrop, recent alternatives like the *extended Morality as Cooperation Dictionary* (eMACD) have shown promising results. Grounded in a cooperative theory of morality and empirically validated across diverse text types, it provides a more functionally coherent and context-sensitive framework, and future studies may benefit from its use in public health and crisis communication research.

Despite its limitations, dictionary-based annotation remains a practical and transparent method for large-scale content analysis. As Bos and Minihold (2022) argue, it is one of the few approaches that enables researchers to apply systematic coding schemes across extensive corpora. In the case of this study, it allowed for the annotation of over 28,000 articles into defined moral categories, something that would have been unfeasible through manual coding alone.

In sum, this study underscores the dual role of journalism in crisis contexts: as a source of orientation and as a co-creator of social meaning. While the differences between media types remained moderate, the presence and tone of moralized language suggest that journalism may subtly participate in the construction and reinforcement of social group boundaries. Rather than indicating a deviation from journalistic standards, such framing choices likely mirror the normative expectations placed on media in times of public uncertainty. To refine and expand upon the patterns identified in this study, future research should go beyond the identification of

moral language and examine the narrative structures and interpretive frames through which social groups were portrayed. Approaches such as narrative or discourse analysis, fruitfully combined with qualitative methods, may offer valuable tools to capture depth, nuance and contextual specificity of journalistic reporting over the social groups emerging amidst crises such as the pandemic. Ultimately, this allows for a more grounded understanding of how news media shape not only public discourse, but also societal perceptions of belonging and legitimacy in times of uncertainty.

Bibliography

- Abrams, D., Lalot, F., & Hogg, M. A. (2021). Intergroup and intragroup dimensions of COVID-19: A social identity perspective on social fragmentation and unity. *Group Processes & Intergroup Relations*, 24(2), 201–209. <https://doi.org/10.1177/1368430220983440>
- Amin, A. B., Bednarczyk, R. A., Ray, C. E., Melchiori, K. J., Graham, J., Huntsinger, J. R., & Omer, S. B. (2017). Association of moral values with vaccine hesitancy. *Nature Human Behaviour*, 1(12), 873–880. <https://doi.org/10.1038/s41562-017-0256-5>
- Arbatli, E., & Rosenberg, D. (2021). United we stand, divided we rule: how political polarization erodes democracy. *Democratization*, 28(2), 285–307. <https://doi.org/10.1080/13510347.2020.1818068>
- Atari, M., Haidt, J., Graham, J., Koleva, S., Stevens, S. T. and Dehghani, M. (2023). Morality beyond the WEIRD: How the nomological network of morality varies across cultures. *Journal of Personality and Social Psychology*, 125(5), 1157–1188. <https://doi.org/10.1037/pspp0000470>
- Attwell, K., Smith, D. T., & Ward, P. R. (2018). ‘The Unhealthy Other’: How vaccine rejecting parents construct the vaccinating mainstream. *Vaccine*, 36(12), 1621–1626. <https://doi.org/10.1016/j.vaccine.2018.01.076>
- Basavaraj, A. K., Saikia, P., Varughese, A., Semetko, H. A. & Kumar, A. (2021). The COVID-19–Social Identity–Digital Media Nexus in India: Polarization and Blame. *Political Psychology*, 42, 827–844. <https://doi-org.uaccess.univie.ac.at/10.1111/pops.12774>
- Ball-Rokeach, S. J. & Defleur, M. L. (1976). A Dependency Model of Mass-Media Effects. *Communication Research* 3 (1): 3–21. doi:10.1177/009365027600300101.
- Beyond Conflict (2020). America’s Divided Mind. Understanding the Psychology that drives us apart. URL: [Beyond-Conflict-America_s-Div-ided-Mind-JUNE-2020-FOR-WEB.pdf](#) [last access: 18.06.25]
- Blume, S. (2006). Anti-vaccination movements and their interpretations. *Social Science & Medicine* (1982), 62(3), 628–642. <https://doi.org/10.1016/j.socscimed.2005.06.020>

- Borah, P., Hwang, J., & Hsu, Y. C. (2021). COVID-19 Vaccination Attitudes and Intention: Message Framing and the Moderating Role of Perceived Vaccine Benefits. *Journal of Health Communication*, 26(8), 523–533. <https://doi.org/10.1080/10810730.2021.1966668>
- Bos, L., & Minihold, S. (2022). The Ideological Predictors of Moral Appeals by European Political Elites; An Exploration of the Use of Moral Rhetoric in Multiparty Systems. *Political Psychology*, 43(1), 45–63. <https://doi.org/10.1111/pops.12739>
- Braley, A., Lenz, G., Adjodah, D., Rannama, H. & Pentland, A. (2022). The Subversion Dilemma: Why Voters Who Cherish Democracy Participate in Democratic Backsliding. <https://doi.org/10.21203/rs.3.rs-1766479/v1>
- Brewer, M. B. (2001). The Many Faces of Social Identity: Implications for Political Psychology. *Political Psychology*, 22 (1). 115-125. <https://doi-org.uaccess.univie.ac.at/10.1111/0162-895X.00229>
- Brugman, B. C. (2023). How the effects of emphasizing ethics are examined: a systematic review of moral framing experiments. *Annals of the International Communication Association*, 48(4), 436-455. <https://doi.org/10.1080/23808985.2024.2393845>
- Capurro, G., Greenberg, J., Dubé, E., & Driedger, M. (2018). Measles, Moral Regulation and the Social Construction of Risk: Media Narratives of “Anti-Vaxxers” and the 2015 Disneyland Outbreak. *Canadian Journal of Sociology*, 43(1), 25–47. <https://doi.org/10.29173/cjs29301>
- Connel, E., & Hunt, A. (2010). The HPV Vaccination Campaign: A Project of Moral Regulation in an Era of Biopolitics. *Canadian Journal of Sociology*, 35(1), 63–82. <https://doi.org/10.29173/cjs6689>
- Christians, C. G., Glasser, T., McQuail, D., Nordenstreng, K., & White, R. A. (2010). *Normative theories of the media: Journalism in democratic societies*. University of Illinois Press.
- Curry, O. S. (2016). Morality as Cooperation: A Problem-Centred Approach. Shackelford, T. & Hansen, R. (eds). *The Evolution of Morality*. *Evolutionary Psychology*, 27-51. https://doi.org/10.1007/978-3-319-19671-8_2
- DeScioli, P., & Kurzban, R. (2009). Mysteries of morality. *Cognition*, 112(2), 281–299. <https://doi.org/10.1016/j.cognition.2009.05.008>

de Vreese, C. H. (2005). News framing: Theory and typology. *Information Design Journal: IDJ*, 13(1), 51–62. <https://doi.org/10.1075/idjdd.13.1.06vre>

Dubé, E., Vivion, M., & MacDonald, N. E. (2014). Vaccine hesitancy, vaccine refusal and the anti-vaccine movement: influence, impact and implications. *Expert Review of Vaccines*, 14(1), 99–117. <https://doi.org/10.1586/14760584.2015.96421>

DW. (2022). Thousands protest COVID curbs across Europe. <https://www.dw.com/en/thousands-protest-covidcurbs-in-europe-amid-omicron-surge/a-60374676> [last access: 19.06.25]

Eisele, O., Litvyak, O., Brändle, V. K., Balluff, P., Fischeneder, A., Sotirakou, C., Syed Ali, P., & Boomgaarden, H. G. (2022). An Emotional Rally: Exploring Commenters' Responses to Online News Coverage of the COVID-19 Crisis in Austria. *Digital Journalism*, 10(6), 952–975. <https://doi.org/10.1080/21670811.2021.2004552>

Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication*, 43(4), 51–58. <https://doi.org/10.1111/j.1460-2466.1993.tb01304.x>

Feinberg, M. and Willer, R. (2019). Moral reframing: A technique for effective and persuasive communication across political divides. *Social and Personality Psychology Compass*, 13(12), e12501. <https://doi.org/10.1111/spc3.12501>

Feldman, L., & Hart, P. S. (2021). Upping the ante? The effects of “emergency” and “crisis” framing in climate change news. *Climatic Change*, 169(1–2). <https://doi.org/10.1007/s10584-021-03219-5>

Fiske, S. T. and Taylor, S. E. (1991). *Social cognition*. New York: McGraw-Hill.

Fiske, A. P., & Tetlock, P. E. (1997). Taboo Trade-offs: Reactions to Transactions That Transgress the Spheres of Justice. *Political Psychology*, 18(2), 255–297. <https://doi.org/10.1111/0162-895X.00058>

Futák-Campbell, B., & Pütz, M. (2022). From the ‘Open door’ policy to the EU-Turkey deal: Media framings of German policy changes during the EU refugee ‘crisis.’ *International Relations (London)*, 36(1), 61–82. <https://doi.org/10.1177/0047117821999413>

- Gamson, W. and Modigliani, A. (1989). Media discourse and public opinion on nuclear power: A constructionist approach. *American Journal of Sociology*, 95(1), 1–37. <https://doi.org/10.1086/229213>
- Graham, J., Haidt, J. and Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology*, 96(5), 1029–1046. <https://doi.org/10.1037/a00151414>
- Green, J., Petty, J., Whiting, L., Orr, F., Walker, K., Brown, A. M., Crisp, E. P., Fowler, C., & Jones, L. K. (2021). The Impact of the Anti-Vaccination Movement and Vaccine Hesitancy on the Health of the Child. *Pediatric Nursing*, 47(5), 216–243. <https://doi.org/10.62116/PNJ.2021.47.5.216>
- Greussing, E., & Boomgaarden, H. G. (2017). Shifting the refugee narrative? An automated frame analysis of Europe’s 2015 refugee crisis. *Journal of Ethnic and Migration Studies*, 43(11), 1749–1774. <https://doi.org/10.1080/1369183X.2017.1282813>
- Grimmer, J., & Stewart, B. M. (2013). Text as Data: The Promise and Pitfalls of Automatic Content Analysis Methods for Political Texts. *Political Analysis*, 21(3), 267–297. <https://doi.org/10.1093/pan/mps028>
- Haidt, J. (2012). *The Righteous Mind: Why Good People Are Divided by Politics and Religion*.
- Hallin, D. C & Mancini, P. (2004). *Comparing Media Systems. Three Models of Media and Politics*. Cambridge University Press.
- Hallin, D. C., Mellado, C., Cohen, A., Hubé, N., Nolan, D., Szabó, G., Abuali, Y., Arcila, C., Attia, M., Blanchett, N., Chen, K., Davydov, S., De Maio, M., Garcés, M., Himma-Kadakas, M., Humanes, M. L., I-Hsuan Lin, C., Lecheler, S., Lee, M., ... Ybáñez, N. (2023). Journalistic Role Performance in Times of COVID. *Journalism Studies* (London, England), 24(16), 1977–1998. <https://doi.org/10.1080/1461670X.2023.2274584>
- Hatchman, K., Hornsey, M. J., & Barlow, F. K. (2024). The vaccination divide: Exploring moral reasoning associated with intergroup antipathy between vaccinated and unvaccinated people. *British Journal of Health Psychology*, 29(4), 889–906. <https://doi.org/10.1111/bjhp.12736>

- Heidenreich, T., Lind, F., Eberl, J.-M., & Boomgaarden, H. G. (2019). Media Framing Dynamics of the ‘European Refugee Crisis’: A Comparative Topic Modelling Approach. *Journal of Refugee Studies*, 32(Special_Issue_1), i172–i182. <https://doi.org/10.1093/jrs/fez025>
- Henkel, L., Sprengholz, P., Korn, L., Betsch, C., & Böhm, R. (2023). The association between vaccination status identification and societal polarization. *Nature Human Behaviour*, 7(2), 231–239. <https://doi.org/10.1038/s41562022-01469-6>
- Herrera-Peco, I., Jiménez-Gómez, B., Peña Deudero, J. J., Benitez De Gracia, E., & Ruiz-Núñez, C. (2021). Healthcare Professionals’ Role in Social Media Public Health Campaigns: Analysis of Spanish Pro Vaccination Campaign on Twitter. *Healthcare (Basel)*, 9(6), 662. <https://doi.org/10.3390/healthcare9060662>
- Hogg, M. A., Terry, D. J., & White, K. M. (1995). A tale of two theories: A critical comparison of identity theory with social identity theory. *Social Psychology Quarterly*, 58 (4), 255–269. <https://doi.org/10.2307/2787127>
- Houston, J. B., Hawthorne, J., Perreault, M. F., Park, E. H., Goldstein Hode, M., Halliwell, M. R., & Griffith, S. A. (2015). Disasters, 39(1), 1-22. <https://doi.org/10.1111/disa.12092>
- Huddy, L., Mason, L., & Aarøe, L. (2015). Expressive Partisanship: Campaign Involvement, Political Emotion, and Partisan Identity. *The American Political Science Review*, 109(1), 1–17. <https://doi.org/10.1017/S0003055414000604>
- Iyengar, S., & Westwood, S. J. (2015). Fear and Loathing across Party Lines: New Evidence on Group Polarization. *American Journal of Political Science*, 59(3), 690–707. <https://doi.org/10.1111/ajps.12152>
- Kahan, D. M. (2017). “Misinformation and Identity-Protective Cognition.” *Yale Law & Economics Research Paper* 587: 1–9. <http://dx.doi.org/10.2139/ssrn.3046603>
- Karafillakis, E., Van Damme, P., Hendrickx, G., & Larson, H. J. (2022). COVID-19 in Europe: new challenges for addressing vaccine hesitancy. *LANCET*, 399(10326), 699–701. [https://doi.org/10.1016/S0140-6736\(22\)00150-7](https://doi.org/10.1016/S0140-6736(22)00150-7)
- Kata, A. (2010). A postmodern Pandora’s box: Anti-vaccination misinformation on the Internet. *Vaccine*, 28(7), 1709–1716. <https://doi.org/10.1016/j.vaccine.2009.12.022>

- Katz, E. (1989). Journalists as Scientists: Notes Toward an Occupational Classification. *The American Behavioral Scientist* (Beverly Hills), 33(2), 238–246. <https://doi.org/10.1177/0002764289033002022>
- Kaufman, M. (1967). The American Anti-Vaccinationists and their Arguments. *Bulletin of the History of Medicine*, 41(5), 463–478. URL: <https://uaccess.univie.ac.at/login?url=https://www.proquest.com/scholarly-journals/american-anti-vaccinationists-their-arguments/docview/1296239136/se-2>. [last access: 18.06.25]
- Kitzinger, J., & Reilly, J. (1997). The rise and fall of risk reporting: Media coverage of human genetics research, 'False memory syndrome' and 'Mad cow disease'. *European Journal of Communication*, 12(3), 319–350. doi:10.1177/0267323197012003002
- Kleinfeld, R. (2023). Polarization, Democracy, and Political Violence in the United States: What the Research Says. *Carnegie Endowment for International Peace*. URL: <http://www.jstor.org/stable/resrep53058> [last access: 18.06.25]
- Klemm, C., Das, E., & Hartmann, T. (2019). Changed priorities ahead: Journalists' shifting role perceptions when covering public health crises. *Journalism* (London, England), 20(9), 1223–1241. <https://doi.org/10.1177/1464884917692820>
- Knudsen, E., Nordø, Å. D., & Iversen, M. H. (2023). How Rally-Round-the-Flag Effects Shape Trust in the News Media: Evidence from Panel Waves before and during the COVID-19 Pandemic Crisis. *Political Communication*, 40(2), 201–221. <https://doi.org/10.1080/10584609.2023.2168322>
- Kodapanakkal, R. I., Brandt, M. J., Kogler, C., & van Beest, I. (2022). Moral Frames Are Persuasive and Moralize Attitudes; Nonmoral Frames Are Persuasive and De-Moralize Attitudes. *Psychological Science*, 33(3), 433–449. <https://doi.org/10.1177/09567976211040803>
- Koehler, D. J., & Brewer, N. (2016). Can Journalistic “False Balance” Distort Public Perception of Consensus in Expert Opinion? *Journal of Experimental Psychology. Applied*, 22(1), 24–38. <https://doi.org/10.1037/xap0000073>
- Korn, L., Böhm, R., Meier, N. W., & Betsch, C. (2020). Vaccination as a social contract. *Proceedings of the National Academy of Sciences - PNAS*, 117(26), 14890–14899. <https://doi.org/10.1073/pnas.1919666117>

- Labio-Bernal, A., Rubira-Garcia, R., & Pocevicene, R. (2024). Comparing Media Systems: A New Critical Academic Reading. *Media and Communication* (Lisboa), 12(5), 1. <https://doi.org/10.17645/mac.8357>
- Lee, N.-J., McLeod, D. M., & Shah, D. V. (2008). Framing Policy Debates: Issue Dualism, Journalistic Frames, and Opinions on Controversial Policy Issues. *Communication Research*, 35(5), 695–718. <https://doi.org/10.1177/0093650208321792>
- MacKay, M., Colangeli, T., Gillis, D., McWhirter, J., & Papadopoulos, A. (2021). Examining Social Media Crisis Communication during Early COVID-19 from Public Health and News Media for Quality, Content, and Corresponding Public Sentiment. *International Journal of Environmental Research and Public Health*, 18(15), 7986. <https://doi.org/10.3390/ijerph18157986>
- Mackie, D.M., Devos, T. & Smith, E.R. (2000). Intergroup Emotions: Explaining Offensive Action Tendencies in an Intergroup Context. *Journal of Personality and Social Psychology* 79(4), 602–16. DOI: 10.1037//0022-3514.79.4.602
- Mäntylä, M. V., Graziotin, D., & Kuutila, M. (2018). The evolution of sentiment analysis—A review of research topics, venues, and top cited papers. *Computer Science Review*, 27, 16–32. <https://doi.org/10.1016/j.cosrev.2017.10.002>
- Mason, L. (2015). “I Disrespectfully Agree”: The Differential Effects of Partisan Sorting on Social and Issue Polarization. *American Journal of Political Science*, 59 (1), 128–145. DOI: 10.1111/ajps.12089
- McCoy, J., Rahman, T., & Somer, M. (2018). Polarization and the Global Crisis of Democracy: Common Patterns, Dynamics, and Pernicious Consequences for Democratic Polities. *The American Behavioral Scientist* (Beverly Hills), 62(1), 16–42. <https://doi.org/10.1177/0002764218759576>
- McDonald, K., Graves, R., Yin, S., Weese, T., & Sinnott-Armstrong, W. (2021). Valence framing effects on moral judgments: A meta-analysis. *Cognition*, 212, 104703–104703. <https://doi.org/10.1016/j.cognition.2021.104703>
- McKenzie, L., & Attwell, K. (2023). “I’m provax”: Pro-vaccination personal histories and socialities of older Australians in the COVID-19 pandemic. *Sociology of Health & Illness*, 45(7), 1441–1461. <https://doi.org/10.1111/1467-9566.13640>

- Melischek, G. & Seethaler, J. (2023). Mediale Kommunikation während der COVID-19-Pandemie. Ein Scoping Review. Bogner, A. (publ.). Nach Corona. Reflexionen für zukünftige Krisen. Österreichische Akademie der Wissenschaften. <https://doi.org/10.1553/978OEAW95696>
- Morse, T. (2018). Mediatized war and the moralizing function of news about disruptive events. *Journalism* (London, England), 19(3), 384–401. <https://doi.org/10.1177/1464884917693861>
- Motta, M., Callaghan, T., Sylvester, S., & Lunz-Trujillo, K. (2023). Identifying the prevalence, correlates, and policy consequences of anti-vaccine social identity. *Politics, Groups & Identities*, 11(1), 108–122. <https://doi.org/10.1080/21565503.2021.1932528>
- Ng, R., & Tan, Y. W. (2021). Diversity of COVID-19 News Media Coverage across 17 Countries: The Influence of Cultural Values, Government Stringency and Pandemic Severity. *International Journal of Environmental Research and Public Health*, 18(22), 11768. <https://doi.org/10.3390/ijerph182211768>
- Nichter, M. (1995). Vaccinations in the third world: A consideration of community demand. *Social Science & Medicine* (1982), 41(5), 617–632. [https://doi.org/10.1016/0277-9536\(95\)00034-5](https://doi.org/10.1016/0277-9536(95)00034-5)
- Nielsen, R. K., R. Fletcher, N. Newman, J. S. Brennen & Howard, P. N. (2020). Navigating the ‘info demic’: How people in six countries access and rate news and information about coronavirus. DOI: 10.60625/risj-b838-pw85
- Ogbodo, J. N., Onwe, E. C., Chukwu, J., Nwasum, C. J., Nwakpu, E. S., Nwankwo, S. U., Nwamini, S., Elem, S., & Iroabuchi Ogbaeja, N. (2020). Communicating health crisis: a content analysis of global media framing of COVID-19. *Health Promotion Perspectives*, 10(3), 257–269. <https://doi.org/10.34172/hpp.2020.40>
- ORF.at (2022, Jan 26): FPÖ will Einsprüche gegen Impfpflicht unterstützen. URL: <https://orf.at/stories/3245133/> [last access: 18.06.2025]
- Palm, R., Bolsen, T., & Kingsland, J. T. (2021). The Effect of Frames on COVID-19 Vaccine Resistance. *Frontiers in Political Science*, 3. <https://doi.org/10.3389/fpos.2021.661257>
- Pan, Z. and Kosicki, G. M. (1993). Framing analysis: An approach to news discourse. *Political Communication*, 10 (11), 55-76. <https://doi.org/10.1080/10584609.1993.9962963>

Pauly, M. (2021). Beyond the political principle: Applying Martin Buber's philosophy to societal polarization. *Philosophy and Social Criticism*, 48 (3), 437-456. DOI: 10.1177/01914537211017571

Pavey, L., Rotella, A., & Vallée-Tourangeau, G. (2024). Moral obligation, autonomous motivation and vaccine hesitancy: Highlighting moral obligation increases reactance in hesitant individuals. *Applied Psychology: Health and Well-Being*, 16(4), 1520–1538. <https://doi.org/10.1111/aphw.12540>

Perreault, M. F., & Perreault, G. P. (2021). Journalists on COVID-19 Journalism: Communication Ecology of Pandemic Reporting. *The American Behavioral Scientist*, 65(7), 976–991. <https://doi.org/10.1177/0002764221992813>

Peretti-Watel, P., Seror, V., Cortaredona, S., Launay, O., Raude, J., Verger, P., Fressard, L., Beck, F., Legleye, S., L'Haridon, O., Léger, D., & Ward, J. K. (2020). A future vaccination campaign against COVID-19 at risk of vaccine hesitancy and politicisation. *The Lancet Infectious Diseases*, 20(7), 769–770. [https://doi.org/10.1016/S1473-3099\(20\)30426-6](https://doi.org/10.1016/S1473-3099(20)30426-6)

Pluviano, S., Watt, C., Della Sala, S., & Moore, A. C. (2017). Misinformation lingers in memory: Failure of three pro-vaccination strategies. *PloS One*, 12(7), e0181640. <https://doi.org/10.1371/journal.pone.0181640>

Rauh, C. (2018). Validating a sentiment dictionary for German political language—a workbench note. *Journal of Information Technology & Politics*, 15(4), 319–343. <https://doi.org/10.1080/19331681.2018.1485608>

Rehren, P., & Sinnott-Armstrong, W. (2021). Moral framing effects within subjects. *Philosophical Psychology*, 34(5), 611–636. <https://doi.org/10.1080/09515089.2021.1914328>

Reinhardt, A., & Rossmann, C. (2021). Age-Related Framing Effects: Why Vaccination Against COVID-19 Should Be Promoted Differently in Younger and Older Adults. *Journal of Experimental Psychology. Applied*, 27(4), 669–678. <https://doi.org/10.1037/xap0000378>

Rodríguez, H., Díaz, W., Santos, J.M., Aguirre, B.E. (2007). Communicating Risk and Uncertainty: Science, Technology, and Disasters at the Crossroads. *Handbook of Disaster Research*, 476-488. https://doi.org/10.1007/978-0-387-32353-4_29

- Rojas-Calderón, A. (2024). Constructive Journalistic Roles in Environments of Social Complexity and Political Crisis. *Journalism and Media*, 5(2), 626–645. <https://doi.org/10.3390/journalmedia5020042>
- Rossmann, C., Meyer, L., & Schulz, P. J. (2018). The Mediated Amplification of a Crisis: Communicating the A/H1N1 Pandemic in Press Releases and Press Coverage in Europe. *Risk Analysis*, 38(2), 357–375. <https://doi.org/10.1111/risa.12841>
- Rozbroj, T., Lyons, A., & Lucke, J. (2019). The mad leading the blind: Perceptions of the vaccine-refusal movement among Australians who support vaccination. *Vaccine*, 37(40), 5986–5993. <https://doi.org/10.1016/j.vaccine.2019.08.023>
- Rozin, P. (1999). The Process of Moralization. *Psychological Science*, 10(3), 218–221. <https://doi.org/10.1111/1467-9280.00139>
- Rudolph, T. J. & Hetherington, M. J. (2021). Affective Polarization in Political and Nonpolitical Settings. *International Journal of Public Opinion Research*, 33 (3), 591-606. doi:10.1093/ijpor/edaa040
- Ryan, T. J. (2019). Actions versus Consequences in Political Arguments: Insights from Moral Psychology. *The Journal of Politics*, 81(2), 426–440. <https://doi.org/10.1086/701494>
- Sahlgren, M., Karlgren, J. & Eriksson, G. (2007): SICS: Valence annotation based on seeds in word space. DOI: 10.3115/1621474.1621538
- Semetko, H. A. and Valkenburg, P. M. (2000). Framing European politics: A content analysis of press and television news. *Journal of Communication*, 50(2), 93–109. <https://doi.org/10.1111/j.1460-2466.2000.tb02843.x>
- Skitka, L. J. (2010). The Psychology of Moral Conviction. *Social and Personality Psychology Compass*, 4(4), 267–281. <https://doi.org/10.1111/j.1751-9004.2010.00254.x>
- Skog, F., & Lundström, R. (2022). Heroes, victims, and villains in news media narratives about COVID-19. Analysing moralising discourse in Swedish newspaper reporting during the spring of 2020. *Social Science & Medicine* (1982), 294, 114718–114718. <https://doi.org/10.1016/j.socscimed.2022.114718>

- Skog, F., Lundström, R., Rinaldi, C., Tartari, M., Scarcelli, C. M., Tartari, M., Scarcelli, C. M., & Rinaldi, C. (2025). Voices of reason, voices of moralization: Analyzing moralizing discourse in scientific claims in news media in relation to the COVID-19 pandemic in Sweden, 2020–2022. In *Folk Devils and Moral Panics in the COVID-19 Pandemic* (1st ed., Vol. 1, pp. 108–119). Routledge. <https://doi.org/10.4324/9781003453222-9>
- Smith, N., & Graham, T. (2019). Mapping the anti-vaccination movement on Facebook. *Information Communication and Society*, 22, 1310–1327. <https://doi.org/10.1080/1369118X.2017.1418406>
- Somer, M. & McCoy, J. (2018). Déjà vu? Polarization and Endangered Democracies in the 21st Century. *American Behavioral Scientist*, 62 (1), 3–15. <https://doi.org/10.1177/0002764218760371>
- Somer, M., & McCoy, J. (2019). Transformations through Polarizations and Global Threats to Democracy. *The Annals of the American Academy of Political and Social Science*, 681(1), 8–22. <https://doi.org/10.1177/0002716218818058>
- Spence, A., & Pidgeon, N. (2010). Framing and communicating climate change: The effects of distance and outcome frame manipulations. *Global Environmental Change*, 20(4), 656–667. <https://doi.org/10.1016/j.gloenvcha.2010.07.002>
- Spialek, M. L., Czapinski, H. M., & Houston, J. B. (2016). Disaster communication ecology and community resilience perceptions following the 2013 central Illinois tornadoes. *International Journal of Disaster Risk Reduction*, 17, 154–160. <https://doi.org/10.1016/j.ijdr.2016.04.006>
- Sprengholz, P., Betsch, C., & Böhm, R. (2024). Experimental testing of three categorization-based interventions to reduce prejudice and discrimination against the unvaccinated in the aftermath of COVID-19. *Analyses of Social Issues and Public Policy*, 24(2), 552–566. <https://doi.org/10.1111/asap.12386>
- Stoddart, M. C. J., Ramos, H., Foster, K., & Ylä-Anttila, T. (2023). Competing Crises? Media Coverage and Framing of Climate Change During the COVID-19 Pandemic. *Environmental Communication*, 17(3), 276–292. <https://doi.org/10.1080/17524032.2021.1969978>
- Svolik, M. W. (2019). Polarization versus Democracy. *Journal of Democracy*, 30(3), 20–32. <https://doi.org/10.1353/jod.2019.0039>

Tajfel, H., and J. C. Turner (1979). An Integrative Theory of Intergroup Conflict. *The Social Psychology of Intergroup Relations*, 33–47. <https://library.alnap.org/help-library/an-integrative-theory-of-intergroup-conflict> [last access: 18.06.25]

Thompson, E. E. (2019). Communicating a Health Risk/Crisis: Exploring the Experiences of Journalists Covering a Proximate Epidemic. *Science Communication*, 41(6), 707–731. <https://doi.org/10.1177/1075547019878875>

Valenzuela, S., Piña, M., & Ramírez, J. (2017). Behavioral Effects of Framing on Social Media Users: How Conflict, Economic, Human Interest, and Morality Frames Drive News Sharing. *Journal of Communication*, 67(5), 803–826. <https://doi.org/10.1111/jcom.12325>

Van Aelst, P., Toth, F., Castro, L., Štětka, V., Vreese, C. de, Aalberg, T., Cardenal, A. S., Corbu, N., Esser, F., Hopmann, D. N., Koc-Michalska, K., Matthes, J., Schemer, C., Sheafer, T., Splendore, S., Stanyer, J., Stępińska, A., Strömbäck, J., & Theocharis, Y. (2021). Does a Crisis Change News Habits? A Comparative Study of the Effects of COVID-19 on News Media Use in 17 European Countries. *Digital Journalism*, 9(9), 1208–1238. <https://doi.org/10.1080/21670811.2021.1943481>

Van Atteveldt, W., Kleinnijenhuis, J., Ruigrok, N., & Schlobach, S. (2008). Good News or Bad News? Conducting Sentiment Analysis on Dutch Text to Distinguish Between Positive and Negative Relations. *Journal of Information Technology & Politics*, 5(1), 73–94. <https://doi.org/10.1080/19331680802154145>

Vermeer, S., Kruikemeier, S., Trilling, D., & de Vreese, C. (2022). Using Panel Data to Study Political Interest, News Media Trust, and News Media use in the Early Stages of the COVID-19 Pandemic. *Journalism Studies* (London, England), 23(5–6), 740–760. <https://doi.org/10.1080/1461670X.2021.2017790>

Wagner, M. & Eberl, J.-M. (2024). Divided by the jab: affective polarisation based on COVID vaccination status. *Journal of Elections, Public Opinion and Parties*, 1-24. DOI: 10.1080/17457289.2024.2352449

Weintrobe, S. (2020). Moral injury, the culture of uncare and the climate bubble. *Journal of Social Work Practice*, 34(4), 351–362. <https://doi.org/10.1080/02650533.2020.1844167>

Winter, K., Pummerer, L., Hornsey, M. J., & Sassenberg, K. (2022). Pro-vaccination subjective norms moderate the relationship between conspiracy mentality and vaccination intentions. *British Journal of Health Psychology*, 27(2), 390–405. <https://doi.org/10.1111/bjhp.12550>

- Wolsko, C., Ariceaga, H., & Seiden, J. (2016). Red, white, and blue enough to be green: Effects of moral framing on climate change attitudes and conservation behaviors. *Journal of Experimental Social Psychology*, 65, 7–19. <https://doi.org/10.1016/j.jesp.2016.02.005>
- Wormley, A. S., Scott, M., Grimm, K. J., & Cohen, A. B. (2025). Measuring Morality: An Examination of the Moral Foundation Questionnaire’s Factor Structure. *Personality & Social Psychology Bulletin*, 51(2), 314–328. <https://doi.org/10.1177/01461672231191362>
- Zannat, R., Faisal, H. M., Moni, S. F., & Maxwell, L. C. (2024). Understanding We Can Do This COVID-19 vaccine campaign elements through message frames and emotional appeals. *Discover Psychology*, 4(1), 169–184. <https://doi.org/10.1007/s44202-024-00288-2>
- Žažar, K. (2022). Fighting the virus, “hunting the witches” – moralizing in public discourses during the coronavirus pandemic in Croatia. *Kybernetes*, 51(5), 1833–1848. <https://doi.org/10.1108/K-11-2020-0819>
- Zhang, B. (2024). “It’s My Moral Responsibility to Protect Others!” Examining the Effects of Moral Framing and Message Format on Influenza Vaccination Attitude and Intention. *Health Communication*, 1–13. <https://doi.org/10.1080/10410236.2024.2348236>
- Zhou, A., Liu, W., Kim, H. M., Lee, E., Shin, J., Zhang, Y., Huang-Isherwood, K. M., Dong, C., & Yang, A. (2024). Moral Foundations, Ideological Divide, and Public Engagement with U.S. Government Agencies’ COVID-19 Vaccine Communication on Social Media. *Mass Communication & Society*, 27(4), 739–764. <https://doi.org/10.1080/15205436.2022.2151919>

Appendix

I. Customized dictionary of social vaccine groups used for annotation

Term	Social Group
<i>geimpft*</i>	Vaccinated/Pro-vaccines
<i>impfwillig*</i>	Vaccinated/Pro-vaccines
<i>impfbereit*</i>	Vaccinated/Pro-vaccines
<i>impfbefürwort*</i>	Vaccinated/Pro-vaccines
<i>impfpositiv*</i>	Vaccinated/Pro-vaccines
<i>ungeimpft*</i>	Unvaccinated/Anti-vaccines
<i>impfgegner*</i>	Unvaccinated/Anti-vaccines
<i>impfskepti*</i>	Unvaccinated/Anti-vaccines
<i>impfkrit*</i>	Unvaccinated/Anti-vaccines
<i>impfverweiger*</i>	Unvaccinated/Anti-vaccines
<i>impfleugn*</i>	Unvaccinated/Anti-vaccines
<i>nicht geimpft*</i>	Unvaccinated/Anti-vaccines
<i>impfablehn*</i>	Unvaccinated/Anti-vaccines
<i>nicht-geimpft*</i>	Unvaccinated/Anti-vaccines

Abstract (English)

This master's thesis investigates how Austrian news media portrayed vaccine-related social groups during the Covid-19 pandemic. Building on the theories of social identity, framing and moral foundations, it examines to which extent vaccinated/pro-vaccine and unvaccinated/anti-vaccine groups were represented in news articles, how moral language was used in this context, and whether differences emerged between quality press and tabloid outlets. Using a computer-assisted quantitative content analysis of N= 28,188 news articles (= 584,449 sentences) published in *Kronen Zeitung*, *Heute*, *Der Standard* and *Die Presse* between November 2020 and May 2022, this study applied a dictionary-based annotation pipeline in Python to identify group mentions, co-occurring moral language, and sentiment. The results show that vaccinated groups were highly salient across media coverage, with somewhat higher visibility in quality newspapers. Unvaccinated groups were also frequently referenced and more salient in tabloid outlets. Across both media types, moral framing was pervasive but varied systematically: vaccinated groups were primarily associated with *Care/Harm* and *Purity/Degradation* frames and more positive sentiment, while unvaccinated groups were more often linked to *Authority/Subversion* and *Loyalty/Betrayal* frames, accompanied by more negative sentiment. Significant differences between media types were identified in the frequency and tone of moral framing, especially regarding the unvaccinated group. In sum, the findings underscore the dual role of journalism in crises: as a source of orientation and a co-creator of social meaning. While the differences between media types remained moderate, the presence and tone of moralized language suggest that journalistic reporting may subtly contribute to the construction and reinforcement of social group boundaries during times of uncertainty.

Abstract (German)

Diese Masterarbeit untersucht, wie österreichische Tageszeitungen während der Covid-19-Pandemie impfbezogene soziale Gruppen porträtierten. Aufbauend auf dem theoretischen Grundgerüst der Social Identity Theory, der Framing Theory und der Moral Foundations Theory analysiert die durchgeführte Studie, wie salient geimpfte und ungeimpfte Gruppen in der Berichterstattung waren, inwieweit sie mit moralischen Frames verknüpft wurden und ob Unterschiede zwischen Qualitäts- und Boulevardzeitungen feststellbar sind. Grundlage der Analyse bildet eine Computer-gestützte quantitative Inhaltsanalyse von N= 28.188 Artikeln (=584.449 Sätzen), erschienen in den Nachrichtenmedien *Kronen Zeitung*, *Heute*, *Der Standard* und *Die Presse* im Zeitraum von November 2020 bis Mai 2022. Mittels einer regelbasierten, dictionary-gestützten Annotations-Pipeline in Python wurden Gruppensalienz, moralische Sprache und Sentiment systematisch erfasst. Die Ergebnisse zeigen eine allgemein hohe Sichtbarkeit geimpfter Gruppen, mit leicht erhöhter Präsenz in Qualitätszeitungen. Ungeimpfte Gruppen wurden ebenfalls regelmäßig thematisiert und wiesen in Boulevardzeitungen eine höhere Sichtbarkeit auf. Moralisches Framing war in beiden Medientypen weit verbreitet, wobei sich systematische Unterschiede zeigten: Geimpfte Gruppen wurden vorrangig mit den Moral Foundations *Care/Harm* und *Purity/Degradation* sowie mit positivem Sentiment assoziiert, während ungeimpfte Gruppen häufiger mit *Authority/Subversion*, *Loyalty/Betrayal* und tendenziell negativem Sentiment dargestellt wurden. Signifikante Differenzen zwischen Qualitäts- und Boulevardpresse traten in Häufigkeit und Tonalität insbesondere in Bezug auf ungeimpfte Gruppen auf. Insgesamt verdeutlichen die Ergebnisse die doppelte Rolle des Journalismus in Krisenzeiten: Als Instanz der gesellschaftlichen Orientierung und als aktiver Mitgestalter öffentlicher Diskurse der sozialen Zugehörigkeit.