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# RATIONAL AND EMOTIONAL APPROACH IN PUBLIC COMMUNICATION IN THE TIMES OF PANDEMICS: A CALL-TO-ACTION MESSAGE RESEARCH

Scientific papaer https://doi.org/10.59014/ZRDR4587

#### Abstract

For over a decade, a number of scholars and scientific papers emphasized the continual decline of trust in public institutions, mainly in the democracies of "the West". Some associated the observed phenomenon with the rise of social media and digital environments, while others attributed it to the rise of economic and political power of less democratic regimes of "the East", such as China and Russia. In times of crisis, trust in government institutions could be of crucial importance for the appropriateness of the institutional response to the problems facing the nation. Across the EU, it is obvious that citizens of certain member states express higher trust in government and state institutions than others. This division has been even more apparent during the COVID-19 pandemic, especially when vaccination rates of particular EU countries are compared. In Croatia, the Government's main message concerning COV-ID-19 vaccination was modeled to appeal to the receivers' empathy towards others. However, emotional appeal is just one of the possible courses of action. Theories of rational choices and exchange theories emphasize other, often ulterior motives, such as selfishness and revenge, as equally effective purposes to undertake certain actions. In this paper, we have examined four different types of messages, based on selfishness, revenge, honesty and empathy, and their power to persuade research subjects to get vaccinated. Message reception results are compared to other socio-demographic and behavioral factors to define which message type would be most appealing to different demographic groups.

**Keywords:** Rational and emotional messages, selfishness, vengefulness, honesty, empathy, COVID-19

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#### Introduction

Two years after the outbreak of COVID-19, the latest Eurobarometer (Eurobarometer 94) shows that trust in the European Union increased across the "club", as did the trust in certain national institutions, but the distribution of trust is unequal. While national governments and related institutions gained trust in countries of the global north, such as in Scandinavia, the situation in the global South is quite the opposite. Compared to EU-27, trust in various institutions such as traditional media (print, radio, and television), the judiciary system, public administration, political parties etc., judging by the percentages of positive answers in, for example, Croatia, is steadily declining. While the national response to the COVID-19 crisis possibly played an important role with respect to the levels on trust, decline of trust in institutions is not a new phenomenon (Norris, 2011). Norris and Inglehart attribute the decline in trust to many parallel social processes noting, among other things, that "cultural issues, and the politicization of social identities, tend to divide into 'Us-versus-Them' tribes, bringing uncompromising and extreme party polarization" (2019:54). While claiming that "western societies have been getting steadily more socially liberal on many issues over several decades, especially among the younger generation and college-educated middle classes" (p. 94), Norris and Inglehart conclude that "paralleling these changes is a decline in respect for authority" (p.96).

Various authors showed that decline in the trust in institutions and decline in authority is partly connected to the main media sources of information, especially internet sources and social media as the main distractors (e.g. Vosoughi, Roy and Aral, 2018; Tsfati and Ariely, 2014; Jamieson and Cappella, 2008). Since 2016, various reports (e.g., Newman et al., 2022; Newman et al, 2021; Newman et al., 2019; Čerepinko and Gamberožić, 2019; Čerepinko, Bagarić and Dujić 2019) showed that online sources have become the dominant information channel for the majority of respondents, and the discrepancy between certain countries in Eurobarometer results could be, to certain level, explained by the discrepancy in the trust in online information sources. Croatian respondents, for example, have more trust in social networks than their EU counterparts (EU overall: 19% positive attitude, 68% negative attitude and 13% don't know; Croatia: 29% positive attitude, 59% negative attitude and 12% don't know). The percentages are similar for online sources: EU overall: 35% positive attitude, 54% negative attitude and 11% don't know; Croatia: 37% positive attitude, 52% negative attitude and 11% don't know).

The problem with trust could partly also be traced to the communication strategies applied during the crisis. This paper aims to detect the role of different approaches in message formation (rational vs. emotional approach) that could lead to better public communication and the improvement of trust in institutions.

#### Communication during COVID-19 crisis

Regarding governmental and public communication response to the COVID-19 crisis, several authors noted the same structural problem that was mentioned in the introduction: the lack of proper response to misinformation campaigns on social networks (known as "infodemic"), and the unpreparedness of institutions for high-quality risk communication (Lovari, 2020; Ataguba and Ataguba, 2020).

Building upon previous research regarding crisis communication, Malecki, Keating and Safdar (2021) focus on hazard and outrage as the key factors in planning successful public communication campaigns. Hazard refers to the number of people affected by a certain threat, and outrage to the reaction that seeks to reduce the anger and resentment felt by the public. They recognize planning as one of the key actions, and propose creating goals depending on the stage in the lifecycle of the crisis (pre-crisis; in-crisis; maintenance and post-crisis), with three main goals: addressing COVID-19 patients, addressing hazard, and addressing outrage through five communication strategies: careful planning; accepting the public as partners; transparent and honest approach to the public; acknowledgement of the uncertainties; compassion in communication and evaluation and reassessment of applied strategies.

Both aspects are based on the rational and emotional decision-making process, but, for the purposes of this paper, hazard is perceived more as a rational, and outrage more as an emotional response with regard to personal strategies for coping with the pandemic.

#### The rational and the emotional choice

Rational decision-making is based on socio-economic theories, such as the rational choice theory (See Scott, 2000), or the social exchange theory (See Foa and Foa, 1976; Blau, 1964; Homans, 1961), postulating that people make decisions about various issues by taking into account all the costs and benefits of a certain decision for their social or material gains. "In rational choice theories, individuals are seen as motivated by the wants or goals that express their 'preferences'. They act within specific, given constraints and on the basis of the information that they have about the conditions under which they are acting" (Scott, 2000, p. 127). Another line of research originated from psychological perspectives focused on balance of power within groups/dyads and on mutual interdependence of involved individuals (see Thibaut and Kelley, 1959). Such a theoretical framework, positivist in nature, enables testable hypotheses and prediction of behavior, but is to some extent met with criticism, mostly because, as shown below, it does not take into account all of the aspects of the decision-making process.

As Scott (2000) specifies, the rational choice theory does not encompass a wide scope of different social norms that build social interactions and exclude both altruism and mutual trust of dyad or group members. For example, Cook and Emerson (1978) emphasize that trust (and fairness) should not be perceived as a rational behavior, but rather as social norm(s) with moral power to counter rationality. Elster (1989) claims that rational choices and social norms are separate but complemental processes in composing social actions.

Hechter and Kanazawa (1997) point to another path of criticism that emphasizes the lack of realism, because the rational choice theory does not consider emotions, habits, hastiness and other personal traits, as well as individual values, when calculating the best interest of an individual.

Considering the limitation of the rational choice theory, Coleman (1990) introduced micro and macro levels into the theoretical framework, enabling the introduction of personal characteristics of each individual, and accepting the notion that rationality is not universal and general, but is dependent on a particular situation and its interpretation. Hechter and Kanazawa (1997, 208) note that (...) "sociological rational choice is an inherently multilevel enterprise. It seeks to account for social outcomes on the basis of both social context and individual action. In this respect it often differs, at least in emphasis, from other (thin) versions of rational choice theory that are employed in much economic analysis and game theory".

Speaking about the impact of emotions on decision-making, the term emotion in this context is considered in a broader sense – from current emotions such as love, attraction, hatred, etc., to empathy and to previous experiences, either our own or the experiences we had a chance to hear about.

Damasio (1994) proved that the observed patients who were not able to use their emotional memories were unable to choose between the options they were offered, which is similar to the findings of Corcos and Pannequin (2011), Thompson (2014) Kvaran, Nichols and Sanfey (2013). Wondra and Ellsworth (2015) state that people's emotional reactions are determined by their self-defined goals, and their evaluation whether a certain action is good or bad is based on whether it contributes to the achievement of their goals, and to what extent. If the individual assess that the situation does not affect their goals in any way, their emotional reaction could be absent.

Frith (2007) states that individuals communicate better when able to predict what will happen next and create long-term or short-term assumptions, based on experience. Dunbar (2009) points out that the above is a prerequisite for the emergence of the Theory of Mind phenomenon, i.e., the ability of an individual to imagine himself in the position of another individual.

The results of the research by Burgoon and Hale (1988) showed that the attractiveness (physical and social) between the interlocutors, and the estimated credibility of the interlocutors, influence the outcomes of the interaction. One of the factors that influence the outcome is the individual's assessment (evaluation) of the extent of the earned benefits: the higher the evaluation (more positive), the more positive and successful are the outcomes of the interaction perceived.

In-group bias is another factor in decision-making based on perceived closeness with others, defined by Scheepers et al. (2006) as a ubiquitous and diverse phenomenon that appears in all types of groups, in different cultures. When individuals identify with the identity of a group, they are ready to invest an effort in raising the reputation of the group and

improving the position of the group in relation to other groups (Scheepers et al., 2006; Gomez et al, 2021, Scheepers et al. Ph.D., 2003), meaning that messages targeting in-group bias will be met with greater approval and better motivate to action.

Another perspective on rational and emotional decision-making can also be assumed by applying the Game Theory. Although the Game Theory rests on rational foundations and assumptions, research shows that the decisions of individuals are often more driven by emotional than rational motives (Bornstein and Yaniv, 1998; Santos et al., 2015; Bohnet and Frey, 1999; Robert and Carnevale, 1997; Bechler et al., 2015). Bornstein and Yaniv (1998) showed that not all subjects display rational behavior and make decisions influenced by their emotions, mainly honesty and fear of vindictiveness/punishment, and when encouraged to empathize, the results are closer to an even distribution, i.e., the players behave even more fairly (Bohnet and Frey, 1999; Bechler et al., 2015).

The above studies clearly point out that people are more inclined to act honestly than selfishly, although research, based on rational theories, shows that they have clear arguments to act selfishly. Fear of social isolation as an act of punishment for selfish behavior can also be a reason for this, especially if individuals are engaged in behavior not benefiting or even endangering their social groups, thus punishing these individuals, and vengefulness as a personality trait is key to the long-term survival and development of the group (Friedman and Singh, 2004; Hilbe and Sigmund, 2010; Frey and Rusch, 2012; Shutters, 2013; Han and Lenaerts, 2016). As stated by Frey and Rusch (2012), the first level of punishing individuals who do not cooperate is social pressure on these individuals through gossip, insults, contempt, etc. They also state that this social pressure grows very quickly when individuals do not change their behavior and start cooperating. The final measure of punishment is the exclusion of that individual from the group, whereby one loses the advantages of group membership. It is clear that vengefulness is not a desirable trait in terms of rational action, because by revenge/punishment an individual threatens his success, damages his reputation, or exposes themselves to potential criticism or conflict.

Some studies (Rand et al., 2009; Scheepers et al., 2006) have shown that people respond better to positive than to negative messages and are more willing to take certain actions based on a positive call to action.

### Methodology

The research was conducted in the form of an online questionnaire. The participants were students (N=214), and the sample was selected by the snowball sampling method. The questionnaire consisted of a total of ten questions, of which four dealt with socio-demographic characteristics (gender, age, level of education and level of monthly household income), and three with behavioral habits (preferred source of information, preferred source of news on the internet, and preferred device they use to surf the web).

The remaining three questions consisted of different types of messages, and the respondents were asked to rate how much they agree with each message, using a Likert scale from 1 to 5 (1 – I do not agree at all, 5 – I completely agree).

Respondents were divided into four groups, each group responding to messages related to one of the four different types of emotions – selfishness, empathy, honesty, and vengefulness. Respondents were offered one in an imperative form and one in one declarative form. The third message focused on in-group bias and trust in institutions.

### Results

A total of 214 respondents participated in the research, of whom 67% were women and 33% were men. The age group of the respondents was determined on the basis of generational affiliation, so the respondents were divided into five age groups – generations, according to Strauss, Strauss and Howe (1991). In total, 68% respondents belonged to the age group between 21 and 37 years of age, which is expected considering that the sample consisted of students. 14% respondents were younger than 20, 10% were between 38 and 44 years of age, and 8% were between 45 and 58 years of age. There were no respondents over the age of 59.

Expected results with regard to the target group of this research were also obtained regarding the level of education completed by the respondents: 44% of the respondents had a high school or undergraduate diploma. 10% completed graduate studies, and 2% had master's or doctoral degrees.

The fourth socio-economic question was related to the monthly income of the respondents' household in order to determine the possible connection between the level of income and the level of empathy or trust in institutions. A total of four answers were offered: less than HRK 7,793, between HRK 7,794 and 15,588, more than HRK 15,588 and, as the fourth option, respondents were given the option to refuse to answer the question. The stated amounts were chosen on the basis of a survey by the National Bureau of Statistics on average household consumption in Croatia in 2019<sup>35</sup>. According to these data, the average monthly consumption was HRK 7,793, and the amount of HRK 15,588 is twice the average monthly consumption. The majority of respondents (44%) declared that their income was between HRK 7,793, 23% declared that it was more than HRK 15,588, and 16 % refused to answer.

Four fifths of the respondents named internet portals (45%) and social networks (36%) as their preferred source of information. A negligible number of respondents named traditional mainstream media. The largest percentage of the remaining respondents chose television (5%), while radio and print were named as the preferred source of information by only 2% and 1% respondents, respectively. Interestingly, 9% said that they avoid the news altogether.

When specifically asked about their preferred source of news, most respondents (40%) named social networks. Portals operated by national corporate media were chosen by 28% respondents, and national independent media portals were chosen by 22%. As expected, portals operated by foreign media outlets (8%) and independent foreign portals (2%) received the fewest responses. Additionally, 86% respondents said that they use their mobile phones to search/access the internet, and 14% said that they use desktop computers.

<sup>35</sup> https://web.dzs.hr/Hrv\_Eng/publication/2020/SI-1676.pdf

Regarding the messages related to different types of emotions (selfishness, empathy, honesty, and vengefulness), as shown in Figure 1, messages (both imperative and declarative) that refer to selfishness as an emotion received the highest average rating of 3.48 (imperative) and 3.37 (declarative). Messages focused on empathy received a score of 3.09 and 3.06, respectively, and messages promoting honesty a score of 2.78 and 3.03. Messages focused on vengefulness received the lowest average ratings of 2.27 and 2.18, respectively.



Figure 1: Average scores of agreement of the respondents with different types of messages

One positive and one negative message were offered to test the messages related to in-group bias, as shown in Figure 2. Respondents largely agreed with the positive message (average rating of 3.2), while the negative message had a significantly lower average rating (2.13).



Figure 2: Average scores of agreement of the respondents with the in-group statements

The overall average scores for messages focused on trust in institutions (See Figure 3) are lower than the other tested messages. The claim that the Government of the Republic of Croatia handled the pandemic well received the highest rating (2.32), while the Civil Protection Headquarters received a score of 2.2 for the same claim. The respondents agreed with the claim that they trust the Government and state authorities of the Republic of Croatia when it comes to the COVID-19 pandemic with an average score of 2.0. The claim that the pandemic is exaggerated and that COVID-19 is not as serious a disease as it had been made out to be by the media received an average rating of 3.07.



Figure 3: Average scores of agreement of the respondents with the statements of trust

## Discussion

The results showed that the respondents agreed to the greatest extent with the imperative message aimed at selfishness (Get vaccinated, protect yourself!). Cross-tabulation analysis showed that respondents who named internet portals and social networks as their preferred source of information agreed with this statement to the greatest extent. On the other hand, respondents who avoid the news agreed with this statement to the least extent. Likewise, respondents who most often use their mobile phone to surf the web agree with the statement to a much greater extent (3.58) than those who usually use a computer for this purpose (2.87). However, since the majority of the respondents were mobile phone users, this result should be taken with caution.

Almost identical results were obtained by analyzing the declarative form of a message focused on selfishness (By vaccination, we protect ourselves.).

Table 1: Crosstab analysis – level of agreement with the imperative message aimed at selfishness and preferred source of information.

Count										
Social networks		Preferred	Preferred source of information (pick one answer):							
		Internet	l avoid	Something	Radio	Television	Print			
		portals	the news	else						
To what extent (from	1	10	19	9	2	1	1	0	42	
1 to 5) do you agree	2	11	3	2	0	1	3	0	20	
with the following	3	12	11	2	0	0	2	0	27	
statement? [Get	4	23	13	0	2	2	3	0	43	
yourself!]	5	21	51	6	0	0	2	2	82	
Total		77	97	19	4	4	11	2	214	

Crosstab

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Table 2: Chi-Square tests – level of agreement with the imperative message aimed at selfishness and preferred source of information.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)				
Pearson Chi-Square	53,810a	24	,000				
Likelihood Ratio	58,598	24	,000				
N of Valid Cases	214						
a. 24 cells (68,6%) have expected count less than 5. The minimum expected count is .19.							

According to some authors (e.g. McChesney, 2016; Castells, 2013; Morozov, 2011), the sole fact that internet sources are main information channels means the dissolution of one shared social reality for those who prefer them over traditional media, since each individual lives in a specific social and information bubble, and each social media newsfeed differs from the others, so a shared sense of society, or at least a sense of shared destiny, could be lacking. There is also research showing that selfishness ss a very prominent trait in the human population (Scot, 2000; Elster, 1989; Bornstein and Yaniv 1998), especially if a sense of in-group bias is not achieved (Bohnet and Frey, 1999; Bechler et al., 2015).

A similar result, although with a lower score than selfishness, was obtained by the crosstab analysis of the imperative message focused on empathy (Get vaccinated, think of the others!) and the preferred source of information. Respondents who named internet portals and social networks as their preferred sources of information agreed with the message to the highest extent, and those who avoid the news altogether agreed with it to the least extent (average rating of only 1.79). The same applies to the declarative form of this type of message (By vaccination, we protect the others around us). Even though further research is needed to explore the relationship between individuals who disconnect themselves from media news cycles and those who lack empathy, this finding may indicate deeper personal reasons for withdrawal from news watching.

Table 3: Crosstab analysis – level of agreement with the imperative
message aimed at empathy and preferred source of information.

#### Crosstab

Count

Social networks	Preferred source of information (pick one answer):							Total	
		Internet	l avoid	Something	Radio	Television	Print		
		portals	the news	else					
To what extent (from	1	12	22	12	2	1	3	1	53
1 to 5) do you agree	2	11	11	3	0	0	1	0	26
with the following	3	18	14	2	1	2	4	0	41
statement? [Get	4	18	15	0	1	1	1	1	37
the others!]	5	18	35	2	0	0	2	0	57
Total		77	97	19	4	4	11	2	214

Table 4: Chi-Square tests – level of agreement with the imperative message aimed at empathy and preferred source of information.

**Chi-Square Tests** 

	Value	df	Asymp. Sig. (2-sided)				
Pearson Chi-Square	39,672a	24	,023				
Likelihood Ratio	42,797	24	,010				
N of Valid Cases	214						
a. 24 cells (68,6%) have expected count less than 5. The minimum expected count is .24.							

In case of the imperative message aimed at honesty (Get vaccinated because everyone has to contribute to the fight against Covid!), a statistically significant difference was found in relation to the completed level of education of the respondents – the higher the completed level of education, the greater the agreement with the message. As the level of education completed among the student population is usually also related to age, these results can be viewed through the prism of age as well.

Table 5: Crosstab analysis – level of agreement with the imperative message aimed at honesty and completed level of education.

#### Crosstab

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Graduate studies	Highest completed level of education					
	Master of science or doctorate	Undergraduate studies	High school			
To what extent (from 1 to 5) do you agree with the following	1	5	1	37	21	64
	2	3	0	14	16	33
statement? [Get vaccinated	3	4	0	18	22	44
because everyone has to contribute to the fight against Covid!]	4	1	0	14	17	32
	5	8	4	10	19	41
Total		21	5	93	95	214

# Table 6: Chy-Square tests – level of agreement with the imperative message aimed at honesty and completed level of education.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)				
Pearson Chi-Square	27,556a	12	,006				
Likelihood Ratio	25,993	12	,011				
N of Valid Cases	214						
a. 9 cells (45,0%) have expected count less than 5. The minimum expected count is .75.							

Older participants were more inclined to agree with the message in imperative form that called for the punishment of those who do not contribute to the overall betterment of the community, that is, a message characterized by vengefulness (Get vaccinated because otherwise you will suffer the consequences!) – most respondents between 45 and 58 years of age (2 .65), followed by respondents between 38 and 44 years of age (2.52). As already mentioned, research has shown that punishing individuals who do not contribute to the overall success of the group and vengefulness as a personality trait are crucial for the long-term survival and development of the group (Friedman and Singh, 2004; Hilbe and Sigmund, 2010; Frey and Rusch, 2012; Shutters, 2013; Han and Lenaerts, 2016). With the assumption that older members of the community have more experience in life and relations with the members of community, the results could be interpreted in this regard.

#### Table 7: Crosstab analysis – level of agreement with the imperative message aimed at vengefulness and age of respondents.

Crosstab

Count	
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Up to 20 y.o.	Age					
		Between 21	Between 38	Between 45		
	and 37 y.o.	and 44 y.o.	and 58 y.o.			
To what extent (from 1 to 5) do you agree with the following	1	13	71	7	5	96
	2	8	21	2	5	36
statement? [Get vaccinated	3	3	22	9	2	36
because otherwise you will suffer the consequences!]	4	2	17	0	1	20
	5	5	14	3	4	26
Total		31	145	21	17	214

#### Table 8: Chi-Square tests – level of agreement with the imperative message aimed at vengefulness and age of respondents.

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22,625a	12	,031
Likelihood Ratio	21,673	12	,041
N of Valid Cases	214		

a. 10 cells (50,0%) have expected count less than 5. The minimum expected count is 1.59.

Two messages were aimed at in-group bias: one was positive (By vaccination, we protect our family, friends, and neighbors) and one was negative (People who refuse to get vaccinated do not care about their family, friends, and neighbors). In case of the positive message, our analysis showed a statistically significant difference regarding the respondents' preferred source of information. In this case, again, respondents whose preferred sources of information are internet portals and social networks agreed with the statement the most, and those who avoid news agreed with it the least.

# Table 9: Crosstab analysis – level of agreement with the positive message aimed at in-group bias and preferred source of information.

#### Crosstab

Count

Social networks	Preferred source of information (pick one answer):							Total	
		Internet	l avoid	Something	Radio	Television	Print		1
		portals	the news	else					
To what extent	1	15	18	13	2	1	1	0	50
(from 1 to 5) do	2	9	9	1	0	0	3	1	23
you agree with the	3	14	16	1	0	2	3	0	36
By vaccination	4	19	18	1	2	1	3	1	45
we protect our									
family, friends and	5	20	36	3	0	0	1	0	60
neighbors.]									
Total		77	97	19	4	4	11	2	214

Table 10: Chi-Square tests – level of agreement with the positive message aimed at in-group bias and preferred source of information.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)		
Pearson Chi-Square	47,703a	24	,003		
Likelihood Ratio	45,402	24	,005		
N of Valid Cases	214				
a. 24 cells (68,6%) have expected count less than 5. The minimum expected count is .21.					

In addition, there is a difference regarding the device respondents use to search the internet (higher average score for those who use their mobile phones), but also regarding the preferred source of news on the internet. Respondents who named portals operated by foreign media outlets (3.5) and independent national portals (3.45) as their preferred sources had the highest rating, and respondents who named independent foreign portals (2.6) and portals operated by national corporate media companies (3.03) had the lowest rating. However, since the sample is biased towards internet portals and social networks, this result should also be taken with caution.

In case of the negative message, the results showed that older respondents and respondents with a higher level of education agree with it to a greater extent. As research has shown (Scheepers et al., 2006; Hamid, 2021, Scheepers et al., 2003), in-group bias occurs when individuals identify with a group. In this case, they are more willing to fight for the welfare of the group. Greater experience and a higher level of education in this case can be associated with a better understanding of the importance of belonging to a group, both for one's own well-being and for the well-being of the community.

Table 11: Crosstab analysis – level of agreement with the negative message aimed at in-group bias and age of respondents.

Crosstab

Count

Up to 20 y.o.		Age				Total
		Between 21 and 37 y.o.	Between 38 and 44 y.o.	Between 45 and 58 y.o.		
To what extent (from 1 to 5) do	1	17	74	8	5	104
you agree with the following statement? [People who refuse to be vaccinated do not care about their family, friends, and neighbors.]	2	3	21	7	1	32
	3	7	25	3	4	39
	4	3	17	2	2	24
	5	1	8	1	5	15
Total		31	145	21	17	214

# Table 12: Chi-Square tests – level of agreement with the negative message aimed at in-group bias and age of respondents.

**Chi-Square Tests** 

	Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square	22,883a	12	,029	
Likelihood Ratio	16,993	12	,150	
N of Valid Cases	214			
a. 11 cells (55,0%) have expected count less than 5. The minimum expected count is 1.19.				

Table 13: Crosstab analysis – level of agreement with the negative message aimed at in-group bias and completed level of education.

#### Crosstab

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Graduate studies		Highest completed level of education				Total
		Master of science or doctorate	Undergraduate studies	High school		
To what extent (from 1 to 5) do	1	7	1	52	44	104
you agree with the following statement? [People who refuse to be vaccinated do not care about their family friends and	2	4	1	13	14	32
	3	3	0	17	19	39
	4	5	0	7	12	24
neighbors.]	5	2	3	4	6	15
Total		21	5	93	95	214

Table 14: Chi-Square tests – level of agreement with the negative message aimed at in-group bias and completed level of education.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)			
Pearson Chi-Square	30,699a	12	,002			
Likelihood Ratio	19,581	12	,075			
N of Valid Cases 214						
a. 9 cells (45,0%) have expected count less than 5. The minimum expected count is .35.						

As already mentioned, the respondents gave the lowest average score regarding trust in institutions. The oldest respondents mostly agreed with the statement that the Government of the Republic of Croatia handled the COVID-19 pandemic well (3.05), but the average rating of the youngest was the second highest (2.58). Respondents who declared that they avoid the news also agreed with this statement to the lowest extent.

Table 15: Crosstab	analysis – level	of agreement	with the	statement	that
the Government	handled the par	ndemic well a	nd age of	responden	ts.

Crosstab

Count

Up to 20 y.o.		Age				Total
		Between 21	Between 38	Between 45		
		and 37 y.o.	and 44 y.o.	and 58 y.o.		
To what extent (from 1 to 5) do	1	4	38	7	1	50
you agree with the following statement? [The government of the Republic of Croatia handled coped the Covid-19 pandemic well.]	2	10	48	7	4	69
	3	14	52	3	7	76
	4	1	6	4	3	14
	5	2	1	0	2	5
Total		31	145	21	17	214

Table 16: Chi-Square tests – level of agreement with the statement that the Government handled the pandemic well and age of respondents.

**Chi-Square Tests** 

	Value	df	Asymp. Sig. (2-sided)		
Pearson Chi-Square	30,062a	12	,003		
Likelihood Ratio	26,706	12	,009		
N of Valid Cases 214					
a. 9 cells (45,0%) have expected count less than 5. The minimum expected count is .40.					

On a similar question, regarding the Civil Protection Headquarters, the highest average ratings came from older respondents and those who had completed a higher level of education. Older respondents largely agreed with the statement that they trust the Government and state bodies of the Republic of Croatia when it comes to the COVID-19 pandemic.

No statistical significance is found regarding answers on COVID-19 as an exaggerated and unserious between any demographics or behavioral traits.

### Conclusion

By analyzing the collected results, several conclusions can be drawn. When the results of agreement with certain statements or types of messages are compared with the respondents' most common source of information, it is interesting to note that the respondents who declared that they avoid the news generally do not agree with any of the statements, that is, they agree to the lowest extent of all respondents. In the same comparison, the results show that respondents who named internet portals as their preferred source of information generally hold more radical views: in most cases, they completely agree or completely disagree with the statements. The above could be due to the fact that on the internet, users choose sources, portals and content that fit their views, and are thereby consolidating their views further.

Comparing the agreement with the statements and messages and the age of the respondents, the results show that older respondents have the highest trust in institutions. In addition, older respondents are more inclined to punish those who do not contribute to the overall well-being of the community.

The relationship between the completed level of education of the respondent and the level of agreement with a particular statement shows that respondents with a higher level of education generally have more trust in institutions. Likewise, these same respondents are more inclined to be honest.

Concerning the development of intra-group bias, the results show that older and more educated respondents are more prone to this social phenomenon. Those who choose internet portals and social networks as their preferred source of information show similar tendencies, but further research is needed to clearly establish in-group frames concerning the individuals they relate to as members of their group.

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# RACIONALNI I EMOCIONALNI PRISTUP U JAVNOM KOMUNICIRANJU U VRIJEME PANDEMIJE: ISTRAŽIVANJE PORUKA POZIVA NA DJELOVANJE

## Sažetak

Više od desetljeća brojni znanstvenici i znanstveni radovi naglašavali su stalni pad povjerenja u javne institucije, uglavnom u demokracijama "zapada". Neki su promatrani fenomen povezivali s usponom društvenih medija i digitalnih okruženja, drugi s usponom ekonomske i političke moći manje demokratskih režima "istoka", poput Kine i Rusije. U vrijeme krize povjerenje u institucije vlasti moglo bi biti od presudne važnosti za primjerenost institucionalnog odgovora na probleme s kojima se nacija suočava. Diljem EU očito je da građani pojedinih država članica iskazuju veće povjerenje u vladu i državne institucije od ostalih. Takva je podjela bila ili je još izraženija tijekom pandemije COVID-19, posebice kada se usporede stope procijepljenosti pojedinih zemalja EU. U Hrvatskoj je glavna vladina poruka o cijepljenju protiv COVID-19 oblikovana tako da apelira na empatiju primatelja prema drugima. Međutim, emocionalni apel samo je jedan od mogućih smjerova djelovanja. Teorije racionalnih izbora i teorije razmjene naglašavaju druge, često prikrivene motive, kao što su sebičnost i osveta kao jednako učinkovite svrhe poduzimanja određenih radnji. U ovom radu ispitujemo četiri različite vrste poruka, temeljene na sebičnosti, osveti, poštenju i empatiji, te njihovu moć da uvjere subjekte istraživanja da se cijepe. Rezultati prijema poruka uspoređuju se s drugim socio-demografskim čimbenicima i faktorima ponašanja kako bi se definiralo koja bi vrsta poruke bila najprivlačnija različitim demografskim skupinama.

Ključne riječi: Racionalne i emocionalne poruke, sebičnost, osvetoljubivost, iskrenost, empatija, COVID-19