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“Vaccinate or Terminate”

A CDA of USA and Italian Online Petitions on Covid-19 Vaccines

Abstract

In the contemporary crisis of representative democracy, the increased accessibility of the Internet has favoured novel forms of civic engagement. E-petition platforms like Change.org have empowered individuals to address decision-makers on various issues, utilising the web to gather endorsement. During the Covid-19 pandemic, vaccination campaigns polarised public opinion, with some advocating a widespread distribution of vaccines and others rejecting them for various reasons. The swift authorisation and implementation of vaccine mandates amplified fear and mistrust, skilfully exploited by spreaders of misinformation and conspiracy theories. Integrating Critical Discourse Analysis with Corpus Linguistics, this study examines a corpus of online petitions in favour and against Covid-19 vaccinations published on Change.org in the United States and Italy. In both countries, vaccination proponents emphasise the prioritisation of human health by protecting vulnerable groups and waiving vaccine patent rights. Opposers of vaccination present a range of motivations, including doubts about vaccine safety, concerns about individual rights, and arguments against mandates. They may also tap into a populist distrust of political elites and health authorities. Consequently, the petitions blend elements from different genres, encompassing political propaganda and popular science.

Keywords: *anti-vaccinationism, Covid-19 vaccines, e-petitions, critical discourse analysis, corpus-assisted discourse studies*

At a time of crisis, social media are a double-edged sword in health communication.

(José van Dijk and Donya Alinejad, “Translating Knowledge, Establishing Trust”)

Popular petitioning serves as a direct mode of political participation wherein advocates gather a significant number of signatures to voice their concerns to higher authorities and seek policy changes (Macintosh 2003, 56). In the context of the contemporary challenges to representative democracy, the increasing accessibility and interactivity of the Internet have ushered in new opportunities for civic engagement. Online petition platforms have emerged as

influential mediums for launching, promoting, and signing petitions entirely in the digital realm (Cozma and Lehti 2021; Hagen, et al. 2015). *Change.org*, the focus of this study, stands as one of the world’s most widely used petition websites. Here, individuals can initiate online campaigns aimed at influencing decision-makers to address issues at local, national, and global levels (Change.org USA 2022; Aiezza 2018).

The worldwide impact of Covid-19 posed a profound threat to human health, prompting nations to implement a diverse array of measures in response to the pandemic. The crisis exacerbated social and economic disparities while heightening political divisions. This research delves into the user-generated discourse of e-petitions related to Covid-19 vaccines. It aims to investigate how supporters and opponents frame issues surrounding vaccination within the distinct contexts of the United States and Italy.

1. A pandemic in the post-truth era

Amidst the backdrop of the Covid-19 pandemic, an unprecedented rise in the dissemination of related content occurred, primarily within online spaces, where false or misleading news proliferated. This surge in digital information, coupled with what is now recognised as an “infodemic” (WHO 22 December 2020), highlighted considerable challenges. Emergency management responses often exhibited inconsistencies, and guidance provided to the public frequently contradicted itself. Many politicians, seizing the opportunity presented by the pandemic, leveraged it to further their agendas, spreading populist messages that opposed recommended restrictions and measures and criticising international health organisations, expert opinions, and pharmaceutical companies. This manipulation of the circumstances exacerbated feelings of fear, suspicion, and mistrust towards health authorities. It also fuelled disbelief in the presence and severity of Covid-19 and scepticism regarding the effectiveness and safety of vaccines, ultimately contributing to vaccine hesitancy (Bolsen and Palm 2022; Berman 2020). A “science-related populism” (Mede and Schäfer 2020) surfaced, promoting the idea that virtuous ‘ordinary people,’ guided by their common sense, should be the arbiters of what constitutes ‘true knowledge,’ rather than relying on the allegedly corrupt elites.

Therefore, it is unsurprising that a high number of user-generated petitions in various languages on the platform *Change.org* addressed the issue of Covid-19 and the management of the pandemic. Nevertheless, it is worth noting that the platform does not host excessively extreme positions. Petitions detected as disseminating hate speech, fake news, and conspiracy theories are indeed generally promptly removed from the website, in adherence to Community Guidelines (Change.org USA 30 August 2022).

1.1 Covid-19 management and vaccinations in the USA and Italy

This study delves into the perspectives on Covid-19 vaccines within distinct contexts, specifically the United States and Italy.¹ The response to the health emergency brought to light a heightened tension between public health concerns and civil liberties (Mujib 2023; Etzioni 2021). Both nations witnessed significant political shifts coinciding with the evolution of Covid-19. As the pandemic persisted, public willingness to embrace new guidance waned, particularly with the emergence of new variants and waves of infection.

Despite its advanced medical capabilities and status as a global economic and scientific superpower, the United States grappled with the highest number of coronavirus cases and deaths worldwide, especially during the first year of the pandemic (Johns Hopkins University & Medicine 2023; Roberts 2022). This poor performance was largely attributed to governmental shortcomings, as the Trump administration’s response primarily focused on economic concerns and potential political consequences, downplaying the public health crisis. Trump attempted to shift blame to China and accused the media and Democrats of exaggerating the pandemic to undermine his presidency. Additionally, Trump and his allies cast doubt on scientific and medical expertise, questioning the need for rigorous testing, mask-wearing, and social-distancing measures (Rovira Kaltwasser and Taggart 2022; Woolhandler et al. 2021). In the USA, as a federal nation, the management of the Covid-19 crisis was decentralised. This approach included differentiated lockdown policies and vaccination plans. Individual state authorities, municipalities, and also private entities implemented local vaccine mandates (HHS 24 October 2022), which further intensified partisan divides (Roberts 2022). The inauguration of Joe Biden in January 2021 brought promises to rebuild public confidence in the government and science, immunise the nation, reduce the spread of Covid-19, address inequities, reopen activities, and restore America’s global leadership (The White House 21 January 2021). Biden issued a directive for large businesses to either implement vaccinations or conduct weekly testing, a move ultimately blocked by the Supreme Court, while remaining in effect for healthcare facilities entitled to federal funding (Supreme Court of the United States 13 January 2022). Mandates faced substantial opposition, mainly from Republicans, who perceived their action as unconstitutional and encroaching on personal freedom (Bolsen and Palm 2022, 90).

Meanwhile, Italy witnessed a series of political transitions. Giuseppe Conte’s ‘yellow-green’ government, an alliance between the Five Star Movement (M5S) and the League, was followed in September 2019 by Conte’s second administration, this time a ‘yellow-red’ coalition, formed

¹ The current overview extends up to mid-November 2022, corresponding to the time of corpus collection. It does not, therefore, examine developments occurring after that date.

by the M5S and the Democratic Party. Subsequently, Mario Draghi was appointed Prime Minister in February 2021. During the initial pandemic wave, Italy faced one of the highest Covid-19 clinical burdens in the world (Bezzini, et al. 2021). Under the two Conte administrations, the government maintained continuous communication with the public, offering information and rationale justifying the need for stringent measures to curb the spread of the disease. In contrast, Mario Draghi pursued a more restrained communication strategy (De Blasio and Selva 2021). Italy implemented a predominantly centralised approach, requiring Covid-19 vaccination for healthcare workers and other occupational groups and introducing a national mandate for a vaccination certificate, known as the ‘green pass.’ This document served various purposes, including medical and professional activities, travel, and access to specific locations or events. The Italian system also distinguished between a ‘reinforced green pass’ applicable to individuals vaccinated against or recovered from Covid-19 and a ‘basic’ pass, obtainable with a negative test result (ECDC 08 September 2022). Protests against Covid-19 regulations in Italy escalated, expressing concerns about a ‘health dictatorship’ (in Italian, ‘dittatura sanitaria’) and allegations of segregation (Giorgi 2021).

Opponents in both nations also attacked fellow citizens for their submission to established authorities, conformity, and support for punitive social control (Peng 2022).

Both countries secured supplies of the vaccines Pfizer-BioNTech, Moderna, Janssen, and Novavax, with Italy additionally incorporating the use of Oxford-AstraZeneca. In their vaccination rollout strategies, both nations prioritised healthcare workers, vulnerable groups, and education staff. Nonetheless, some differences also emerged, notably the earlier inclusion of younger children in the vaccination plan in the United States (HHS 24 October 2022; ECDC 08 September 2022). Strikingly, Italy exhibited a higher level of vaccine acceptance, leading to an overall higher vaccination rate in the country when compared to the United States: 80% of the population was fully vaccinated in Italy, while 68% in the USA (Holder 13 March 2023).

Vaccines, a remarkable testament to human progress, have played a pivotal role in reducing the incidence of Covid-19 (Rahmani, et al. 2022), much like they have historically in the fight against infectious diseases. Nevertheless, some individuals vehemently oppose vaccination (Berman 2020, xiii). Vaccine hesitancy, resistance, or refusal may be linked to a range of factors, comprising social determinants of health, convenience, accessibility, literacy, information clarity, risk-benefit assessments, considerations of collective versus individual responsibility, trust or distrust in authority and healthcare systems, as well as ideological beliefs (Peters 2022). Vaccine-specific hesitancy also emerged, with citizens displaying greater willingness to accept vaccines with higher reported levels of efficacy and safety while expressing reservations towards

others, particularly AstraZeneca and Johnson & Johnson, due to concerns about their connection to severe side effects (Merkley and Loewen 2022).

Individuals opposing vaccine mandates encompass both those with anti-vaccine beliefs and those with vaccine-related concerns. Nevertheless, the primary points of contention often revolve around considerations about legality and individual freedom (Spitale, Biller-Andorno and Germani 2022).

2. Aims

This study explores persuasive discourses surrounding health-related decisions in online communities. It conducts a comparative examination within the different cultural and regulatory landscapes of the USA and Italy to reveal how advocates and critics have framed the subject of Covid-19 vaccinations.

The research investigates user-generated texts of e-petitions to uncover strategies and motifs employed by creators to mobilise support. The analysis centres specifically on how e-petitioners in both countries heighten public consciousness regarding the advantages and disadvantages of vaccines and appeal to the beliefs held by their respective populations, with particular attention to anti-vaccine positions.

3. Corpus

The study considers petitions from the USA and Italian versions of *Change.org* (Change.org USA 2022; Change.org Italy 2022) on the topic of Covid-19 vaccines. Petitions in English and Italian were retrieved through the search function of the websites, using the queries “covid*” and “vaccin*” in both cases, since the morphological root is identical in the two languages. The software *WordSmith Tools 7.0* (Scott 2019) was employed to analyse the corpus.

A total of 60 petitions, evenly split between the two countries, were chosen, with an equal distribution between those endorsing vaccines and those opposing them. Consequently, the corpus was divided into four segments: USApro, USAcon, ITApro, and ITAcon. The final corpus consists of 13,939 tokens for the English component and 26,769 for the Italian one (see Table 1). The petitions were created between 2020 and 2022, with a time span from 24 January 2021 to 23 August 2022 for the USA and from 23 April 2020 to 26 August 2022 for Italy. Although the study acknowledges temporal variations within this timeframe, it is important to note that the primary objective of this research did not involve a diachronic perspective.

While the length of petitions varied, Italian texts, especially those against vaccines, tended to be longer. Specifically, USApro petitions ranged from 88 to 1,026 words, USAcon from 195 to 2,705, ITApro from 128 to 1,241, and ITAcon from 145 to 4,191.

Petitions were selected based on their popularity, determined by the number of signatories. For the sake of convenience and to ensure a proportional representation of the most widely endorsed petitions in the two countries, the minimum signature threshold was set at 5,000 for the USA and 1,250 for Italy. Supporters ranged from 281,447 to 5,034 for the USA and from 281,435 to 1,252 for Italy, as of 15 November 2022. *Change.org* allows creators to declare a “victory” when they believe tangible results have been achieved (Change.org USA 2023; Karpf 2016). Only a few pro-vaccine petitions in the corpus culminated in victories: 9 in USApro and 1 in ITApro. The collected texts encompass various elements: name(s) of the addressee(s), creator’s name/nickname and location, number of supporters, creation date, titles of embedded videos and captions in the pictures, petition text, and any statement of victory. While *Change.org* offers a commenting feature, not all petitions received user responses. Therefore, to maintain consistency and focus on the primary texts, comment sections were not included in this analysis.

	USA			ITA		
	USApro	USAcon	USA tot	ITApro	ITAcon	ITA tot
Texts	15	15	30	15	15	30
Tokens	5,738	8,201	13,939	7,699	19,070	26,769
Types	1,582	1,969	2,871	2,461	4,870	6,179
STTR	45.00	43.15	43.77	54.80	51.84	52.08

Tab. 1: Corpus structure

4. Theoretical framework and methodology

This research delves into user-generated communication concerning Covid-19, drawing insights from recent investigations that have explored discourses about the pandemic. Notably, numerous studies have examined the interplay between the pandemic, populism, and conspiracy theories, with a particular focus on politics, news reporting, and social media language (Demata, Knoblock and Zummo 2022; Oswald, et al. 2022; Wodak 2021). Scholars from multiple fields have scrutinised communications related to Covid-19 within specific national contexts, including the USA (Roberts 2023; Fuchs 2021; Mair, et al. 2021) and Italy (Zanotti and Meléndez 2023; Mikolič 2022; Bertero and Seddone 2021).

Affiliation played a pivotal role in shaping opinions regarding Covid-19 management, prompting various investigations to focus on user-generated discourse within social platforms (Aiello 2022; Inwood and Zappavigna 2022; Cruickshank, et al. 2021; Ioannidis 2020). Additionally, the dissemination of scientific knowledge during the pandemic has received significant attention (Mazzoleni and Ivaldi 2022; Raffini and Penalva-Verdú 2022; O’Hair and O’Hair 2021). Furthermore, several studies (Tan and K.L.E 2023; Musolff, et al. 2022) have also applied Kress and van Leeuwen’s (2001) multimodal discourse analysis approach to examine how the pandemic was represented and recontextualised through various semiotic means.

Previous research has identified e-petitions as instances of persuasive writing aimed at garnering support from fellow citizens through various rhetorical strategies. Petitions typically leverage traditional persuasive techniques, including appeals to emotions, establishment of credibility, and provision of corroborative information (Fatkhiyati and Suharno 2019; Hagen, et al. 2016; 2015; Ghaltakhchyan 2013).

This study employs an integrated approach incorporating both quantitative and qualitative analytical perspectives. It combines Critical Discourse Analysis (henceforth CDA) (Wodak 2021; Reisigl and Wodak 2009; Wodak and Meyer 2009) with Corpus Linguistics (Baker, Gabrielatos and McEnery 2013). Within the framework of CDA, discourse is conceptualised as a collection of “context-dependent semiotic practices that are situated within specific fields of social action,” being both shaped by and shaping societal dynamics (Reisigl and Wodak 2009, 89). CDA allows for the exploration of how semiotic means dependent on power and ideology are harnessed to construct positive self-representations and negative other-representations (van Dijk 2006). In this analysis, the focus lies on the opposing views regarding virus management, to unveil how petitioners frame their arguments and the underlying ideologies they embrace. The discourse-historical approach (DHA) to CDA is adopted as an effective framework for analysing persuasive discourse. The investigation encompasses two primary tiers: an ‘entry level’ and an ‘in-depth’ examination. The ‘entry-level’ thematic analysis of discourse topics identifies the relevant frames (Goffman 1974) and the interpretative frameworks. As defined by Entman (1993), framing involves the process of selecting specific elements of the perceived reality and emphasising them. On the other hand, the ‘in-depth’ analysis entails identifying the textual genre, scrutinising its macro-structure, and delving into the strategies employed for identity construction and argumentation. In this study, the ‘entry-level’ investigation involved the thematic categorisation of petitions, including their visual components—viewed through the lens of multimodal discourse analysis (Kress and van Leeuwen 2001)—to explore their content and identify the frames through which Covid-19 vaccination was portrayed (see Paragraph 5.1).

The inspection was complemented by a more ‘in-depth’ observation, considering relevant rhetorical structures and discourses employed to support stances (see Paragraph 5.2). Corpus analyses of keywords, concordances, and collocations (Baker, Gabrielatos and McEnery 2013) were also instrumental in pinpointing areas of inquiry related to the justification strategies used to substantiate diverse positions.

Previous research has investigated petitions from a genre perspective, identifying their rhetorical structures (Aiezza 2018; Peikola 2012). Texts created on *Change.org* have been shown (Aiezza 2022; 2018) to incorporate a range of optional rhetorical moves. Such e-petitions combine features from traditional petitions, fundraising letters, and popular science with the interactive and multimodal elements of digital communication and advertising. The present study focuses specifically on some key functions of online petitions, especially those related to the following moves: “Attracting attention,” achieved primarily through titles and visuals (see Paragraphs 5.1.1 and 5.1.2); “Indicating a problem,” describing the nature of the issue to be resolved (see Paragraphs 5.1.1 and 5.2); “Referencing other materials,” quoting or linking to external sources that provide additional information (see Paragraph 5.2.1).

5. Analysis

5.1 Overview of petition content

To start the analysis, petitions within each subcorpus were categorised based on their primary topic (see Table 2).

Topics	Pro		Con	
	USApro	ITApro	USAcon	ITAcon
Vaccination and mandate in educational settings	7		2	3
Vaccination for vulnerable individuals	3	4		
Vaccination for healthcare workers			4	1
Vaccination for children	1		3	
Vaccination for other groups or settings		5	3	1
Mandate for universal vaccination and Covid pass		2	3	10
Vaccine patent rights and donations	3	3		

Tab. 2: Petition topics

In both the United States and Italy, pro-vaccine petitions predominantly advocated for prioritising vaccination rollouts within specific population segments. In the USA, this included teachers, students, and vulnerable individuals, whereas, in Italy, it encompassed vulnerable subjects, particular groups or activities, and the general population as a whole. Notably, both pro subcorpora featured petitions calling for the waiver of vaccine patent rights.

Conversely, anti-vaccine petitions in the USA primarily opposed vaccine mandates for healthcare workers, various other groups, and children, along with advocating against universal vaccination. In Italy, the focus of anti-vaccine texts predominantly revolved around the rejection of the Covid-19 ‘green pass’ system.

Change.org enables petitioners to address relevant decision-makers by tagging them. In both countries, appeals were primarily directed towards national and state representatives. Furthermore, users targeted healthcare institutions, educational establishments, international organisations, pharmaceutical companies, specific entities, or the general public.

On *Change.org*, petitioners are identified by their name and surname, the name of the organisation or nickname, along with a profile picture. Additionally, pleaders often convey their identity and qualifications within the main body of the text. As shown in Table 3, the authors of the e-petitions in question were predominantly ordinary citizens rather than scientific experts. Some of them concentrated their advocacy on children, vulnerable populations, or specific workplaces due to personal connections or interests. It is worth noting that Italian pro-vaccination requests prominently originated from non-governmental organisations (NGOs) and organised groups.

Authors	Pro		Con	
	USApro	ITApro	USAcon	ITAcon
Individual citizens	6	3	6	8
Healthcare and research professionals		1	2	3
Parents	4		3	1
Employees, their families, or labour unions		3	2	
School and university populations	2		2	3
Vulnerable individuals or their families	3	1		
NGOs or other organisations		7		

Tab. 3: Petition authors

5.1.1 *Petition titles*

Appellants must capture the readers’ attention through impactful titles and representative visuals. The titles of the petitions in the corpus explicitly convey the main themes and the initiators’ stance. These headlines can consist of a main title that introduces the topic, followed by a sentence that provides clarification or calls readers and authorities to action. In the examples that follow, emphasis was added to relevant expressions for analysis.

Titles might include affirmative phrases like “vaccines for,” “priority for,” or negative ones such as “parents/employees against,” “no to,” and “freedom from.” These structures were prevalent in the Italian titles (2 instances in the USApro titles, 14 in the ITApro, 6 in the USAcon, and 14 in the ITAcon), as seen in examples (1), (2), and (3):

- (1) **Priorità del vaccino anti covid-19** alle persone con disabilità psichica ed intellettiva [Priority of the covid-19 vaccine for people with mental and intellectual disability]² (ITApro 02 January 2021)
- (2) **STOP³ alla protezione dei brevetti** per i vaccini anti-covid: tuteliamo la salute pubblica [STOP patent protection for anti-covid vaccines: let’s safeguard public health] (ITApro 06 May 2021)
- (3) **Libertà vaccinale, non discriminazione** dei non vaccinati, **no green pass** [Vaccine freedom, non-discrimination of the unvaccinated, no green pass] (ITAcon 20 July 2021)

In accordance with *Change.org* guidelines, it is recommended that titles effectively convey a sense of urgency, often achieved through the imperative mood, pervasive in the American texts (15 cases in the USApro, 3 in the ITApro, 7 in the USAcon, and 3 in the ITAcon), as in:

- (4) **Save Lives! Include ALL Diabetics** in the COVID vaccine rollout in California (USApro 23 February 2021)
- (5) **Stop** mandatory vaccination for healthcare workers in Mesa County (USAcon 18 August 2021)

² Translations from Italian were provided by the author of this paper.

³ In Italian, the word “stop” is a noun originating from its homonymous English counterpart. It can be employed with both nominal and verbal functions, with the latter usage reflecting the imperative of the English verb. In most cases, it conveys the meaning of “halt.” It is a widely recognised word internationally, including in Italy, where it is commonly used as a directive or caution to come to a standstill, cease movement, or discontinue an action (Treccani 2023).

Expressions such as *now*, *immediate*, and *priority*, which contribute to stressing the critical situation, were particularly noticeable in the pro subcorpora (5 cases in the USApro, 6 in the ITApro, and 1 in the USAcon), as shown in:

- (6) Allow PA Teachers to Get the COVID Vaccine **NOW!** (USApro 12 February 2021)
- (7) Covid19: **subito** il vaccino nelle carceri [Covid19: vaccine in prisons **immediately**] (ITApro 30 December 2020)

The use of ‘shouty’ capitalisations, especially prevalent in Italian anti-vaccine texts, was also noteworthy (5 instances in the USApro titles, 2 in the ITApro, 4 in the USAcon, and 6 in the ITAcon), as in:

- (8) **NO ALLA DAD PER GLI STUDENTI SENZA GREEN PASS [NO TO REMOTE LEARNING FOR STUDENTS WITHOUT A GREEN PASS]** (ITAcon 16 January 2022)

In summary, pro-vaccine petition titles stressed the need to prioritise vaccination for specific vulnerable groups to ensure their well-being. They also promoted a discourse centred on obligation and responsibility, advocating for mandatory vaccination policies to safely resume social activities. Furthermore, they called for the suspension of patent rights and international collaboration to vaccinate individuals in low-income countries, contributing to the global effort against the pandemic while protecting also public health domestically.

The titles of anti-vaccine petitions in both countries shared similar discourse patterns. They presented the themes of autonomy, choice, and resistance against perceived coercive measures, emphasising individual freedom and the right to make decisions regarding vaccination. These pleas opposed vaccine mandates, expressing concerns about their impact on educational institutions, personal liberties, and access to public services. Anti-vaccinationists in both nations were committed to safeguarding the rights of healthcare workers and employees, advocating for policy changes and mobilisation against vaccination requirements.

Children were a more prominent topic in the titles of petitions from the USA. Some USApro titles highlighted the link between vaccination and the safe reopening of schools, reflecting concerns about children’s health and education. In contrast, several USAcon e-petitions focused on parental apprehensions regarding children vaccination. Among other country-specific themes, the Italian anti-vaccine titles also contained medical concepts, including herd immunity and exemptions based on prior infection.

5.1.2 Petition visuals

The petitions also engaged readers by incorporating visual elements, such as images or videos, covering various themes, as summarised in Table 4. It is crucial to observe that a single visual could encompass multiple topics simultaneously.

Visual topics	Pro		Con	
	USApro	ITApro	USAcon	ITAcon
Slogans	4	5	9	4
Protests		1	3	2
Signage			2	1
Flags	2		1	1
Vaccine and vaccination	6	6	1	
Healthcare professionals	5	5	4	1
PPE (personal protective equipment)	3	2	2	3
Medical tools	2			1
Green pass				4
Covid-19 ‘spiky ball’ symbol	1	2		1
Vulnerable individuals	2	2	1	
Children	2			
Universities and schools			3	2
Workplaces		2	2	

Tab. 4: Some relevant topics in petition visuals

Visual elements were further categorised based on their overall tone, falling into one of the following categories: positive; negative; neutral or representative; protest or informative. The interpretation of positivity or negativity in visuals is contingent upon the initiator’s perspective. For pro-vaccine petitioners, a positive visual might depict the act of receiving a vaccine, whereas a negative visual could portray problematic situations such as a jail, a disease, or overcrowded places, raising concerns for workers. On the contrary, for those opposing vaccines, an image of a green pass smartphone application could be viewed as negative. Neutral or representative visuals typically included depictions of workplaces or settings relevant to the requests, while protest or informative visuals often featured slogans or demonstrations.

In both countries, petitions advocating for vaccines frequently contained positive representations from the medical realm, showcasing vaccine phials, syringes, PPE, and healthcare professionals actively engaged in administering vaccinations. Conversely, visual elements in petitions opposing vaccines tended to include informative texts or slogans. In Italy, they predominantly focused on attacking the Covid-19 pass. Other visuals depicted various individuals and locations connected with the petition topic.

Further categorisation of the symbols found in these images might be conducted. Notably, it is worth noting that all subcorpora contained images that employed visual metaphors (Messaris 1997, 10). For instance, hands played a prominent role in several images (5 in USApro, 6 in ITApro, 5 in USAcon, and 8 in ITAcon), serving contrasting purposes. Hands were a recurring topic during the pandemic, involved in actions such as handwashing, sanitising, glove-wearing, discouraging face-touching, and maintaining social distance.



Fig. 1: Examples of visual metaphors representing hands (upper left: USApro 02 February 2021; lower left: ITApro 26 August 2021; upper right USAcon 17 August 2021; lower right ITAcon 26 August 2022; copyright: © 2023, Change.org, PBC)

Figure 1 provides illustrative examples from the corpus. In the upper left, a healthcare worker is portrayed holding a vaccine phial with one hand while giving a thumbs-up sign as a gesture of approval with the other. In the lower left, children’s hands are depicted engaging in the responsible Covid-era greeting, a fist bump. In the upper right, nurses are shown while touching through a transparent curtain, signifying respect for their dedication and sacrifices in

preventing contamination, by avoiding the imposition of additional burdens and requirements. In the lower right, a silhouette of a person breaks free from the constraints of a vaccine mandate, symbolised by broken chains.

5.2 Comparing pro- and anti-vaccine petitions in the USA and Italy

To analyse the written content of e-petitions, keywords were extracted to facilitate a comparison between pro-vaccine and anti-vaccine positions in both countries. The USApro subcorpus was thus contrasted against the USAcon, and the ITApro against the ITAcon. Keywords were included only if appearing in at least 20% of the texts (3 out of 15 for each subcorpus). Statistical significance was determined with a p-value set at 0.001, and the Log Likelihood test was applied to evaluate keyness. Key terms with a score ≥ 14 were considered. The findings for the American component are provided in Table 5, while Table 6 presents the results for the Italian section.

Keywords USApro	Freq.	Log L.	Keywords USAcon	Freq.	Log L.
teachers	39	43.38	mandate	39	41.37
type	23	40.83	employees	25	26.52
diabetes	17	30.18	workers	24	25.46
educators	15	20.21	healthcare	18	19.10
children	32	16.49	choice	16	16.97
high	9	15.98	choose	15	15.91
victory	9	15.98	against	24	14.91
risk	20	15.79	jobs	14	14.85
school	19	14.47			
safely	8	14.20			

Tab. 5: Keywords USApro vs USAcon

In the USA pro-vaccine texts, keywords primarily referred to the groups whom the applicants aimed to prioritise in vaccine rollouts, especially school populations (*teachers, educators, children*) and people dealing with chronic diseases like *diabetes*.

Conversely, within the anti-vaccine USA petitions, keywords encompassed the disputed *mandate* and specific groups for whom proponents advocated exemptions from mandatory

vaccination, such as *employees* and *healthcare workers*. The emphasis on individual freedom regarding vaccines was evident through terms like *choose* and *choice*.

Keywords ITApro	Freq.	Log L.	Keywords ITAcon	Freq.	Log L.
brevetti [patents]	14	34.89	SARS-CoV-2	59	27.40
salute [health]	46	33.03	green	49	25.92
anti-covid	13	32.40	of	49	25.92
globale [global]	12	29.91	pass	48	25.29
pandemia [pandemic]	20	28.22	anticorpi [antibodies]	36	24.42
categorie [categories]	13	25.87	it	32	21.70
priorità [priority]	13	25.87	casi [cases]	29	19.67
lavoratori [workers]	14	24.19	articolo [article]	31	14.62
presidente [president]	41	22.85			
mondiale [world's]	9	22.43			
paesi [countries]	24	22.13			
vaccini [vaccines]	27	21.38			
Mario	15	20.54			
commissario [commissioner]	7	17.45			
Luigi	7	17.45			
regionale [regional]	7	17.45			
ministro [minister]	21	17.22			
comitato [committee]	6	14.95			
commissione [commission]	6	14.95			
senatrice [female senator]	6	14.95			
straordinario [extraordinary]	6	14.95			
piano [plan]	11	14.90			
reddito [income]	11	14.90			

Tab. 6: Keywords ITApro vs ITAcon

The Italian pro-vaccine keywords displayed references to the waiver of patent rights to assist underprivileged countries. Key terms included *patent*, *global*, *countries*, and *income*, as well as words related to the Covid-19 crisis and its management, such as *health*, *pandemic*, *priority*, *categories*, *anti-covid*, and *vaccines*. Additionally, several keywords related to specific political recipients of the appeals.

In contrast, the keywords in the Italian anti-vaccine subcorpus highlighted the contentious *green pass*, alongside more technical terms, such as the scientific designation of the virus as *SARS-CoV-2*, *antibodies*, *infection cases*, and the legal term *article*. Moreover, *of* and *it* held relevance, with the former representing the English preposition found in the titles of specialised medical references cited in anti-vaccine petitions, and the latter, *it*, denoting the URL domain of the hyperlinks embedded to support the claims.

5.2.1 Anti-vaccine discourses

A following step of the analysis focused on selected key terms and explored relevant themes, particularly within the anti-vaccine subcorpora. Some of the most relevant keywords identified were examined, studying their concordances and delving into the surrounding texts to uncover emerging frames on Covid-19 vaccines.

Within the USA anti-vaccine subcorpus, the concordances of the search string “mandat*” (70 occurrences, 0.85%) encompassed a range of contexts (see Figure 2). These included descriptions of mandate regulations, statements and slogans expressing the petitioners’ opposition to compulsory vaccination policy, and numerous arguments reinforcing their standpoint.

Vaccine mandates, specifically the one instituted by President Biden (see Paragraph 1.1), were frequently framed as challenging individual rights. They were described as *unlawful* and *unconstitutional*, seen as contravening American legal principles, notably the Fourth Amendment, which safeguards bodily integrity, as in:

- (9) All students, faculty, alumni, and community members need to recognize the fact that **our basic civil liberties are being taken away from us**. This is happening one institution, one CDC recommendation, and **one mandate at a time**. (USAcon 31 July 2021)
- (10) **Mandating** the Covid-19 vaccine on anyone is a **violation of our rights**. (USAcon 11 August 2021)
- (11) We believe that the October 2021 COVID vaccine mandate is **unconstitutional** because it violates the right to bodily integrity (Fourth Amendment). The **mandate is**

designed as a scare tactic and has **no force of the law** behind it. (USAcon 22 October 2021)

(12) Our petition will show our representatives how many people are against President Biden’s **unconstitutional vaccine mandate** [...]. (USAcon 27 October 2021)

(13) These new mandates are **unjust, unlawful and un-American**. (USAcon 27 November 2021)

, and car seats. When asked Hochul if **she would mandate vaccinations** for young people in that age Aug 11, 2021 Governor Inslee has **demanding via mandate that** all healthcare workers in Washington by April 2 will b...] Stop the **T-Mobile Vax Mandate United** States started this petition to Washington - STOP THE **COVID VACCINE MANDATE [STOP FORCED VACCINE**
 We believe that the October 2021 **COVID vaccine mandate is** unconstitutional because it violates the , President Biden announced a **COVID-19 vaccine mandate on** all businesses with over 100 to tell Congress to make **COVID-19 vaccine mandates illegal** or face economic disaster. Our 30, 2022 We request that the **Covid-19 vaccine mandate for** all employees be REMOVED!!! No National Walkout will go on until **COVID-19 vaccine mandates are** made illegal in the United States. Join The National Walkout To **End Vaccine Mandates [PROJECT STANDTOGETHER.COM** religions that must be exempted from **the vaccine mandate, and** due to the existence of this list, Florida to amend their **COVID 19 Vaccination Mandate Alfredo** Fernandez MD Miami, FL, United and/or amend the **COVID-19 vaccination mandate. Many** of us will be forced to leave their act on a solution to end **these unconstitutional mandates. If** we want to see change, we must believe that it is neither morally right nor **lawful to mandate NYPD** and FDNY officers to undergo Montgomery County Council passing a **proposal to mandate vaccine** passports! This proposal was , or else lose their jobs by October 18, 2021. **This mandate is** in direct opposition with the we are going to STEP UP and FIGHT **against this mandate. We** do not wish to be impartial and sake, our own sake and our customers sake. **If this mandate holds,** T-Mobile will lose a lot of great health and strength in your reconsideration **of this mandate, and** we hope to hear from you soon. us in telling the federal government to **remove this mandate immediately,** or at the very least to offer vaccination policy immediately **withdraw this mandate. As** a community we stand together to right to bodily integrity (Fourth **Amendment). The mandate is** designed as a scare tactic and has no **Stop mandatory vaccination** for healthcare workers in If you are at all concerned about the new **CA state mandate forcing** vaccinations on our teachers and is an issue of personal & parental choice. **The state mandate would** force vaccinations on excellent , 2022. It has been clearly stated that **while some mandates are** being stayed by the courts, statements was the **secondary requirement, mandating all** students and staff to receive one of workers. The CDC is **not recommending mandated vaccinations.** For over 18 months this institution, one CDC recommendation, **and one mandate at** a time. It has been highlighted in the of Firefighters) is opposed to this **position of mandated vaccinations** and has published a are not vaccinated against COVID-19. **These new mandates are** unjust, unlawful and un-American. We Created Sep 10, 2021 LAUSD **CANNOT FORCE MANDATE ANY MAN, WOMAN, OR** as a federal contractor and the **deadline for mandatory vaccination** is on January 4th, 2022. It STOP **CA COVID MANDATE FOR TEACHERS AND STUDENTS** 19th that all changed when **Governor Brown mandated vaccines** for health care workers. Health and other healthcare facilities in Mesa **County are mandating the** COVID-19 vaccines for employees. for our children. We will NOT **ACCEPT any mandates put** on our children and we DEMAND BNSF **Employees Against Mandated COVID** Vaccine [BNSF 4872] Levi Sep 21, 2021 We are New York **parents against mandating the** COVID-19 vaccine for our children. New York **Parents Against Mandatory COVID-19** Vaccines for Children [NY

Fig. 2: Some concordances of “mandat*” in the USAcon subcorpus

CDC is in the same position, they offer freedom in **choice without mandating**. **That** is the reasonable medical freedom. We are demanding the right to **choose whether or not** we take an experimental and autonomy over our bodies and the ability to freely **choose what does or** does not enter our bodies is a that our health care workers deserve the right to **choose what goes in** their bodies without being along with kids regardless of their personal right to **choose what goes in** those bodies. 72.9% of Allow Oregon health care workers the right to **choose what goes in** their bodies [I stand with of Covid-19. Everyone should have the right to **choose what is put** into their body, while knowing 18, 2021 Stand up for medical freedom and for the **choice to choose if YOU** decide to get vaccinated the beginning of the pandemic. While many workers **chose to get the** vaccine, there are still those who possible long term effects of the vaccination before **choosing to put it** into the bodies of our children. to say no, are we even American anymore? If you **choose to take the** vaccine that is on you, and if you AGE BRACKET SHOULD HAVE THE RIGHT TO **CHOOSE TO VACCINATE THEIR KIDS AND NOT** get vaccinated—because that should be a personal **choice—this is about** the government trying to force & teachers, but this is an issue of personal & parental **choice**. **The state mandate** would force vaccinations to lose our jobs and income for making a personal **choice that the government** should absolutely have information is at bottom of petition. The council **chose not to vote** on the proposal on the 25th, choose to take the vaccine that is on you, and if you **choose not to take** it, once again that is on you! It is while there are many who are vaccinated, many have **chosen not to get** it. Many of the unvaccinated are and we ask that all NYPD and FDNY members who **choose not to get** vaccinated be allowed to continue as the act of coercing....“to compel to an act or **choice” or “to achieve** by force or threat” (https: its employees into giving up their right to medical **choice**. **Meanwhile, NYPD and FDNY** members as . However, for many others, it may not be the best **choice**. **Many believe that** more time needs to pass FIRED FOR MAKING A PERSONAL HEALTH **CHOICE.**] **Jennifer Blackford Albuquerque, NM,** [I stand with Oregon health care workers’ right to **choose.**] **Jane Doe United States** started this for children in 2019. Parents should have the right to **choose if they want** to vaccinate their children for Stand up for medical freedom and for the choice to **choose if YOU decide** to get vaccinated with the FOR TEACHERS AND STUDENTS Free **Choice Huntington Beach, CA,** United States as many nurses and other healthcare workers will **choose freedom over fear** and leave the healthcare decision, they are trying to strip us of our God-given **choice for our personal** health. Now, somehow York State parents who are advocating for vaccine **CHOICE for our children**. We will NOT ACCEPT , please DO NOT force us out of NY, give parents a **CHOICE for their children** who are too young to themselves and their kids vaccinated IS the best **choice for them**. **However,** for many others, it may should be aware of the implication of the government **choosing FOR US what** goes into our bodies. hired. Also, this is truly wrong to force someone to **choose between a medical** choice and their job. is giving us an ultimatum. They are forcing us to **choose between our livelihood** and getting cases since 1968. I hope to be able to make that free **choice and still keep** my kids in public school. I hope to force someone to choose between a medical **choice and their job**. RETAIL EMPLOYEES WHO . That leaves millions of Americans who have **chosen against it for** now, and that is their right.

Fig. 3: Some concordances of “cho*” in the USAcon subcorpus

Concordances of the string “cho*” (as in, e.g., *choice* and *choose*; 38 occurrences, 0.46%) were also examined in the USAcon subcorpus (see Figure 3). An emerging frame revolved around the concept of individual autonomy in making health-related choices without external coercion. This narrative emphasised specific demographics impacted by the mandates, including healthcare workers, teachers, staff, and children, to elicit empathy and garner support for the cause. Users presented the issue as a question of bodily autonomy (see also Solis 18 June 2019), of personal choice concerning what individuals put into their bodies or administer to their children:

- (14) Sign the petition and tell Governor Brown that our health care workers deserve **the right to choose what goes in their bodies** without being coerced. (USAcon 23 August 2022)

- (15) The state mandate would force vaccinations on excellent teachers & staff along with kids regardless of their personal **right to choose what goes in those bodies**. (USAcon 14 October 2021)

USAcon petitioners also perceived workplace mandates as unjust ultimatums, forcing individuals to compromise their beliefs and potentially endanger their health merely to secure their employment. This frame underscores the idea that individuals should not be pressured or coerced into a specific vaccination decision and should retain the freedom to determine what aligns best with their interests without fear of punitive repercussions (see also (26)):

- (16) The federal government is giving us an **ultimatum**. They are forcing us to **choose** between our **livelihood** and getting vaccinated with the COVID-19 vaccine. (USAcon 12 November 2021)
- (17) Stand up for medical freedom and for the **choice to choose** if YOU decide to get vaccinated with the COVID-19 vaccine without **fear of losing your livelihood and career**. (USAcon 18 August 2021)

Parallel to the USA *mandate*, the phrase *green pass* (48 occurrences, 0.25%) was concordanced in the ITAcon subcorpus (see Figure 4). Within this context, users referred to the different areas of implementation and types of green pass (whether basic or reinforced/super). Petitioners challenged the vaccine pass through expressions of dissent (also discussed in Paragraph 5.1.1). These opposition arguments exhibited varying degrees of intensity, ranging from reasoned explanations to more explicitly populist and anti-vaccine perspectives.

Doubts surfaced concerning the efficacy and reliability of the green pass as a safety measure, emphasising the need for objective immunity assessment rather than relying on mere regulatory criteria. Additionally, objections were raised regarding the necessity and effectiveness of the green pass in specific contexts, such as public transport, as it would not guarantee immunity from contagion:

- (18) [...] raccolta firma [sic] per ottenere Green Pass **non su basi burocratiche**, a seguito della mera epoca di vaccinazione o di avvenuta guarigione, ma su elementi diagnostici oggettivi sulla propria risposta immunitaria [...]. [collection of signature [sic] to obtain Green Pass **not on bureaucratic grounds**, based on the mere date of vaccination or recovery, but on objective diagnostic elements about one's immune response [...].] (ITAcon 28 July 2021)

- (19) Sia perciò deposta nell’università la tessera del Green Pass, con la sua **falsa “garanzia di sicurezza”**, dal momento che è ormai comune evidenza che anche i vaccinati possono contagiarsi e contagiare [...]. [Let thus the Green Pass card, with its **false “safety guarantee”**, be discarded in the university, since it is now common evidence that even vaccinated people can become infected and infect [...].] (ITAcon 09 September 2021)
- (20) Il super green pass sui mezzi pubblici **non è una misura sanitaria**: il vaccino **non impedisce il contagio**, d’altra parte le fasce di popolazione (che per età e patologie pregresse [sic]) sono più a rischio di terapia intensiva, hanno una buona copertura vaccinale, e sono protette dalla malattia grave. [The super green pass on public transport **is not a health measure**: the vaccine **does not prevent contagion**, after all, the population groups (who due to their age and previous diseases [sic]) are more at risk of intensive care, have good vaccination coverage, and are protected from severe disease.] (ITAcon 25 January 2022)

... !!! Obiettivi: 1 Libertà di scelta per il vaccino 2 **NO al Green Pass** 3 Libertà di scelta sui tamponi Considerato Libertà di scelta per il vaccino. **No al Green Pass [NO GREEN PASS LIBERTÀ di scelta sul**
No al Green Pass Obbligatorio [VACCINATION CERTIFICATE
 SE NON HO ANTICORPI VACCINAMI! SE **HO ANTICORPI GREEN PASS ILLIMITATO!** Claudio Giorlandino Direttore
 , organizzazioni, aziende pubblici o privati **di creare Green Pass o** passaporti vaccinali finalizzati ad identificare i
 UNIVERSITA' **LIBERE DAL GREEN PASS!** Paolo Cesaretti Italia ha lanciato questa
 SI COMPRA. !! FIRMA PER **L'ABOLIZIONE DEL GREEN PASS E** ABOLIZIONE DI EVENTUALE 'OBBLIGO
 1 set 2021 RACCOLTA FIRME PER **ABROGAZIONE DEL GREEN PASS !! INUTILE** STRUMENTO DI RICATTO PER
 anche a tempo pieno nel caso di **mantenimento del Green Pass. Entro** l'inizio del nuovo anno accademico: 27
 meno di lei. Sia perciò deposta nell’università la **tessera del Green Pass, con** la sua falsa "garanzia di sicurezza", dal
 autorizzino le seguenti disposizioni: - Revoca **dell'obbligo di Green Pass per** accedere alle attività e alle infrastrutture
NO GREEN PASS-STOP DISCRIMINAZIONI [GREEN PASS? PER NOI LA LIBERTÀ È SACRA] IVANO
 ... d'altra parte per la libertà, la questione non si pone **1. Il “green pass” obbliga** al vaccino o all’effettuazione di un
 indiretto della somministrazione del Vaccino al COVID **19. Il Green Pass, già** vietato dal Parlamento Europeo - Reg. n.953
 il famoso dott. Crisanti non ha potuto nascondere **come il Green Pass non** sia uno strumento di sanità pubblica, bensì
 Famiglie Senz'Auto (in foto, protesta degli Studenti **contro il Green Pass**) ss
 Data di lancio 8 ago 2021 Con l'introduzione del nuovo **DL il green pass è** stato esteso a 12 mesi soltanto per i vaccinati e
 -Possibili effetti collaterali per la gravidanza **ecc... Il Green Pass obbligatorio**, nonostante preveda, oltre alla
 supposizione di contagiosità di quanti non **esibiscano il green pass, in** mancanza completa di prove e perfino di indizi
 . Infatti, l'art. 9 del decreto-legge 52/2021, che **introduce il “green pass” prevede** espressamente l’applicabilità delle
 Nazionale Covid e che attualmente non possono **ottenere il Green Pass. Si** tratta di centinaia di persone - forse migliaia -
 se compatibili con il Regolamento CE 953/2021. **Pertanto, il “green pass” è** FACOLTATIVO. 4. Il Consiglio d’Europa
 ha già lanciato un monito importante: "Per quanto **riguarda il Green Pass rafforzato** recentemente approvato in Italia (...)
 DIRITTI SONO #FUORISERVIZIO **STUDENTI CONTRO IL GREEN PASS]** Linda Maggiori Faenza, Italia ha lanciato
 in questo paese l'esecutivo abbia istituito una **tessera (il “Green Pass”, il** cui nome stesso implica soggiacenza
 Libertà di scelta per il vaccino. **No al Green Pass [NO GREEN PASS LIBERTÀ** di scelta sul vaccino [http://chng.it/](http://chng.it/UniBz)
 UniBz **pro-choice / No Green Pass [unibz]** Unibz Pro-choice BOLZANO, Italia ha
 Libertà vaccinale, non discriminazione dei non **vaccinati, no green pass [NO ALL’OBBLIGO VACCINALE SI ALLA**
 di Roma e Milano lancia una raccolta firma **per ottenere Green Pass non** su basi burocratiche, a seguito della mera
 stato accettato. Ora mi trovo vaccinata, iperimmune **e senza Green Pass. Siamo** guide turistiche (nel mio caso),
 Vaccinati e guariti iperimmuni, **ma senza Green Pass: il** governo intervenga [ANNULLATO Cognome e
 del codice civile. Inoltre gli studenti e **studentesse senza Green Pass non** potranno accedere alle strutture universitarie
NO ALLA DAD PER GLI STUDENTI SENZA GREEN PASS [Youtube: <https://youtu.be/qXau6zXJTHU>
STOP GREEN PASS Liberta Per sempre Italia ha lanciato questa
 , di condizioni personali e sociali." Di contro, le **norme sul green pass obbligatorio** per l’accesso ai ristoranti e ad altre
 sulla salute pubblica, la discriminazione causata **dal Super Green Pass è** un duro colpo al benessere emotivo e psichico
 (Il Ministro della Salute prevede una deroga all’uso **del super green pass solo** per gli scuolabus, ma dal 10 febbraio il
 Togliete **il super green pass dai** mezzi pubblici! [I TUOI DIRITTI SONO
 il super gp sarà richiesto anche negli scuolabus.) **Il super green pass sui** mezzi pubblici non è una misura sanitaria: il
 25 gen 2022 Dal 10 gennaio solo chi possiede **il super green pass (vaccinati/guariti)** può salire sui mezzi pubblici.
 da Covid19 ha anticorpi fino a 12 mesi deve invece **avere un green pass limitato** a soli 6 mesi? Firma anche tu per

Fig. 4: Some concordances of *green pass* in the ITAcon subcorpus

Arguments also contended that the green pass requirements violated fundamental rights, including physical and mental integrity and the imperative of informed consent. This measure was viewed as unconstitutional, discriminatory, and in breach of EU law:

- (21) Il Green Pass, già vietato dal Parlamento Europeo - Reg. n.953/2021 [sic] è una misura restrittiva **anticostituzionale e l’emblema della discriminazione**. [The Green Pass, already banned by the European Parliament - Reg. no.953/2021 [sic] is an **unconstitutional** restrictive measure and **the emblem of discrimination**.] (ITAcn 12 August 2021)
- (22) Il “green pass” obbliga al vaccino o all’effettuazione di un tampone ogni 48 ore. Ciò è **illegale in base alla Carta dei diritti fondamentali dell’Unione Europea** che all’art. 3 dispone: “Ogni individuo ha diritto alla propria integrità fisica e psichica. Nell’ambito della medicina e della biologia devono essere in particolare rispettati: il **consenso libero e informato** della persona interessata, secondo le modalità definite dalla legge.” [The “green pass” requires vaccination or performing a test every 48 hours. This is **illegal under the Charter of Fundamental Rights of the European Union** which in art. 3 provides: “Everyone has the right to his or her physical and mental integrity. In the fields of medicine and biology, the following must be respected in particular: the **free and informed consent** of the person concerned, according to the procedures laid down by law.”] (ITAcn 26 August 2022)

However, it is worth noting that the arguments did not take into account that restrictions or requirements were permissible under EU law to protect public health during the Covid-19 pandemic, as supported by the available scientific evidence (European Parliament and Council of the European Union 15 June 2021).

In the most extreme instances, the Covid-19 pass was seen as a means of blackmail, coercion, and submission, enforced upon citizens from higher authorities and constraining personal liberty:

- (23) RACCOLTA FIRME PER ABROGAZIONE DEL GREEN PASS !! **INUTILE STRUMENTO DI RICATTO** PER UNA POPOLAZIONE CHE NON VUOLE ESSERE COMPRATA,PERCHE LA **LIBERTA'NON SI COMPRA**. !! [sic] [COLLECTION OF SIGNATURES TO REPEAL THE GREEN PASS !! **USELESS BLACKMAIL TOOL** FOR A POPULATION THAT DOES NOT WANT TO BE BOUGHT,BECAUSE **FREEDOMCANNOT BE BOUGHT**. !! [sic]] (ITAcn 01 September 2021)
- (24) [...] una tessera (il “Green Pass”, il cui nome stesso implica **soggiacenza linguistica e cessione di autonomia intellettuale**) che introduce **divisioni e discriminazioni** [...]. [[...] a card (the “Green Pass”, whose very name implies **linguistic subjugation**

and **cession of intellectual autonomy**) that introduces **divisions and discrimination** [...]. (ITAcon 09 September 2021)

Examples like the previous ones reveal common elements often observed in populist texts. These characteristics include typographical features like capitalisation, exclamation marks, misspelt words, and distinctive punctuation patterns (see Aiezza 2019, 132-134; Napolitano and Aiezza 2018, 102-103). These traits are accompanied by the recurring theme of resistance against prevailing elites and the emphasis on individual intellectual autonomy (see Mede and Schäfer 2020).

Considering the relevance of the issue within the texts under investigation, concordances for the string “vaccin*” were retrieved for both the USA and the Italian anti-vaccine subcorpora, resulting in 169 occurrences (2.06%) in the USAcon and 213 instances (1.10%) in the ITAcon.

Upon scrutinising concordances in the USA anti-vaccine texts, it became apparent that numerous petitioners engaged in scientific discourse, particularly in the context of drug development. A primary criticism centred on the expeditious authorisation of Covid-19 vaccines, reflecting scepticism and apprehensions and defending the right to make informed decisions. These texts depicted the vaccines as *experimental*, highlighting the absence of long-term studies and potential risks, especially for children:

- (25) As of August 17th, 2021, The [sic] currently implemented COVID-19 **vaccines are NOT FDA approved**. Emergency use authorization has been granted to the currently used COVID-19 vaccines which include Pfizer, Moderna, and J&J vaccines. According to the FDA these are **investigational drugs**, therefore **experimental** in nature. (USAcon 17 August 2021)
- (26) We are demanding the right to choose whether or not we take an **experimental vaccine** with no long term studies without jeopardizing our jobs. (USAcon 18 August 2021)
- (27) The Covid-19 vaccine has **NOT had sufficient study trials** for children, **nor has it been tested long enough**. This vaccine has significant side effects. (USAcon 05 November 2021)

Some petitioners contended that vaccines were unnecessary for children, citing their lower susceptibility to severe effects from the virus. Arguments also involved presenting statistics to underscore the minimal Covid-19 risk within younger age groups, as in (28). Some authors even downplayed the significance of the pandemic, comparing it to a common cold (29), thereby questioning the necessity of enforcing vaccine requirements for various social activities:

- (28) WITH CDC’S UPDATED COVID-19 INFECTION FATALITY RATE FOR THE AGE GROUP OF 0-19 YEARS BEING 0.00003% WITH SURVIVAL RATE OF 99.997% THE DECISION MADE BY THE LAUSD BOARD OF EDUCATION IS IRRESPONSIBLE AND MADE WITHOUT ANY CONSIDERATION OF THE SAFETY OF THEIR STUDENTS AND FACULTY IN MIND. (USAcon 10 September 2021)
- (29) How many boosters will they require us to give our children so they can go to a restaurant, gym, movies, etc... **for something as mild as a cold at the moment?** (USAcon 13 January 2022)

Similar motifs to those identified in the USAcon were observed in the Italian anti-vaccine subcorpus. Concerns were voiced regarding vaccines due to their perceived experimental nature. Doubts and inquiries about the safety and efficacy of Covid-19 vaccine were raised even among healthcare professionals, as in (30):

- (30) I nostri dubbi non riguardano l’efficacia dei vaccini in generale, ma **l’efficacia e la sicurezza dei vaccini per il Covid-19 che vengono proposti in modo indiscriminato**, anche a chi è già stato contagiato dal virus, senza alcun controllo sierologico, senza diritto di scelta sul farmaco da usare [...]. E’ anche noto che le informazioni date alla cittadinanza, [sic] sono state troppo vaghe e contraddittorie, si pensi alla **vicenda Astra Zeneca** su limiti di età per la somministrazione, pericolosità del farmaco, [...]. Possiamo davvero fidarci? [...] E’ evidente che si tratta di una spesa enorme per gli stati e di un **guadagno enorme per le multinazionali del farmaco**. [Our doubts do not concern the effectiveness of vaccines in general, but the **effectiveness and safety of vaccines for Covid-19 that are offered indiscriminately**, even to those who have already been infected with the virus, without any serological testing, without the right to choose which drug to use [...]. It is also well known that the information given to the public, [sic] has been too vague and contradictory, think of the **Astra Zeneca issue** on age limits for administration, drug dangerousness, [...]. Can we really trust? [...] It is evident that this represents a huge expense for states and a **huge profit for pharmaceutical multinationals.**] (ITAcon 1 April 2021)

These sentiments revealed a pervasive scepticism and mistrust towards authorities, pharmaceutical companies (‘Big Pharma’), and the vaccination process. This suspicion was fuelled by a perceived lack of transparency and clarity concerning vaccine-related decisions and information, further contributing to vaccine (including vaccine-specific) hesitancy (see Paragraph 1.1).

Within the ITAcon component, overt instances of populist and anti-scientific perspectives were observed. These discussions encompassed allegations of censorship and the suppression of

alternative treatments in favour of vaccines, as in (31). Some also expressed support for alternative viewpoints that challenged official positions, such as Montagnier’s opinions against mass vaccination, and even disseminated false information, also concerning the alleged hazardous presence of graphene in vaccine formulations, as seen in (32):

- (31) Vediamo [...] la sistematica **cancellazione di ogni accenno a diversi sistemi di cura rispetto alla “narrazione ufficiale” del salvifico vaccino**, si tratti di vitamina C o di eparina, in totale assenza di contraddittorio. [We are witnessing [...] the systematic **deletion of any mention of treatments different from the “official narrative” of the salvific vaccine**, be it vitamin C or heparin, in a total absence of opposition.] (ITAcon 23 April 2020)
- (32) [...] **alcuni medici e scienziati**, tra i quali il premio Nobel per la medicina Luc Montagnier (11), affermano che vaccinare in massa in tempo di epidemia non è prudente in quanto favorirebbe l’insorgenza di **mutazioni nel patogeno**. [...] **Potrebbe assicurare che a nessuno dei suoi studenti il vaccino provocherà un’ischemia**, [...] un evento di tossicità da ossido di grafene (33) e quant’altro? [...] 11. “La vaccinazione di massa è un enorme errore...” parola di Luc Montagnier, 9 giugno 2021, <https://www.politicamentecorretto.com/> [...] 33. **ESCLUSIVO! KAREN KINGSTON, ANALISTA PER LE INDUSTRIE FARMACEUTICHE ED EX DIPENDENTE PFIZER CONFERMA: OSSIDO DI GRAFENE TOSSICO ALL’INTERNO DEI SIERI MRNA**, 29 luglio, <https://www.databaseitalia.it/> [...] **some doctors and scientists**, including the Nobel Prize winner for medicine Luc Montagnier (11), say that mass vaccination in times of epidemic is not prudent as it might promote **pathogenic mutations**. [...] **Could you ensure that the vaccine will not cause any of your students** to experience an ischaemia, [...] a graphene oxide toxicity event (33) or whatever? [...] 11. “Mass vaccination is a huge mistake...” says Luc Montagnier, 9 June 2021, <https://www.politicamentecorretto.com/> [...] 33. **EXCLUSIVE! KAREN KINGSTON, ANALYST FOR PHARMACEUTICAL INDUSTRIES AND FORMER PFIZER EMPLOYEE CONFIRMS: TOXIC GRAPHENE OXIDE IN MRNA SERUMS**, 29 July, <https://www.databaseitalia.it/>] (ITAcon 09 September 2021)

As evident in both American and Italian contexts, petitioners, even those lacking expert qualifications, actively engaged in disseminating specialised knowledge (see also Aiezza 2022; 2018). In their efforts to persuade, these individuals often selected references that conformed to their own perspectives. Pleaders incorporated scientific information and official data from various sources, summarising or paraphrasing their findings without always referencing the original research. This approach may involve misinterpretations, card-stacking, or oversimplification to reinforce specific viewpoints. On some occasions, as in (32), they drew from

media outlets known for spreading misleading information, sources that had likely circulated within anti-vaxxer echo chambers.

As previously seen, users engaged not only with scientific knowledge, but also with legal concepts. This is also notably exemplified by the term *article*, identified as one of the ITAcon keywords. Within the ITAcon subcorpus, the string “articol*” (31 occurrences, 0.16%) was examined. Petitioners called for policy or mandate changes and expressed their refusal to sign informed consents for treatments they perceived as imposed, lacking transparency and accountability:

- (33) Non firmeremo consensi informati per un trattamento imposto e per il quale non esiste nè trasparenza nè [sic] responsabilità da parte del produttore e per il quale **il presente DL introduce addirittura un inspiegabile scudo penale per gli articoli 589 e 590** ossia omicidio colposo e lesioni personali colpose. [We will not sign informed consents for a treatment that is imposed and for which there is neither transparency nor accountability on the part of the producer and for which **this Decree Law even introduces an inexplicable criminal shield for articles 589 and 590** that is manslaughter and unintentional bodily injury.] (ITAcon 05 April 2021)

They went as far as to suggest draft laws aimed at safeguarding freedom of choice:

- (34) In mancanza, a definitivo chiarimento **si proporrà questo testo di legge. Articolo 1.** [...] [Failing this, **this draft law will be proposed** as a final clarification. **Article 1.** [...].] (ITAcon 27 March 2021; ITAcon 01 September 2021)

A similar engagement with legal matters was also evident in USAcon petitions, wherein specific wording was also proposed to replace mandates with recommendations:

- (35) The second goal of this petition is to reverse the status of President Stanley’s orders, changing the wording in the mandate **from ‘requirement’ to ‘strongly recommend’**. (USAcon 31 July 2021)

6. Conclusions

The Covid-19 pandemic did not only pose a global health crisis but also sparked fervent discussions, debates, and expression of public sentiments, much of which unfolded in the digital realm. This investigation delved into the intricate interplay between the pandemic and public opinion, focusing on the discourse surrounding the divisive issue of Covid-19 vaccines in online petitions hosted on *Change.org*. The overarching aim was to explore how different positions were

voiced through e-petitions, providing insight into the complex dynamics of vaccine hesitancy and advocacy in the digital age, while considering the two distinct contexts of the United States and Italy.

Through corpus-assisted critical discourse analysis, the study has unearthed a range of frames utilised and intertwined by petitioners, mirroring the diversity of perspectives, beliefs, and concerns that shape this discourse. Across both countries, texts showcased polarised stances, either in favour or against vaccines, evident in the impactful petition titles and visuals chosen. Both in the USA and in Italy, pro-vaccine arguments tended to lean towards communitarian ideals, underscoring the significance of safeguarding public health by protecting vulnerable populations and essential workers. Several petitions also advocated for waiving Covid-19 vaccine patent rights, demonstrating a spirit of generosity transcending national borders. Nevertheless, there was also an element of self-interest and preservation at play, aiming to prevent the emergence of new virus variants and, therefore, the need for further lockdowns, business closures, and continued reliance on PPE.

This examination dived deeper into the motivations behind anti-vaccine sentiments. In both countries, vaccine hesitancy and refusal were justified through a range of arguments, spanning from legitimate concerns about their efficacy, safety, and potential side effects to debates about individual rights, legal considerations, and expressions of distrust of authorities. Vaccine resistance often tended to align with a libertarian viewpoint—an ideology emphasising individual freedom and refusing excessive government interventions (see also Peng 2022). The objective was to mobilise support against vaccine mandates by appealing to concerns about personal freedom and legality, as Covid-19 vaccine mandates were portrayed as threatening personal choice, bodily autonomy, and livelihoods. Furthermore, specifically in Italy, petitioners conveyed a sceptical view of the green pass system and emphasised the need for alternative approaches or criteria for assessing immunity and safety. Many users in both nations presented a robust critique of vaccine passport programmes and mandates, depicting them as authoritarian and punitive tools that jeopardised freedom, autonomy, and equality within society. They expressed opposition to decisions perceived as excessive or unnecessary, also challenging the official narrative surrounding vaccines. Especially in Italy, vaccine resistance included more extreme positions rooted in anti-science beliefs and mistrust of political and medical establishments. This aligns with earlier research, which indicated a growing politicisation of science amid the pandemic, particularly evident in Italy, characterised by a form of radical right-wing “science-related populism” (Mede and Schäfer 2020). The management of Covid-19 indeed necessitated an increased dependence of the governing class

on technical and scientific expertise. Active engagement of scientists in the political sphere exposed them to populist criticism, aligning them with the despised elite. Opponents advocated for a ‘counter-knowledge,’ promoting politically charged alternative sources of information over established ones and aimed to shift decision-making power and the definition of ‘true knowledge’ from authorities to the people (Crulli 2021).

The analysed texts of USA and Italian petitions exhibited diverse features drawn from various genres, incorporating elements of propaganda and popular science. Although it served as a preliminary inquiry, this study has shed light on how petitioners navigate and engage with specialised information to advocate for their positions. Moreover, it has underscored the influence of populist and anti-scientific viewpoints in shaping public discourse around vaccines. Notably, users actively participated in disseminating scientific, medical, and legal knowledge, often presented with an air of authority, despite the initiators typically lacking expertise in these fields. The notion that even lay citizens, armed with information from online sources of questionable credibility, might consider themselves better equipped than experts to make informed decisions during a global crisis could be dismissed as overly simplistic and implausible. Nevertheless, it is crucial to acknowledge that such citizen-led initiatives problematising issues of common interest may be viewed as an expression of critical citizenship, reflecting doubts about decisions made by politicians and advocating for pluralistic debates on complex topics that directly impact individual lives (see Lello, et al. 2022). Furthermore, these online actions demonstrate the democratisation of information and the influential role of digital platforms in shaping contemporary public discourse. These phenomena necessitate further exploration and understanding.

Additionally, findings serve as a reminder of the importance of accounting for the socio-cultural and contextual factors that influence opinion formation, the online dissemination of misinformation, and the rapid circulation of narratives. Results also suggest that transparent and clear communication from health authorities and policymakers is vital to cultivate trust. Adopting a community-centred approach is also essential to effectively address public concerns, especially in the context of vaccine hesitancy. All of these efforts should be directed towards promoting more informed decision-making in health-related matters.

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