

# **Epidemic and society, trends, consequences, coping strategies**

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## Introduction

The Sars-Cov2 virus and its variants have killed close to 7 million people and infected nearly 700 million people worldwide since the pandemic broke out in 2019, many with life-threatening conditions, and some of those who have recovered may have long-term complications, not to mention the fact that even those who have survived the disease do not enjoy lasting immunity. However, the Covid-19 epidemic and its consequences have posed serious challenges not only to medical science and epidemiology but also to social, economic and political implications. From a social science perspective, there are a number of areas where research is still ongoing, but trends, consequences and coping strategies seem to be emerging for the fourth year of the epidemic.

As a consequence of the risk of infection, the restrictions and closures, many people have developed a lasting fear and anxiety, previously well-functioning relationships have been reduced or relegated to the online space, and in many cases, livelihoods, jobs and families have been threatened. There are, of course, social groups who have not been significantly affected by the epidemic, nor their health, or their livelihoods. The research is multifaceted and wide-ranging, from trust in our fellow human beings, our democratic institutions and legal system, new forms of work, rising inequalities, attitudes towards vaccination, the damage in mental health, social contacts, social solidarity and everyday habits.

Some important phenomena are the subject of this volume. Bán-Forgács brings insight into the freedom of information practices in Hungary during the Covid-19 epidemic and describes the legal

environment that governed access to and dissemination of information of public interest.

Magyari focuses on the challenges and the changes that have emerged in the field of human sciences, and possible responses in sociology and cultural (first of all, political) anthropology. He emphasizes that hyperconnectivity, the conquest of the online world, represents not only a radical change in the structures and mechanisms of the real world but also a fundamental challenge – both theoretical and methodological – for the social sciences.

Albert et al. describe the egocentric networks that emerge as well as their variation across sociodemographic groups and the changes in the type, frequency and quality of relationships before the COVID-19 pandemic and in 2021 as reflected by the personal experience of the respondents. According to their results, friendly relationships are more fragile than family relationships, with young people and women, in particular, reporting higher rates of loss of friendships.

Sándor provides details on changes in self-representation on social media during the COVID-19 pandemic, as well as on their potential link to mental health. Her aim was to contribute to our knowledge both of mental health contexts underlying engagement on social media and of the pandemic's psychosocial consequences – a topic calling for an interdisciplinary approach including sociology, psychology, and communication and media studies.

Örkény seeks to answer the question of what moral arguments can be made in favour of mandatory vaccination and what the arguments against it might be. The individual interest and the public interest do not necessarily always coincide, and individuals are often required to contribute to the public good even at the expense of their own interests. Örkény states that the most important ethical consideration is that the state has a duty to 'protect the common good', which in the case of an epidemic situation means achieving herd immunity. The principle of

equitable justice, based on the principle of fair burden sharing, may justify the requirement of compulsory vaccination.

Grajczjár, Pauló and Ádám explain how worsening labour market conditions affect the willingness to get vaccinated in times of the coronavirus pandemic. Their results show that the vaccination propensity of those negatively affected by the labour market depends primarily on the perceived seriousness of the pandemic. In contrast, those working under unchanged conditions develop active risk-taking solidarity attitudes, confidence in the effectiveness of the vaccine(s), and trust in decision-makers and professionals, which lead to vaccination uptake independently of the perceived seriousness of the pandemic.

Last but not least Földes focuses on the changes in the consuming habits of the Hungarian population since the Covid-19 pandemic has been started. She found that consumers across the world had to change their daily habits to protect themselves and their immediate surroundings from the coronavirus but they became less concerned about certain causes like the environmental impact of their behaviour, what is more, their health became less important, and the focus is now on the inflation and the economic situation. There is no such thing as new consumer behaviour, but instead a constant change in everyday habits.

Fruzsina Albert - Zoltán Brys - Mercédesz Gerdán - Boglárka Herke <sup>1</sup>

## The impact of the COVID-19 pandemic on important relationships in Hungary

### Abstract:

In the present study, we applied a new name generator question to map the most important adult relationships for the ego. We describe the egocentric networks that emerge as well as their variation across sociodemographic groups and the changes in the type, frequency and quality of relationships before the COVID-19 pandemic and in 2021 as reflected by the personal experience of the respondents. We have a closer look at friendship ties in particular.

The analysis uses the database of the research project “The social impact of the COVID-19 pandemic”. The data was collected online between 29 November 2021 and 11 December 2021 using a quota method among the Hungarian population aged 18-65 with internet access, with a sample size of 1,000. The quota was defined by age, gender, type of municipality and educational attainment based on the population data provided by the KSH.

According to the results, 4.6% of respondents were completely

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isolated, and respondents named an average of 5.5 persons important to them. The dominance of close family ties is very strong. The proportion of personal contacts dropped significantly during the quarantine periods, with the quality of the contacts remaining largely unchanged or deteriorating. A third of respondents mentioned a friend as one of the most important people to them. Friendly relationships are more fragile than family relationships, with young people and women in particular reporting higher rates of loss of friendships.

## Introduction

The present study is essentially exploratory, using a new name generator question<sup>2</sup> to map the most important adult (over 18 years old) relationships of the respondents, and to identify the basic characteristics of these important networks of relationships. As the data collection took place at the beginning of the fourth wave, more than one and a half years after the outbreak of the Covid-19 pandemic, we also tried to collect retrospective data on changes in the contact networks and in the type, frequency and quality of important individual contacts. However, due to the limitations of the data collection, we can only aim to analyse the closest, most important contacts, which, using Dunbar's terminology, allows us to delineate the support group and partly the sympathy group (Dunbar 2018), and tries to answer, at least partially, the question regarding what happened to very important ties in the first two years of the pandemic.

## Background

Interpersonal networks are not static and can change as a result of both individual and social factors. An important factor in the disruption or weakening of relationships is the change in the context of the relationship (Mollenhorst et al 2014), i.e. no longer attending the same class, working in

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<sup>2</sup> A method to map ego-centric interpersonal networks.



a different job. However, the time spent together in the context also plays a very important role (Bzdok-Dunbar 2020). As distancing, quarantine and lockdowns were the most important tools in the management of the Covid-19 pandemic, especially until vaccines became widely available, the discussion of the possible effects on personal relationships and networks of relationships and their spill-over effects, especially on mental health, have been present in the scientific discourse practically from the beginning (e.g. Pléh 2021, Bzdok - Dunbar, 2020, Fiorillo et al. 2020, Gloster et al. 2020), since forced social isolation on such a massive scale all over the world has not been experienced by humans before. However, a big question is how long the effects of the closures will last, as the mental health status of the population does not seem to have improved as much as expected despite the lifting of restrictions (Eurofound 2022). Distancing measures have been shown to have lead to a significant decrease in network size in many countries during the first wave of the pandemic in spring 2020 (e.g. Jarvis et al. 2020, Zhang et al. 2020, Bosetti et al. 2020, Latsuzbaia et al. 2020), and data have shown increased vulnerability (albeit for different reasons) of certain groups, especially young people and the elderly (Kaspersy 2020, Eurofound 2020).

Close relationships require commitment and emotional closeness, which is a time- and energy-consuming task to develop and maintain. The time invested in a relationship and the emotional closeness of the relationship are thus interrelated (Dunbar 2018), hence the long-standing use of length of time as an indicator of relationship closeness (e.g. Marsden - Campbell 1984), alongside frequency and multiplexity of contact, emotional closeness and other dimensions. Also relevant to the relational effects of the COVID-19 pandemic is the fact that relationships in which, for whatever reason, we are unable to „invest“ sufficient resources are likely to become more fragile, especially if we have not yet had sufficient time to make them truly close.

Feld (1981) argues that relationships are formed and bound by

shared activities in shared contexts (e.g. school, workplace); research over the past decades suggests that these are a major contributor to the persistence of relationships: the lack of opportunities to meet often leads to relationship breakdown, and in this sense, the lack of institutionally „forced” interactions and little time spent together increases the chances of relationship breakdown (Möllenhorst et al 2014). Pléh mentions as a general trend that confinement reinforces strong relationships, whether family or friends, while other, looser relationships are marginalised (Pléh 2021). We also know that physical distancing often results in emotional distancing (Bzdok - Dunbar 2020). And the measures taken to address the pandemic have locked most people into their households, mainly with family relations, for significant and prolonged periods of time.

Mainly researchers from the US compare the impact of the Covid-19 pandemic to that of previous natural disasters, and the lessons from these have been used to infer the effects of the pandemic on relationships. In addition to the size of contact networks, composition also plays a significant role in coping with a crisis. Hurlbert et al. (2000) found that during Hurricane Andrew, kinship ties provided more and more frequent support, but kinship ties did not provide access to certain resources, and more diverse ties were needed after the initial phase of the crisis. Similar conclusions were reached after the Mississippi River flooding in the Midwest in 2008 (Casagrande et al. 2015).

A panel study conducted in the United States in 2019 and 2020 on a non-representative sample found that the number of very close contacts did not change significantly during the analysed phase of the COVID-19 pandemic, but the composition of contact networks did: the number of close friends and colleagues decreased, while the number of very close family members increased in core networks (Kovacs et al. 2021). In May 2020, Dávid et al. (n.d.) compared Hungarian data collected using the contact diary method with data collected using a similar

method in 2015 and found that the number of face-to-face contacts per day remained broadly unchanged. However, on the one hand, the proportion of those completely isolated doubled (mostly among the youngest and the elderly), while on the other hand, the number of family contacts increased and the number of contacts with friends decreased.

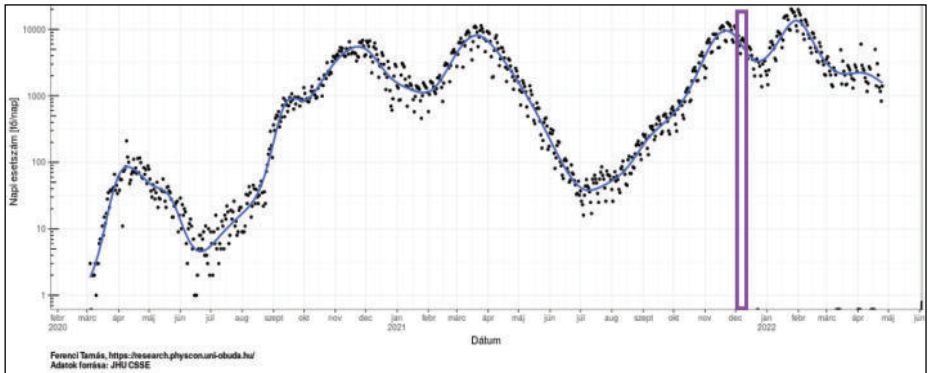
In a survey (Bíró-Nagy-Szászi 2021) which took stock of the first year of the pandemic in Hungary and also looked at relationships, 70% of respondents reported no change in their social relationships during the quarantine periods, 19% reported a strengthening of family relationships and 16% reported a strengthening of their relationship with their partner, while 8% reported a deterioration in their family relationship and 5% reported a deterioration in their relationship with their partner. 19% of respondents reported a decline in their friendships, while 7% reported strengthening. One of the surprising results of the Hungarian Youth Survey 2020 was that, for the first time, the lack of friendships and communities was listed in fourth place on the map of the most pressing problems of young people, and satisfaction with friendships also decreased (Székely 2021).

We intended to find out more about these processes by gathering data with a new name generator.

## **Methods**

The data used in this study were collected as part of a larger study on the social impact of the Covid-19 pandemic, organised in 2021 at the Institute of Sociology of the Centre for Social Sciences. Researchers in the study developed a questionnaire that examined, among other things, physical and mental health, housing, labour market conditions and social relationships in relation to the pandemic. The survey was conducted online between 29 November 2021 and 11 December 2021, with a sample of 1,000 people (using the NRC market research

company's web panel)<sup>3</sup>. The data analysed in this study were collected at the time of the 4th wave (Figure 1), with mask use being made mandatory again from 20 November 2021. The purple frame in Figure 1 indicates the time of data collection.



**Figure 1: Waves of the Covid-19 pandemic in Hungary**

Source: Ferenc Tamás (Óbudai University), <https://research.physcon.uni-obuda.hu/COVID19MagyarEpi/> v0.59

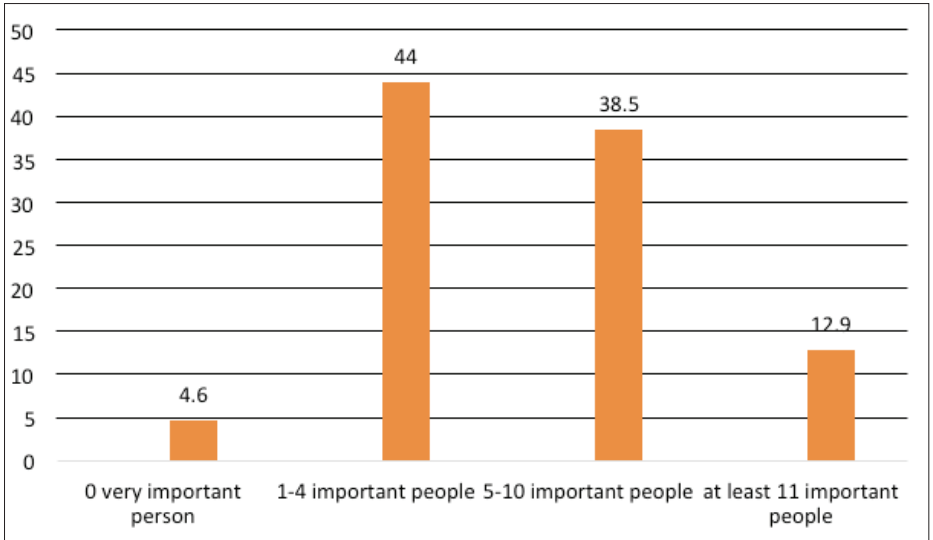
The target population was the Hungarian adult population aged 18-65 with internet access (~5.43 million people). Quotas by age, gender, type of municipality and educational attainment ensured that the sample was a good approximation of the Hungarian population along these dimensions. The data were also weighted by age, gender, type of settlement, region and educational attainment.

The block on interpersonal relationships asked respondents about the relationships respondents considered most important by asking the following question: How many people over the age of 18 are very important to you in your life? Respondents could name a total of 10 such persons, for whom the questionnaire also included additional

name interpreting questions such as the type of relationship (partner, child, parent, other relative, friend, colleague, neighbour, other), the sex of the person in the relationship, their age, whether they live in the same municipality as the respondent and for how long they have known each other. The questionnaire also asked how they predominantly kept in touch before and during the Covid-19 outbreak (face-to-face, by phone or online), how often they met and how the respondent rated their relationship on a scale of 1 to 10, with 1 being very poor and 10 being very good.

The questionnaire then also asked “Was there anyone you would have mentioned among the people most important to you before the Covid-19 outbreak but did not mention now among the people important to you?” Two such persons could be named, and respondents were also asked about the type of contact, the sex of the contact, their age, and whether they lived in the same municipality. In addition, a further question asked “Why did your relationship break down?” Respondents could choose from the following categories: (1) He died, (2) He moved away, (3) We grew apart, (4) We no longer have the time/desire to meet, (5) I am disappointed, (6) Other, and so on.

## Results

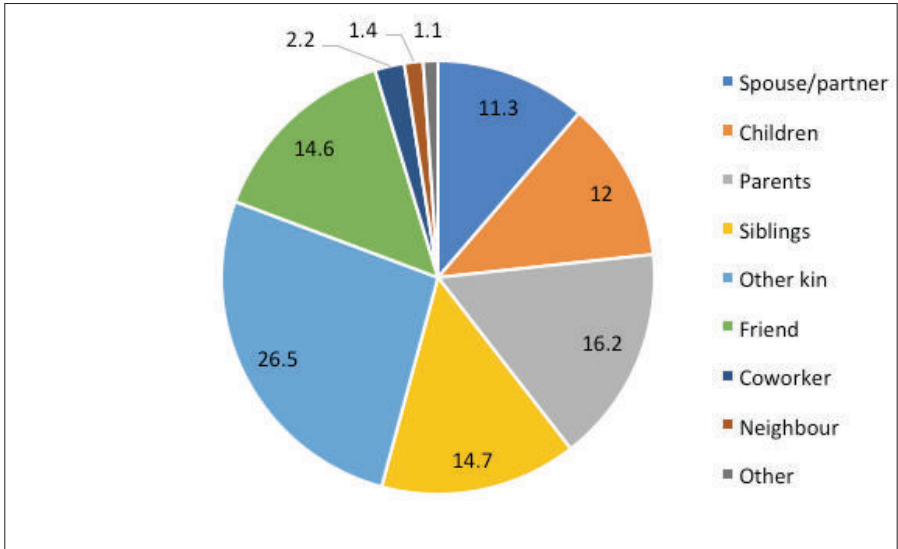


*Figure 2: The distribution of the number of very important relations (%) (N=997)*

On average, respondents mentioned 5.5 (95% CI: 5.3-5.8) people important to them (Figure 2). Men mentioned 5.1 (95% CI: 4.8-5.5) and women 5.9 (95% CI: 5.5-6.3) people. A total of 5,219 people important to them were named by the 997 respondents. There is a slight predominance of women in the number of persons named (alters), with 53% of the persons mentioned as important being women. A quarter of the “most important others” are persons living in the same household as the respondent, and the networks of contacts are geographically bound, as more than half of the persons mentioned live in the same municipality as the respondent.

The prominence of family relations in Hungarian society is reflected by the fact that more than 80% of the people important to the respondents have some form of kinship relation with the respondent:

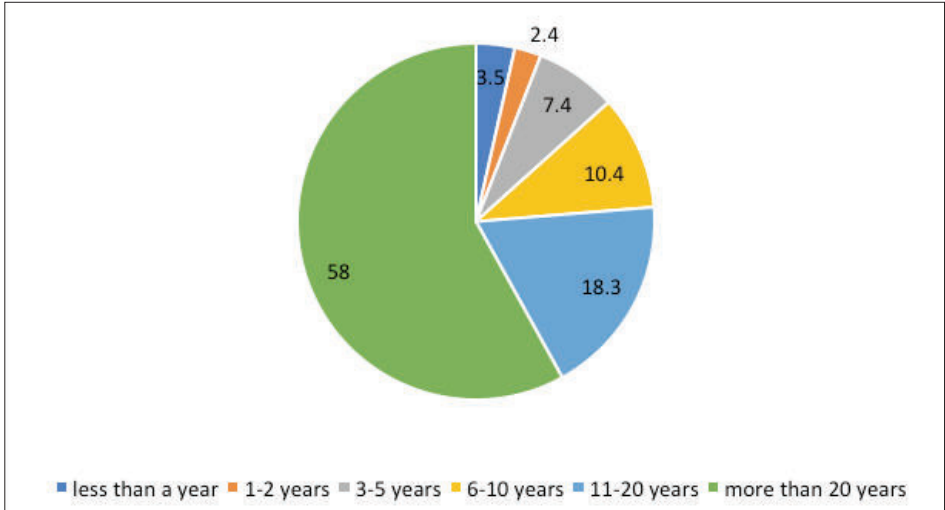
11.3% of those mentioned are partners (including spouses), 12% are adult children, 16.2% are parents, 14.7% are adult siblings and 26.5% are other relatives, which may include both distant family members and members of the partner's family. In comparison, the share of other, non-kin relationship types is negligible among the most important relationships: friends are the most numerous such group, accounting for 14.6% of important relationships, colleagues for 2.2% and neighbours for 1.4%.



**Figure 3: The share of important alters (N=5219) by primary role relation to respondent, %**

Most of the important contacts are old, very long-standing. Less than a year before the survey, i.e. certainly during the Covid-19 pandemic, 3.5% of the relationships mentioned as important were established. A further 2.4% of relationships are 1-2 years old, 7.4% 3-5 years old, 10.4% 6-10 years old and 18.3% 11-20 years old. However, 58% of the

relationships have been in place for more than 20 years. Obviously, we know a good number of our relatives from birth or from the birth of the relatives mentioned, so, given that the respondents and the persons mentioned were at least 18 years old, this figure should not surprise us in light of the role relationships (Figure 3).



*Figure 4: The share of important alters (N=5219) by the length of the relationship with the respondent, %*

Looking at the composition of the respondents' networks, the surveyed adults most often consider their partner as important, with 57% mentioning their partner as one of the most important persons, but parents (53.7%), children (32.7%), siblings (47%) and other relatives (46.5%) are also among the most frequently mentioned categories. So-called "chosen" relationships, such as friends (31.9%), or even colleagues (9.1%) or neighbours (6.1%), are on average much less important. The most important relationships are the closest family relationships: partner, parent, sibling, child; the frequency of mentioning children is probably so low because the instrument asked specifically about people aged 18 and over. Previous research (Albert et al. 2021) has found



that the proportion of friendships among important relationships is increasing, but as the current data show, there is still a significant gap of around 20% between the frequency of mentioning close family relationships (partner, parent, sibling) and that of friends.

The presence of different types of relationships and the size of the networks vary significantly across socio-demographic groups. Women are more likely than men to mention their adult children or other relatives, but also more likely to mention their partners. The prevalence of partners is lowest among the youngest age group, but they mention their parents as the most important contact. Although our study has no data in this regard, the decrease in the frequency of mentioning parents with increasing age may be related to the death of parents. The prevalence of children is almost a mirror image of that of parents: 68.4% of 50-65-year-olds mentioned their children as an important relationship. The frequency of mentioning siblings also decreases with age. The importance of other relatives starts to increase again at an older age after a low point in the mid-30s. The presence of friends declines sharply with age, while that of co-workers less steeply.

Looking at the differences in the mention of friends by demographic group, while women and men mention the same proportion of friends among their important contacts, the proportion decreases with age, in line with previous findings, and increases with educational attainment. Looking at the differences by type of settlement, the data show that people living in Budapest are much more likely to have a friend (44.9%), compared to those living in towns (28.5%) and villages (30.3%). In terms of labour market status, students (46.5%) and the unemployed (41.1%) have the highest proportion of people who mention a friend, while retired people (23%) and those on child care benefits (26.6%) are the most isolated along this dimension.

### *Partners*

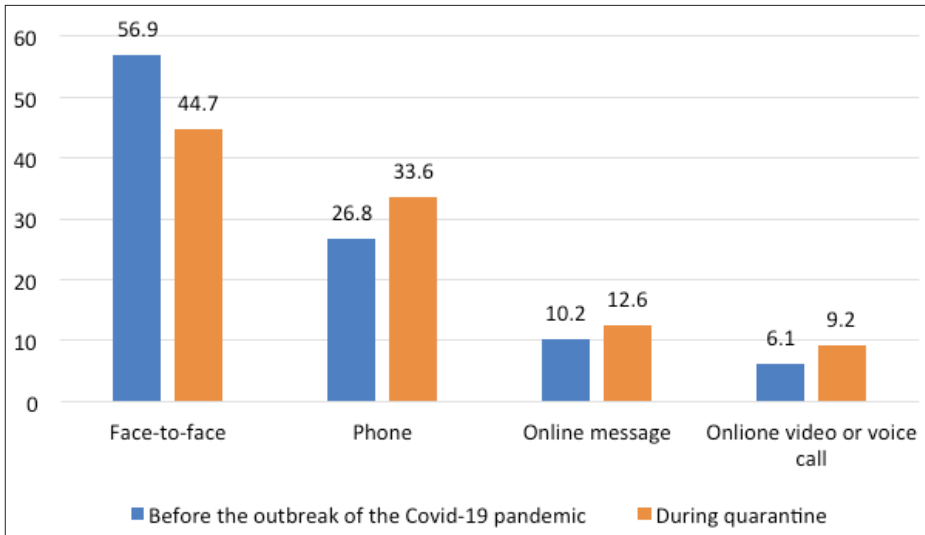
65.2% of respondents are in a relationship. A surprisingly high proportion of respondents in a relationship, 19.3%, did not mention their partner among the people they care about most.

In terms of the deterioration in respondents' relationships, we could find no trace of the otherwise documented significant increase in relationship violence (Sólyomfi 2021, Szabó - Virág 2022) or in divorce filings: an almost negligible proportion, only 1.4%, mentioned their partner among the persons important to them before the Covid-19 pandemic but no longer important at the time of the interview, the reason being the death of the partner in two cases, but in the other cases the deterioration or dissolution of the relationship ("we have grown apart", "I am disappointed in him", "we cannot meet", "he has moved away").

Of course, the breakdown of the relationship could have occurred even though the former partner is still considered among the most important people, as indicated by the fact that in the other categories of relationship types, former partner or spouse was mentioned in several cases. Those who ranked their partner as the most important person to them were largely satisfied with their relationship: before the outbreak and during the closures, 66% rated their relationship as a 10 on a scale of 10, with a further 11% rating it as a 9 or 8. The perceived, recall-based quality of the relationship remained unchanged during the pandemic in the majority of the above cases (85%), and if we allow for a minimal (2 degree) variation, this figure is 98%. The reason for this „rosy” diagnosis of the situation is likely to be that a large proportion of those in a poor-quality relationship did not even mention their partner among the people most important to them.

*Changes in the type, frequency and quality of contacts, compared to the period before the COVID 19 outbreak*

Contact with the most important individuals was mostly face-to-face both before and after the outbreak of Covid 19, although the proportion of face-to-face contact decreased significantly during the closures, while the proportion of telephone and online contact increased.



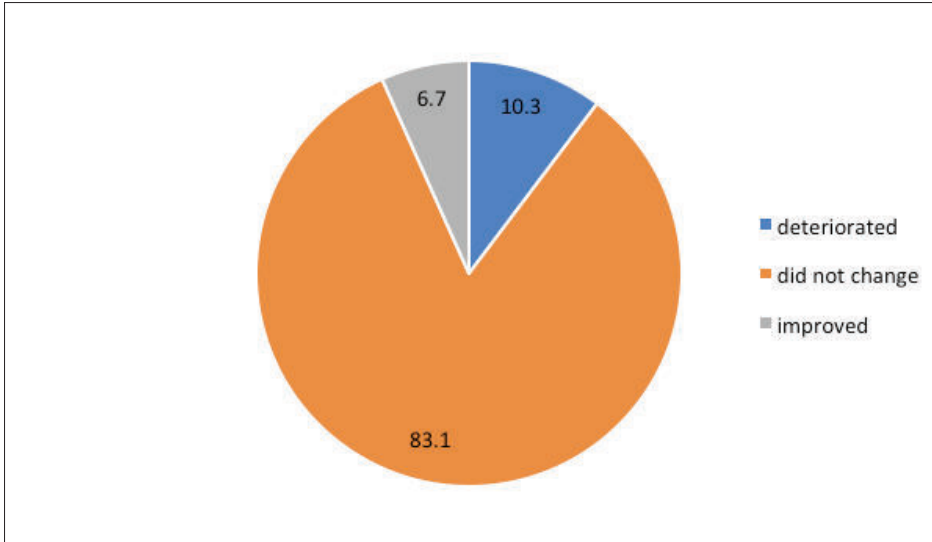
**Figure 5. Typical type of contact before March 2020 and during the closures, %**

In the vast majority of cases (81.5%), the type of contact did not change, with the largest proportion of contacts changing from face-to-face meetings to telephone contact (16%).

Frequency of contact was originally a seven-category variable, from which we created a new variable that gave the frequency of contact as the number of times a person met their contact per month (before and during the pandemic). From this, we could calculate how much the number of meetings had changed. The frequency of contact decreased by  $0.49 \pm 0.23$  per month at the 95% confidence level for the whole

sample. The frequency even increased for those living in the same household ( $0.54 \pm 0.53$ ), and the frequency of encounters for those not living in the same household decreased slightly more than the average ( $-0.77 \pm 0.25$ ). Comparing the two groups, the change in the frequency of contact was significantly different ( $p < 0.001$ ).

The quality of the relationships could be rated by the respondent on a 10-point scale both before and during the pandemic. From this, two types of indicators were generated to characterise the change in the quality of the relationship: one is the difference between the two values entered (a number between -10 and 10), and the other is a variable that only tells us whether the relationship has deteriorated (-1), not changed (0) or improved (1). Figure 11 shows that, overall, the quality of the most important relationships has not changed in the vast majority of cases (83%), but where it has, it has tended to worsen. The quality of the relationship decreased by  $0.100 \pm 0.027$  at the 95% confidence level. Wilcoxon's test for relationship quality showed a significant deterioration in relationship quality ( $p < 0.001$ ). It can be seen that there is a significant deterioration in the type and frequency of contact and in the quality of relationships, but the effect size is small, with the vast majority of relationships remaining unchanged.



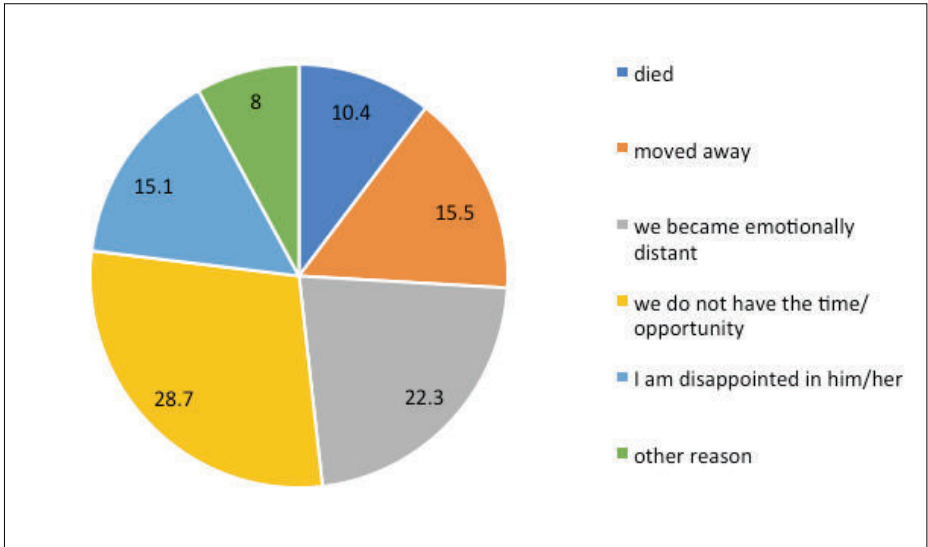
**Figure 6. Changes in the quality of contacts comparing the periods before March 2020 and during the closures, %**

During the COVID-19 pandemic, the quality of friendships decreased (from 8.48 to 8.27), but some demographic groups showed a more pronounced decrease than others: most notably, 30-39 year-olds (change: -0.32), those not working due to illness or disability (-0.33), housewives (-0.34) and the unemployed (-0.30). The least pronounced decrease was seen among 18-23 year-olds (-0.05), those on childcare leave (0) and the retired (-0.09).

### ***Lost important contacts***

17.5% of respondents had lost at least one relationship by December 2021 that was considered very important before March 2020. This rate is 20.1% among women (95% CI: 16.6%–23.65%), and 14.7% (95% CI: 11.5%–17.8%) among men. Women are therefore 1.5 times more likely (95% CI: 1.1-2.4) to have lost an important relationship compared to men. Using cross-tabulation analysis and logistic regression by age,

education, type of settlement, number of household members and sense of loneliness, no similar associations were found.



*Figure 7. Reasons for losing important relationships (N=251), %*

Respondents reported a total of 251 relationships that would have been their most important before the epidemic but were no longer so at the time of the survey. As mentioned in the introduction, the most frequent reason is that there was no longer time/effort to maintain the relationship (28.7% of the relationships concerned). The second most frequently mentioned reason is emotional detachment (22.3%), which can also be a cause and a consequence of the lack of or infrequent encounters. As there are very few cases, these are rather indicative, but there is also an increased involvement of friendships among broken relations, especially among women, young people and people with secondary education. Friendly relationships are more vulnerable than family relationships, with friends being the most frequently mentioned

(5.9%) among the relationships lost during the Covid-19 epidemic, followed by parents (3.7%) and other relatives (3.1%)

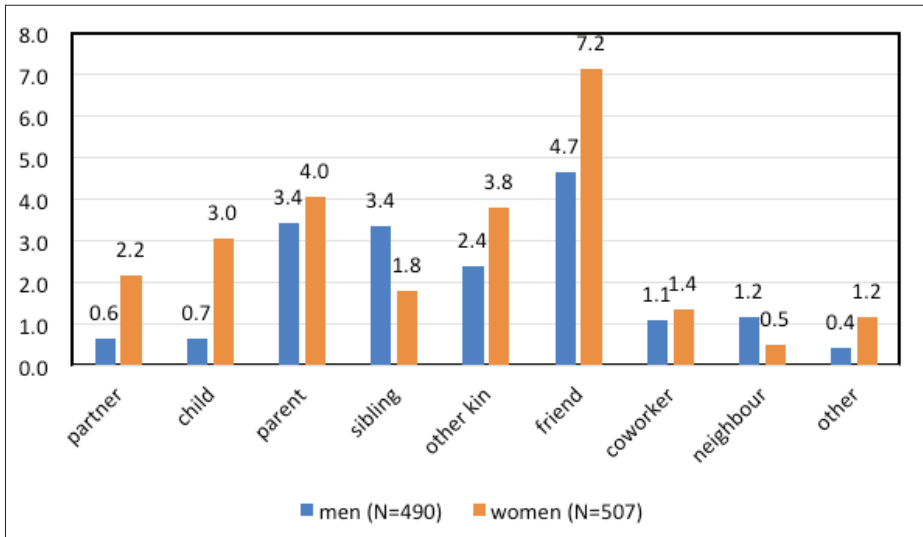


Figure 8. Lost important relationships by role relation (N=251), %

When looking specifically at the reasons for the termination of friendships (N=93), we see that there is a higher proportion of relationships that ended because the parties no longer had the time/opportunity to meet (38,7%). This result indicates the changing importance of friendships, i.e. friendships seem to be less compatible with the changed lifestyle due to the pandemic situation.

Women were more likely than men to have lost a friend during the pandemic period (7,2% of women and 4,7% of men have lost a friend), which is particularly interesting since they have a higher proportion of having only a single friend in their network of very important others. In addition, research prior to the Covid-19 pandemic (Albert et al. 2020) reported a narrowing of the difference in the number of friends between men and women, i.e. while men traditionally had more

friends, this difference was no longer significant in the 2018 data. In contrast, the present results point in the direction that the Covid-19 pandemic has reinstated the gender gap in this regard, with a higher proportion of women having lost friends. This is in line with some Hungarian research (e.g. Fodor et al., 2021, Geambaşu et al., 2020) and a growing number of international studies (e.g. Czymara et al., 2021, Reichelt et al., 2021, Hipp - Bünning, 2021) on this topic, namely, that women were in many respects more severely affected by the pandemic than men. For this reason, many fear a reversal of the progress made towards gender equality in recent decades (EIGE, 2021).

By age, the youngest age group is most affected by the loss of a friend. While 4-6% of the other age groups cited a friendly relationship broken at the time of the epidemic, 16.4% of 18-23-year-olds did so. This is also linked to differences in labour market status, as the results show that 24% of those in school reported a break-up of a friendship, compared to 3-5% of those in paid work and other inactive groups. These results highlight the vulnerability of young people and specifically young people who are students. Among the youngest age group, there are those who finished their secondary education during the virus and started their university studies (or continued their studies in other forms). In their case, new studies often started only online or, if they started semesters in face-to-face education, their schooling often ended up online. In other words, the young people concerned were less (or not at all) able to take advantage of the opportunities to get to know each other in their new training environment, and any new contacts they may have made or had during their previous secondary education could be more easily lost, as they no longer shared the same institutional environment (and new contacts were not built). A further possible explanation for the difference between young people studying and working is that distance learning is more isolating than working remotely (an online class is different from an online work meeting, where you may be freer



to talk to others). These findings also support the importance of the contexts and the length/strength of the relationship mentioned in the introduction to the study.

When we examine the probability of losing a friend in a logistic regression model, we see that the differences between women and men and between age groups are significant even when controlling for other variables (Table 1). That is, women were more likely than men, 18-23-year-olds were more likely than those aged 30 and over have lost a friend during the pandemic. The higher rate of loss of friends among women may be explained by the multiplication of their responsibilities in terms of caring for others during the pandemic period and the associated reduction in women's free time. This explanation is also supported by the interaction effects shown in Table 2, which shows a significant difference between the two sexes only for 30-39-year-olds, with the highest proportion of young children, and 50-65-year-olds with older children who moved home temporarily during the epidemic, and who often had to care for elderly parents..

In the second model, we included labour market status instead of age group (the two cannot be tested simultaneously due to the low number of cases and the correlation between the two variables). The regression results confirm that those in education were significantly more likely to have lost a friend compared to all other groups (those in paid work, the unemployed, retired or other inactive status).

Model 1			Model 2			
	AME	p	ci95	AME	p	ci95
<b>Sex (ref. males)</b>						
Women	0.04	0.03	0.00,0.07	0.04	0.01	0.01,0.07
<b>Age group (ref. 18-23)</b>						
24-29	-0.08	0.13	-0.19,0.03			
30-39	-0.11	0.03	-0.21,-0.01			
40-49	-0.10	0.06	-0.20,0.00			
50-65	-0.10	0.06	-0.20,0.00			
<b>Educational level (ref. primary)</b>						
secondary	0.03	0.08	-0.00,0.07	0.03	0.13	-0.01,0.07
tertiary	0.01	0.47	-0.02,0.05	0.01	0.58	-0.03,0.05
<b>Settlement type (ref. Budapest)</b>						
city	-0.05	0.08	-0.10,0.01	-0.05	0.06	-0.10,0.00
village	-0.04	0.18	-0.10,0.02	-0.04	0.16	-0.09,0.02
<b>Labour market status (ref. In education)</b>						
In gainful employment				-0.19	0.02	-0.34,-0.03
Unemployed				-0.18	0.03	-0.34,-0.02
Retired				-0.20	0.01	-0.36,-0.05
Other inactive				-0.20	0.01	-0.36,-0.04
N			996	996		
Pseudo R <sup>2</sup>			0.05	0.07		

*Dependent variable: Did you have a friend whom you would have mentioned before the outbreak of the Covid-19 pandemic but now you do not mention him/her? (0=no N=929; 1=yes N=67). AME= average marginal effects, ci95=95% confidence intervals.*

**Table 1: Binary logistic regression models - Probability of losing a friend during the Covid-19 epidemic**

<b>Model 3</b>			
	<b>b</b>	<b>p</b>	<b>ci95</b>
<b>Sex (ref. males)</b>			
Women	0.03	0.03	0.00,0.07
<b>Age group (ref. 18-23)</b>			
24-29	-0.09	0.11	-0.20,0.02
30-39	-0.11	0.03	-0.21,-0.01
40-49	-0.10	0.06	-0.20,0.00
50-65	-0.10	0.06	-0.20,0.00
<b>Educational level (ref. primary)</b>			
secondary	0.03	0.11	-0.01,0.07
tertiary	0.01	0.47	-0.02,0.05
<b>Settlement type (ref. Budapest)</b>			
city	-0.05	0.08	-0.10,0.01
village	-0.04	0.16	-0.10,0.02
<b>Sex – age interaction</b>			
women # 18-23	0.10	0.30	-0.09,0.30
women # 24-29	-0.02	0.70	-0.11,0.07
women # 30-39	0.07	0.00	0.02,0.11
women # 40-49	-0.04	0.25	-0.10,0.03
women # 50-65	0.06	0.01	0.01,0.11
N		996	
Pseudo R2		0.08	

*Dependent variable: Did you have a friend whom you would have mentioned before the outbreak of the Covid-19 pandemic among your closest relations but now you do not mention him/her? (0=no N=929; 1=yes N=67), AME= average marginal effects, ci95=95% confidence intervals.*

**Table 2: Binary logistic regression models - Probability of losing a friend during the Covid-19 epidemic – with interaction effects (sex and age)**

## Discussion

In our exploratory analysis, we used the name generator of important contacts to present the state of the close egocentric contact networks of the working-age, internet-using, Hungarian adult population at the end of 2021. 4.6% of respondents were completely isolated, with respondents naming an average of 5.5 people important to them. The dominance of close family ties is very strong and indicates the traditional nature of the relationship structure. However, most of these relationships are very close indeed, both in terms of the quality of the relationship and the length of time it has lasted. Contact with key ties was mostly face-to-face both before and after the Covid-19 outbreak, although the proportion of face-to-face contacts decreased significantly during the closures, while the proportion of telephone and online contacts increased. People living in the same household were more likely to be in contact during the closures than before, while people living in a different household were less likely to be in contact than before. The quality of key contacts remained overwhelmingly unchanged, scoring very highly, but where they changed, they tended to deteriorate. It is possible, however, that the method used, especially when used for retrospective data collection, does not give a realistic picture. A higher-than-expected proportion of people who used to have face-to-face contact switched to telephone contact and a lower proportion to online messaging.

There was also an increased deterioration in the quality and frequency of contacts that were previously personal but which were maintained in other ways as a result of the epidemic. Women were more likely than men to have lost a relationship that was important to them, probably not unrelated to the increased burden of caring and other responsibilities. Although our study focuses on mapping the closest relationships, even in this narrowest range of relationships, the importance of the reduction in opportunities for contact is highlighted,

as this and the closely related distancing are two of the main causes of relationship breakdown, i.e. social isolation should and could be combated by creating and supporting opportunities for contact. At the time of writing this paper, the Covid-19 pandemic is still not over, and it is important to continue to monitor its effects, including its consequences on the formation of networks of relationships and their evolution over time.

Several types of friendships have been distinguished since antiquity (see Albert - Dávid 2007 for details). For the purposes of our study, since the questionnaire was designed to capture the most important human relationships for the respondent, we have not listed the looser friendships, but rather the close, „real/true” (meaningful) ones, i.e. we describe changes in this emotionally closer field. It cannot be ruled out that trends observed in this narrower circle of friends are more pronounced in the looser, more distant circle of friends, which may be even more problematic in terms of social integration.

Overall, it can be concluded that the pandemic period has led to a weakening of friendships and, in some cases, to their disintegration. On the one hand, the loss of a friend was more pronounced among young people (and specifically among those aged 18-23 and, in this context, students), women (and specifically among women aged 30-39 and 50-65). Young people generally have more friends than older age groups, so the greater likelihood of losing a friend may be explained by the fact that they also named looser ties among their friends, which (due to their lower degree of closeness) are more affected by the epidemic situation.

Women were also more likely than men to have lost contact with a friend during the pandemic, a finding that may be related to the multiplication of caregiving tasks during the Covid-19 epidemic (Fodor et al., 2021, Geambaşu et al., 2020) and thus the marginalisation of friendships. This hypothesis is supported by the results of the

questionnaire survey, which showed significant differences between the two sexes for the 30-39 and 50-65 age groups. While for women in their 30s, the care and education of children who are already in nursery, kindergarten or school at home may have caused an increase in burden and a decrease in leisure time; the same may have been the case for those aged 50-65 who had to care for older children (moving home from college or renting) or elderly parents. The higher rate of loss of friends among women also points towards a reversal of the gender gap in the number of friends. While men have traditionally had more friends than women, the gap has disappeared in recent years (Albert et al. 2020). However, the Covid epidemic appears to have broken this trend, which should be a key area of future research. Overall, the quantitative results of the study showed that friendships were the most vulnerable of the important personal relationships during the epidemic.

A limitation of our study is that our sample is representative only of the population with internet access. In a sample representing the whole population, there may be greater differences in the data regarding the decline in face-to-face contact. In addition, the over-65s are not included in the present study, who are also less likely to use the internet, although previous research suggests that they, along with young people, are also considered to be at high risk of the negative impact of the epidemic and of losing friends.

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## Freedom of information and Covid-19 – the Hungarian case

### Abstract

This chapter gives an insight into Hungarian freedom of information practices (case law) during Covid-19 pandemics. The chapter gives an introduction to Hungarian Government policy on freedom of information (dissemination of information related to Covid-19). The essay summarises all major cases related to freedom of information and data of public interest in Hungary, with particular reference to the delayed disclosure of regional and territorial data. A separate sub-chapter is dedicated to the division of personal data from public data in the context of Covid-19 infections.

### Introduction

Covid-19 pandemic challenged the universal system of human rights around the world. Citizens have been forced to endure a multitude of binding restrictions, whether on their privacy, freedom of movement, access to justice or the exercise of any other fundamental right. The ‚balancing principle’ of constitutional law, basically the need to weigh what restrictions on fundamental rights are necessary and proportionate

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in a democratic society, has been regularly applied and invoked in the face of the greatest human epidemic of the 21st century.

The situation of freedom of information is specific in that data of public interest on the endemic, such as the spread of the virus, the number of infected, the number of deaths, the hotspots of the outbreak, or the most important vaccine information as well as credible information on Government measures to combat the epidemic, are not simply *data of public interest*, but are in fact data that are prerequisites for public confidence in the fight against the pandemic.

The lesson learnt from the pandemic so far is that only credible, up-to-date, verifiable information can strengthen public confidence and reduce uncanny panic reactions (e.g. unwarranted getaway from parts of the country where there is no demonstrable threat, fear-driven isolation of infected people, and stigmatisation of certain infected or exposed groups).

To highlight just one aspect of our claim: without authentic information, it is certainly not possible to increase confidence in vaccination. The willingness to vaccinate is a key factor, without which it is not possible to successfully combat the pandemic. Therefore, our claim in this study is that freedom of information is referred to increase the willingness to vaccinate. It is highly justified to assume that the willingness to vaccinate will increase if citizens are aware of the data on how many people have been vaccinated, for instance, in Hungary, what vaccine was used, and how many vaccinated and unvaccinated have died.

It is justified to have accessible data on the health risks (if any) of vaccination. All such data contribute to the trust in vaccination, which contributes to the safe handling of the pandemic. For example, vaccination of children under 12 in Hungary depended heavily on whether guardians who decided for or against the vaccination of minors had access to credible information. Such data reduced concerns about the side effects of vaccines and contributed to herd immunity .

In the international practice of freedom of information and

Covid-19, it seems to be highly unusual, one could argue, that a special “Hungarian way” to handle the crisis was by the Government restricting freedom of information. By and large, the Government failed to recognize how the power of information serves its own interests, and regarded the extended exercise of freedom of information as an obstacle to its own effectiveness in the fight against Covid-19. In sum, the Hungarian Government chose to restrict data of public interest via statutory measures from the very early stage of the pandemic.

## Regulatory Background

The Hungarian government declared a state of emergency for the first time on 11 March 2020 [Government Decree 40/2020 (11.III.) on the declaration of a state of emergency], thus a special legal regime for the whole country came into force. The decree was extended continuously and currently is in force due to the war in Ukraine. So, the state of emergency was originally introduced (and justified) in the fight against the Covid-19 pandemic, and the special legal order was continuously extended for reasons related to the war in Ukraine.

Restrictions on freedom of information were first regulated by Government Decree 179/2020 (4 May 2020) on the derogation from certain provisions on data protection and data requests in times of emergency<sup>5</sup> and then by Government Decree 521/2020 (25 November 2020) (with the same title and the same content but different numbering). Government Decree No 521/2020 (25.XI.) expired on 8.II.2021. It was then re-enacted by Government Decree 27/2021 (29 I).<sup>6</sup> After a new

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5 The legislator has always adapted the order of the data request to the scope of the law imposing the imposition (and reimposition) of the emergency measure. Government Decree 179/2020 (V.4) provided for its application until the end of the state of emergency declared by Government Decree 40/2020 (11.III.).

6 27/2021 (I. 29.) Government Decree on the declaration of a state of emergency and the entry into force of emergency measures, § 4, point 17, reapplies Government Decree 521/2020 (XI. 25.).

expiry, the validity of Decree No 521/2020 (XI.25) was extended until 23 May 2021 by Government Decree No 80/2021 (II.22).<sup>7</sup> Finally, under the next amendment, the scope of Government Decree 521/2020 (XI.25) was again extended by Government Decree 271/2021 (21 May) until the expiry of Act I of 2021 on the protection against the coronavirus pandemic.<sup>8</sup>

In May 2020, the Civil Liberties Union for Europe, Access Now and the Hungarian Civil Liberties Union (TASZ) appealed to the European Data Protection Board (EDPB) against the provisions of Government Decree 179/2020 (4 May 2020) that derogate from freedom of information principles and certain data protection provisions. In its reply of 3 June 2020, the EDPB stresses that it has no jurisdiction in the matter. Suspected violations of the GDPR can be investigated by the national data protection authority.<sup>9</sup> (In this study we argue that the credibility of European and Hungarian NGOs are higher if they manage to apply to competent authorities with their claim. Even though their claim was rightful, they were unable to articulate it).

*The government's justification for the restrictions on the right to freedom of information in Hungary in the fight against Covid-19 is the authorities' administrative workload. According to the Government's reasoning, the delay in fulfilling data requests is justified because the data controller (public authority in charge) is burdened with other pandemic-related tasks. The nature of the restrictions in Hungary are as follows:*

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7 Government Decree 80/2021 (22.II.) on the extension of the period of validity of the emergency measures related to the state of emergency declared on 8 February 2021. Pursuant to Article I, point 17: the Government extends the validity of Government Decree No 521/2020 (25.11.20) on derogations from certain provisions on data requests during the emergency until the expiry of Act I of 2021 on the control of the coronavirus pandemic.

8 271/2021 (21.V.) Government Decree on the renewal of the extension of the emergency measures related to the state of emergency declared on 8 February 2021 § 1.

9 [https://edpb.europa.eu/sites/default/files/files/file1/edpb\\_letter\\_out2020-0046\\_ngoshudecrees.pdf](https://edpb.europa.eu/sites/default/files/files/file1/edpb_letter_out2020-0046_ngoshudecrees.pdf)

1. The request for access to data of public interest may not be submitted orally, and the request for access to data does not have to be fulfilled in the form and manner requested by the applicant pursuant to Paragraph (2) of Section 30 of the Information Act, if it involves a personal appearance before the public authority performing public tasks.
2. The public authority challenged shall comply with the request within 45 days of receipt of the request for data, if it is likely that compliance with the request within the time limit (15 days) would jeopardise the performance of the public tasks of the body. The applicant shall be informed of this (new) deadline within 15 days. This time limit (45 days) may be extended once by 45 days.
3. If the fulfilment of the data request involves a disproportionate use of the staff resources necessary for the performance of the core activities of the body performing public tasks, or the requested document is of significant volume, then a cost compensation may be determined pursuant to Section 29 (2) of the Information Act, and the data request should be fulfilled within 45 days of the payment of the cost compensation instead of the original 15 days of deadline. This period of 45 days may be extended once by another 45 days
4. The data requester under FOI must be notified of the refusal of the request, the reasons for the refusal and the legal remedies available (Section 30 (3) of the Information Act) within 45 days of receipt of the claim instead of 15 days. This period may be extended by a further 45 days.
5. The restrictive measures shall also apply retroactively to pending requests for access to data of public interest.

We have summarised above the most important features of the legal context of freedom of information during the Covid-19 pandemic. The essay will further focus on the three most significant problems in the context of the coronavirus and freedom of information in Hungary:

first, the lack of regional and territorial epidemiological data. Hence the title of the first paragraph: epidemiological data, delay and consequences. The second paragraph is entitled: publication of mortality data, data of public interest and bad government practices. The third problem is the separation of personal and public data in the context of the Covid-19 contagion, part of which is that the identifiability of infected people was jeopardised.

### *Epidemiological data, delay and its consequences*

Essential epidemiological data were partly not communicated by the Hungarian Government to citizens and data were partly delayed. This caused extreme difficulties in the first wave of the pandemic, in the spring of 2020. Also, the Hungarian Government did not communicate (at all) regional epidemiological data in the first phase of the outbreak.

Gergely Gulyás, Minister heading the Prime Minister's Office, stated that regional epidemiological data are not disclosed because „the Operation Task Force's position is clear: we must not create panic in any one municipality“.<sup>10</sup>

Meanwhile, the Government-critical daily 444.hu carried an analysis in an editorial that all European countries publish regional data on coronavirus patients, except for Hungary.<sup>11</sup> In a press statement, the president of the Hungarian National Data Protection Authority (NAIH) says the reason for the concealment of the territorial data is that these data can also be “decision-preparatory” data that are immune from disclosure. According to Paragraph 5 of Article 27 of the Hungarian Information Act<sup>12</sup>, “any

10 <https://infostart.hu/belfold/2020/03/19/kormanyinfo-tiz-tizenotszoros-a-lappangas-szazezres-lehet-a-megbetegedes>

11 <https://444.hu/2020/03/17/az-osszes-europai-oroszag-kozol-teruleti-adatokat-a-koronavirusos-betegkrol-kiveve-magyarorszagot>

12 Act CXII of 2011 on the Right to Informational Self-determination and Freedom of Information (Hereinafter: Information Act).



information compiled or recorded by a body with public service functions as part of, and in support of, a decision-making process for which it is vested with powers and competence, shall not be made available to the public for ten years from the date it was compiled or recorded. Access to these information may be authorized by the head of the body that controls the information in question upon weighing the public interest in allowing or disallowing access to such information”<sup>13</sup>.

According to the President of National Dataprotection Supervisory Authority (NAIH), the disclosure of regional data can be restricted if data contribute to a decision-making procedure, especially if they determine the modus, the place or the time of effective defence against the virus. The Government should avoid to “frustrate the effective fight against the virus”<sup>14</sup>. If the effective fight is jeopardised, the restriction on public data is justified. (In such a case, the subsequent decision in which the mentioned data is “preparatory” can vary. For example, the closure of an infected area can be a decision-making document if there is a threat of mass displacement due to fear-induced panic.)

The question is rather how much it violates the essential content of the fundamental right to freedom of information for a government to withhold territorial infection data in contravention of European best practice. The President of the Hungarian Data Protection Supervisory (NAIH) strengthens the position of the Hungarian Government when he stresses that the fact that territorial data are not considered personal data in statistical form,<sup>15</sup> does not automatically mean that they are open and accessible data, because data disclosure may be restricted for other reasons, e.g. for the preparation of decision-making.

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13 Paragraph 5 of Article 27 in Act CXII of 2011 on the Right of Informational Self-Determination and on Freedom of Information.

14 Interview with Attila Péterfalvi. Hungary live extra: with Attila Péterfalvi (2020-03-19) - HÍR TV. [https://www.youtube.com/watch?v=YAQ\\_-hPxjGQ](https://www.youtube.com/watch?v=YAQ_-hPxjGQ)

15 Personal data are considered always “protected data”

The President of NAIH points out that there is a contradiction in case law (according to the practice at the time) because municipalities widely disclose infection data, while the Operation Task Force considers or may consider the same data as decision-preparatory.

The President of NAIH also makes a sovereignty argument against the EU: he points out that regulation of the freedom of information is a national competence, referring to the fact that there are no milestones for the restriction of the freedom of information; only national law can set limits to it, and no other EU norms have to be complied with.<sup>16</sup>

In NAIH Resolution 2020/2904-2 at the end of March 2020, the President of the Data Protection authority confirmed his previous (televised) statement – discussed in detail above. He refers to the fact that the geographical spread of the epidemic is multiply published, it does not rely on the willingness of the Hungarian Government, for example, geographical data is also published by the WHO, the source of information is multiple.<sup>17</sup> Similarly, a leaflet can be downloaded in Hungary at <https://koronavirus.gov.hu>. In this statement, the President of NAIH confirms that the Information Act allows for restrictions on the disclosure of information preparatory to a decision: „This may be particularly true in a spontaneous or rapidly changing epidemiological situation, where the public authority is not necessarily obliged to provide full information on planned or ongoing decisions or the information on which they are based. It should be stressed that once a decision has been taken, the request for information can only be refused if the information is also used as a basis for a future decision (...)”<sup>18</sup>

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16 Interview with Attila Péterfalvi. Hungary live extra: with Attila Péterfalvi (2020-03-19) - HÍR TV. [https://www.youtube.com/watch?v=YAQ\\_-hPxjGQ](https://www.youtube.com/watch?v=YAQ_-hPxjGQ)

17 <https://who.maps.arcgis.com/apps/opsdashboard/index.html#/ead3c6475654481ca51c248d52ab9c61> <https://coronavirus.jhu.edu/map.html>

18 NAIH 2020/2904-2

### *NAIH practice*

According to NAIH's case law and consistent practice, under the (eg. state of emergency), „notwithstanding Section 29 (1) of the Information Act,<sup>19</sup> the public body handling the data shall comply with the request for access to data of public interest within 45 days of receipt of the request, if it is likely that the timely fulfilment of the request pursuant to Section 29 (1) of the Information Act would jeopardise the public body's performance of its public duties in connection with the emergency “<sup>20</sup>.

„According to the case law of the data protection authority, if the conditions set out in the Government Decree are met, the data requester must at least be informed of the circumstances of Section 29 (2) of the Information Act that grounded the extension of the deadline; also, the data requester must be informed of the public tasks to fulfil that would be jeopardised by providing the information within the original deadline. It is not sufficient to state the fact that the deadline has been extended [by the public body], reasons must also be given.”<sup>21</sup>

„The National Data Protection Authority will assess the justification for the 45-day time limit for compliance and the justification for an extension, which may be applied under the Government Regulation in each case on the basis of its assessment of all the circumstances of the case.”<sup>22</sup> On this basis, for instance, NAIH did not find it lawful to refuse to provide data of public interest in relation to a request for data from the municipality of Gyömrő, where the applicant had not received a reply to his FOI request for two months.<sup>23</sup> The case of NAIH-3092-4/2021 of the municipality of Nagytarcsa is particular, where, following

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19 Paragraph (1) of Article 29 of the Information Act sets a 15-day time limit for the fulfilment of the request.

20 NAIH 2010-6/2021.

21 NAIH 2010-6/2021.

22 NAIH-831-11/2021. See also NAIH-4751-5/2021

23 NAIH-831-11/2021. See also NAIH-2940-8/2021

the receipt of a request for data of public interest, on 11 January 2021, the notary extended the 15-day deadline for the request by a further 15 days under the Information Act. In its investigation, the NAIH found the extended deadlines to be applicable in the pending case, in accordance with the broad interpretation of the cited Government Decree.<sup>24</sup>

However, in the periods when the government decree restricting freedom of information was repealed due to the improvement of the virus situation, the default rule of the Information Act was applied: the request had to be fulfilled within 15 days.<sup>25</sup> Thus, the municipality of Eger was in breach when it failed to inform the data requester within 15 days “when, from whom and how many coronavirus tests were obtained by the municipality” and “who among the municipal leaders had received a rapid test”.<sup>26</sup>

The research has also shown that, in addition to the above legal reference, the NAIH also refers to other legal bases. In NAIH Resolution No. 685-1/2021, the NAIH does not find that Government Decree No. 41/2020 (11.III.), on measures to be taken in the event of an emergency situation to protect the health and life of Hungarian citizens, is a sufficient legal basis for restrictions of data of public interest. According to paragraph 3(2) of Government Decree 41/2020 (11.III.), the mayor of the municipality is responsible for the care of persons in official quarantine. On the other hand, the NAIH, relying on an extremely rarely cited piece of legislation, states, on the basis of Article 4(8) of Act XI of 1991 on Health Authority and Administrative Activity, that “data established on the epidemiological situation are public, and therefore

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24 NAIH-3092-4/2021

25 NAIH/2020/6190/3

26 NAIH/2020/6190/3. If necessary in connection with the request, the Infotv. does not prohibit the public body from providing information, explanations and additions to the data request in order to provide authentic and complete information.

data established on the pandemic should be made public by the State health administration “<sup>27</sup>.

An interesting development is the data request by Anna Donáth, member of the European Parliament, in April 2020, where she asks questions about the Action Group set up to „ensure the functioning” of state and non-state economic companies „vital to the functioning of the country” and the functioning of the Defence Management Tribes (HI Tribes) within it, through a public a data request.<sup>28</sup> The NAIH’s position is that „in the absence of a separate and distinct legal entity and associated budget, the HI Tribes have no directly accountable disclosure obligations”. Their primary functions are logistical, such as passenger transport and guarding. According to Article 28(1) of the Information Act, a request for public data can be submitted directly to the Minister of Defence or his/her superior body in charge of the Task Force but not the Task Force directly.<sup>29</sup>

Public access to mortality data, data of public interest and bad governance practices

In addition to the above, the government’s freedom of information practice received other criticism. One was that the mortality data provided by the Government on the web, do not include information on the sub-data that would reflect on more detailed information on the nature of the virus. One of these critical gaps is the mortality statistics for patients admitted to intensive care units and ventilators, which at the peak of the outbreak were reported by the press to be over 80%.<sup>30</sup> (It is not sufficient to know how many people died, it is important to

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27 NAIH/685-1/2021

28 Government Decision 1108/2020 (18.III.) and Government Decision 1101/2020 (14.III.), point 3 a) and b).

29 NAIH 2020/3404/2.

30 The guest of Straight Talk is Hunor Novák, an infant and paediatrician. <https://www.youtube.com/watch?v=jzjLjxOJFdk>

know how many died out of those that went into intensive care, how effective the intensive care unit was, if there were enough life-saving ventilators, etc).

In Hungary, the most important Government data on the epidemic can be found at [koronavirus.gov.hu/#news](https://koronavirus.gov.hu/#news). In April 2021, the Government published its statistics on the effectiveness of the five vaccines available in Hungary on the same page. The data compared the number of people vaccinated, or the number vaccinated per 100,000 people, with the number of people who became ill or died from the virus. By this statistics (and methodology used for the statistics), the best overall statistical results were granted to the Russian vaccine Sputnik together with the Chinese vaccine Sinopharm.<sup>31</sup> Biochemist Katalin Karikó questioned the accuracy of the statistics, saying on her social media page that the age of the deceased was not indicated and that the sampling intervals were unjustifiably different for the vaccines compared.<sup>32</sup> Szabolcs Dobson, a pharmacist and founder of the Facebook group Coronavirus Vaccination - Literature Trampling, says:<sup>33</sup> „No professional conclusions can be drawn from the data published by the Government. We do not see that the Government has taken into account the timing of vaccination campaigns (see epidemic surge), the demographic, geographical and health characteristics of those vaccinated, the severity of the disease, diagnostics and more. We don't even know if data exist to allow such analyses. I would like to believe that the scientific standard of Hungarian epidemiology is (as it traditionally has been) much higher than what we see here. However, if public epidemiological decision-making is based on the collection and

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31 <https://index.hu/gazdasag/2021/04/27/kormanyzati-tajekoztatasi-kozpont-vakcina-tablazat/>

32 <https://www.facebook.com/photo.php?fbid=10157763512121034&set=a.476277836033&type=3>. See also: opinion of the Hungarian Medical Chamber: <https://index.hu/belfold/2021/04/27/a-mok-szerint-a-kormany-vakcinatablazata-nem-alkalmas-melyebb-kovetkeztetesek-levonasara/>

33 <https://www.facebook.com/groups/740482753554572/permalink/819601538976026/>

processing of data to an asthmatic standard, combined with political marketing, it results in tragedy. Poor Hungary”. In response to the harsh criticisms, the Government of Hungary did not subsequently correct the allegedly incorrect data provided on the Government site.

On 16 June 2021, Bernadett Szél, Member of the Hungarian Parliament, requested from the Ministry of Human Resources the following: “Please send me the background material, background calculations and detailed documentation of the research underlying the table published on the Government’s Facebook page on 25 April, entitled ‘ Data on infections and deaths after the second vaccination between 26 December 2020 and 20 April 2021’”<sup>34</sup>. In its response, the Ministry (referred in Hungarian as EMMI) repeated the same data from the (originally) criticised table that previously raised serious concerns: (Number of cases per 100,000 vaccinees, rounded to the nearest whole number = (total number of cases after the second vaccination) / (number of second vaccinations administered = fully vaccinated) and the number of deaths per 100,000 vaccinees, rounded to the nearest whole number = (total number of deaths after the second vaccination) / (number of second vaccinations administered = fully vaccinated)).<sup>35</sup>

In September 2021, István Ujhelyi, member of the European Parliament (part of the Hungarian opposition) requested data of public interest on how many of the coronavirus patients who were finally hospitalized or died had been previously vaccinated, what vaccine they had received and how many times they had been vaccinated.

34 <https://444.hu/2021/08/04/szel-bernadett-kivancsi-lett-volna-a-reszletes-adatokra-a-kormany-elhiresult-vakcinahatekonysagi-tablazatarol-de-nem-kapta-meg-azokat>

35 The EMMI has also sent a new table showing how many people have been vaccinated with the different vaccines. According to the daily 444. hu, this is the data that would have been available anyway from the European Centre for Disease Prevention and Control. <https://444.hu/2021/08/04/szel-bernadett-kivancsi-lett-volna-a-reszletes-adatokra-a-kormany-elhiresult-vakcinahatekonysagi-tablazatarol-de-nem-kapta-meg-azokat>

No reply was received.<sup>36</sup> In his study, Tamás Ferenci points out that, unfortunately, in Hungary there is still no public, written record on the procedure for determining how (exactly) to consider the cause of death as a Covid-19 related death.<sup>37</sup>

Among the bad government practices, it is worth mentioning the reference to the previously discussed unreflective decision-making as a limit to the disclosure of data of public interest. This practice exempted cases from the principle of freedom of information relying on their nature as preparatory documents for decision-making without discretion. In none of the cases examined in this research paper has the NAIH found that the data or information used to prepare a decision was wrongly classified and was, *in fact*, data of public interest, and therefore no conclusion was made that disclosure was unjustifiably restricted.

The first such group of ambiguous cases was the above mentioned geographical disaggregation of infection data. Here the Hungarian National Data Protection Authority actually formulated the legal basis for the data not to be revealed (how to block them from the public) basically in lieu of the Government. (As a reminder, NAIH is established by law to protect in every possible way the disclosure of public data not to block them).

The other typical set of cases using the argument of preparatory data for decision-making to reject freedom of information requests was related to the evacuation of hospital beds in Hungary. The Order by the Ministry of Human Resources (EMMI) on the emptying of hospital beds for the purpose of accommodating future coronavirus patients was not made public,<sup>38</sup> and therefore the Hungarian Helsinki

36 [https://nepszava.hu/3132813\\_miert-titkolja-a-covid-betegek-oltasi-adatait-a-kormany](https://nepszava.hu/3132813_miert-titkolja-a-covid-betegek-oltasi-adatait-a-kormany). Also: <https://infostart.hu/belfold/2021/09/30/ujhelyi-istvan-pert-indit-a-covid-betegek-oltottsagi-adatai-miatt>

37 <https://github.com/tamas-ferenci/ExcessMortEUR>

38 <http://www.ekint.org/az-allam-atlathatosaga-informacioszabadsag/2020-05-12/uvegemberkent-elni-a-nagy-testver-orszagaban-avagy-a-lemeszarolt-informacios-szabadsagok>



Committee, a civil rights organisation, submitted a public interest data request to the Ministry (EMMI) on 20 April 2020,<sup>39</sup> asking for a copy of the Order. The Hungarian Helsinki Committee claimed that according to the Order, 50% of the bed capacity in Hungarian hospitals had to be made available by 19 April 2020, for a total of 32,900 beds, and in the next phase, another 60% of bed capacity, for a total of 39,500 beds for the purpose of the subsequent care of patients with Covid-19 to be hospitalised.<sup>40</sup>

In its ironic reply, the Ministry states: „I would like to inform you that the document you requested will also provide the basis for a further future decision-making. According to Paragraph 6 of Article 27 of Information Act, I reject it”<sup>41</sup>.

Another typical case related to Covid-19 and freedom of information in Hungary is regarding the NAIH-157-2/2021 statement. In this case, NAIH found the decision to reject the FOI (freedom of information) request was justified. Chief Surgeon General, Cecilia Müller, rejected the request to provide access to several provisions of Government Decree 431/2020 (XI.18). Regarding the Decree, the petitioner also requested “the professional-medical ground” of a statement by Gergely Gyulyás, head of the Prime Minister’s Office. Moreover, the applicant requested the opinion of the National Centre for Public Health (NNK) on whether the textile mask is a garment or a medical device. The Hungarian data protection supervisory (NAIH) concluded that “the NNK did not infringe the applicant’s right of access to data of public interest by not complying with its request (...)”<sup>42</sup> At the same time, the data protection authority (NAIH) draws Cecilia Müller’s attention

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39 [https://kimitud.atlatszo.hu/request/korhazi\\_agykapacitas\\_felszabadit](https://kimitud.atlatszo.hu/request/korhazi_agykapacitas_felszabadit)

40 <https://koronavirus.gov.hu/cikkek/korhazak-orszagszerte-felkeszulnek-tomeges-megbetegedesekre>

41 [https://kimitud.atlatszo.hu/request/korhazi\\_agykapacitas\\_felszabadit](https://kimitud.atlatszo.hu/request/korhazi_agykapacitas_felszabadit)

42 NAIH-157-2/2021

to the fact that „information on masks (..) is extremely important in the current situation, so please do not hesitate to provide a link to the information on the website for applicants (...)”<sup>43</sup> The NAIH’s position does not give an explanation as to why the NNK has not infringed the right of the petitioner to access data of public interest by rejecting the request, if the information on protective masks and their wearing is (per definition) data of public interest.

*Conflict between freedom of information and data protection in the era of Covid*

It is a well-known truism among information rights researchers that, in the course of their research, it is inevitable that – in the given context – they will sooner or later be faced with the conflict of the rights of privacy versus freedom of information.

In the fight against Covid-19 pandemic, the most visible conflict in Hungary relates to the improper disclosure of data of Covid-infected citizens. In the early stages of the outbreak in Hungary, we witnessed that local communities protected themselves against the outbreak by publicly identifying the infected population. In her study, Christina Etteldorf rightly notes that the publicity of a specific person’s infection is an issue that puzzles many authorities across Europe.<sup>44</sup> The disclosure of such personal data can affect the socio-economic situation of the person concerned and can be counterproductive in that it discourages cooperation with the authorities, mainly due to fear of stigmatisation.<sup>45</sup> Various European solutions are known, for example the Latvian DPA states that the designation of infected areas should be sufficiently broad

43 NAIH-157-2/2021

44 Christina ETTELDORF, EU Member State Data Protection Authorities Deal with Covid-19: An Overview, 6 EUR. DATA PROT. L. REV (2020). p. 265.

45 Christina ETTELDORF, EU Member State Data Protection Authorities Deal with Covid-19: An Overview, 6 EUR. DATA PROT. L. REV (2020). pp. 276-77.

to prevent a person from being personally identified. Such a broad definition would be to refer to a large town instead of a municipality of a handful inhabitants.<sup>46</sup>

In the case NAIH/2020/3378/4, the mayor of the city of a small town in Hungary, Szarvas, published on his personal Facebook page the public areas of the city where he had ordered an official quarantine, and at one point he also gave the exact address of the property concerned, which he later corrected and called the release of the address an "administrative error". NAIH points out that there are precise and strict legal-epidemiological rules for the designation of an official quarantine. "In a small municipality, it is inevitable that news of an outbreak might spread from the affected location and affected residents. This does not mean, however, that either the head of the municipality or the general practitioner should make this information public in a targeted way (...)"<sup>47</sup> In Resolution NAIH-3418-4/2021, the Mayor of the Municipality of Mikófalva was censured for having provided information on the Covid-positive status of a parent in a closed Facebook group of the local kindergarten, disclosing the full name of the parent. Data protection supervisory body (NAIH) stresses that in a small town, it is almost inevitable that news of someone's illness will spread in a closed community known to all. However, this does not mean that either the head of the municipality or anyone else should purposefully make such information public. There are strict rules of procedure for the disclosure of such information. Information on the number of persons infected or under official quarantine in the municipality, or information on who may have unfortunately died, is lawful, but any other unintended use of the data should be avoided. This could apply to the naming of one or more "infected streets" in a small municipality (in a small municipality

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46 Christina ETTELDORF, EU Member State Data Protection Authorities Deal with Covid-19: An Overview, 6 EUR. DATA PROT. L. REV (2020), p. 277.

47 NAIH/2020/3378/4

citizens know who resides on the designated street) or the naming of an infected person on a social media or community site.

It is typical that in the early case law of the Hungarian data protection authority (NAIH) the principles of data protection in human epidemic were fuzzy and not yet clear. To show the ambiguity, we highlight that NAIH did not oppose the disclosure of personal data in circumstances similar to those in the previous cases. The local media and the official Facebook page of the city of Cigánd published the Covid-19 infection of a nurse from the city; the information was made public by the Mayor himself. In an article published on 22 March 2020, the local news site, Frissmédia, wrote: “The head of the town had vain hopes that a nurse working in Budapest, who is a native of Cigánd, was unaffected by the virus, but she finally tested positive.<sup>48</sup> According to the mayor, „There is no reason to panic, we have taken the precautions that are customary at such times. The family (Gönczi family, Iskola School street) will be Covid-tested soon according to the procedure. They have thus been moved from voluntary quarantine to strict official quarantine. So they will not be allowed out of their home until they are found not to be carriers“. The Mayor continues, “as there are small children in the family, I ask you to deal with the situation appropriately. Please do not make their already difficult days more difficult with negative comments”.

NAIH argued in the case that the data subject did not subsequently request the deletion of her data, and therefore she consented to the disclosure of it, so, her privacy rights under the Information Act were not violated. However, both GDPR and the Hungarian Information Act requires prior consent for the disclosure of personal data. (Not to ask for deletion later on is an opt-out solution, and prior consent is needed instead). Our research moreover did not discover any document that the data subject’s family, also named in the communication, had given

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48 <https://frissmedia.hu/hir/egy-cigandi-apolono-is-covid-19-beteg/13913>

their prior (informed, voluntary and explicit) consent to the disclosure of their data. Thus, this case is in contradiction with similar facts in previous cases elaborated on earlier in this study .

Data protection authorities in Germany, Austria, Sweden, Belgium, Spain and the Czech Republic also stress that specific names and other personally identifiable information in the context of the pandemic can only be disclosed in exceptional cases. The Slovak data protection agency vests the competent authority to decide case by case the need to protect the data subject or to protect the public health interest of the competent authority.<sup>49</sup> The Lithuanian data protection authority prohibits the disclosure of such data by individuals on social media, arguing that only the competent body can take such a decision.<sup>50</sup> The Italian DPA even calls for a journalist's code of ethics (despite the fact that the DPA has no control over such codes).<sup>51</sup>

The case of President János Áder in the context of Covid-19 is part of the “balancing conflict” between data protection and freedom of information. The petitioner referred to the certificate testifying that the President of the Republic has been vaccinated against SARS-COV-2. The fact that the President was vaccinated with the Chinese Sinopharm had been released by his Office. In the case NAIH-3356-2/2021, the complainant requested the Office of the President to release a copy of the certificate as data of public interest, claiming that the President of the Republic had previously announced the news, as an advertisement against the virus. The claim points out that the President himself had therefore made the information public. The petitioner's position could have been further strengthened, but he did not refer to

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49 Christina ETTELDORF, EU Member State Data Protection Authorities Deal with Covid-19: An Overview, 6 EUR. DATA PROT. L. REV (2020). p. 277.

50 <https://www.dvi.gov.lv/lv/zinas/dvi-vers-uzmanibu-uz-personu-tiesibam-un-pienakumiem-datu-aizsardzibas-joma-veselibas-informacijas-konteksta>

51 Christina ETTELDORF, EU Member State Data Protection Authorities Deal with Covid-19: An Overview, 6 EUR. DATA PROT. L. REV (2020). p. 278.

case NAIH/2020/3378/4, in which the person concerned had himself contributed to the disclosure of his data. In the abovementioned case, the data protection supervisory authority finds the “previously published personal data” such data that is already made public: “I note that in NAIH’s case law and practice, there have been cases where a GP concerned has personally agreed to the publication of his health data and the fact of his infection in the local online newspaper in order to control the coronavirus at the municipal level.”<sup>52</sup>

In the case of János Áder, NAIH argues that personal data of public interest covered by Article 26(2) of Act CXII of 2011 on the Right to Informational Self-Determination and Freedom of Information explicitly refers to personal data related to the performance of public duties of the President of the Republic, i.e. data closely related to the performance of his constitutional duties as the Head of State. Unless János Áder, the President of the Republic, “voluntarily and freely decides otherwise”, the request for his vaccination certificate “may be lawfully refused in the current context”<sup>53</sup>.

### *A statistic that is actually personal*

The most visible conflict in the relationship between freedom of information and data protection in Hungary was caused by the death of a British diplomat working in Budapest. On 25 March 2020, the national news portal Index published an article entitled. „Steven Dick, British Deputy Ambassador in Budapest, is one of the victims of the coronavirus outbreak in Hungary. He is the tenth person to have died in Hungary from the coronavirus. The man, aged just 37, died on Tuesday. The British embassy confirmed the news to Index News”<sup>54</sup>.

<sup>52</sup> NAIH/2020/3378/4

<sup>53</sup> NAIH-3356-2/2021

<sup>54</sup> [https://index.hu/belfold/2020/03/25/a\\_brit\\_nagykovethelyettes\\_a\\_koronavirus\\_egyik\\_aldozata\\_magyarorszagon/](https://index.hu/belfold/2020/03/25/a_brit_nagykovethelyettes_a_koronavirus_egyik_aldozata_magyarorszagon/)

The Government started to publish updated statistics on infections and deaths in March 2020. Data was updated from then on at: <https://koronavirus.gov.hu/elhunytak>. In addition to the number of people who died, their age, sex and underlying disease were also listed. In the published list, the tenth victim of Covid-19 was a 37-year-old man with an underlying alcoholism problem. The data were attributed to the British deputy ambassador, and as a result of the statistical disclosure, it became common knowledge that the deputy ambassador had been suffering from alcoholism. This was understandably embarrassing for both parties, for the Hungarian Government (releasing the information) and for the British Government (hiring high-profile diplomats with alcoholism). All in all, it was sensitive data about a diplomat of a foreign state that was being published. On 31 March 2020, the Hungarian Civil Liberties Union (TASZ) published a position paper stating: “The Government published an illegal list of victims of the coronavirus”. TASZ notes that in the current epidemic situation, the balance between informing the public and protecting individual rights is delicate. It is unacceptable, according to TASZ, that the data is attributed to each anonymised and numbered individual and made public. According to TASZ, “Only data that is inappropriate for individual identification should be made public”<sup>55</sup>. According to TASZ, freedom of information is an important public interest, but the current methodology of publishing coronavirus information on individuals needs to be reformed by the Government. TASZ suggested that the statistics on deaths should include three graphs. The first should show the sex ratio, the second the age distribution and the third the distribution of underlying diseases. A graph can contain only one characteristic (i.e. only age or only underlying disease). Thus, with this method, the integrated data cannot point to a specific individual.

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55 <https://tasz.hu/cikkkek/jogserto-listat-kozolt-az-allam-a-koronavirus-aldozatairol>

Contrary to the position of TASZ, the President of the National Data Protection Authority (NAIH) “has emphasized in several statements that NAIH does not consider the table in which the underlying disease of the deceased was published by the portal to be problematic, since, as stated above, the disclosure of information related to the coronavirus does not violate data protection rules as long as the person concerned cannot be specifically identified. In addition to the gender, age and underlying disease listed in the table, the government portal did not disclose or confirm any other identifiable information, and the statistical data published on the portal do not identify a specific individual, and therefore do not constitute personal data”<sup>56</sup>. NAIH continues its argument as follows: „Data related to certain identifiable persons are of course sensitive personal data which cannot be disclosed, but if data are anonymised or figures are used such as the number of cases of deceased patients, then the right to protection of personal data cannot be called for in this current context.”<sup>57</sup>

Our point in this study is that contrary to the NAIH’s position, TASZ’s argument is correct, but its reference to a general infringement on the right to privacy is inaccurate. The Hungarian Government did in fact wish to fulfil its duty to inform the public and to increase public confidence in the Government’s actions by providing data on the correlation of the virus and deaths during the crisis. In the current case, the problem is more a so-called statistical error or a statistical *disclosure error*.

The essence of a statistical disclosure error is exactly that it relies on anonymised statistical data. The (anonymised) statistical data due to all other circumstances (such as a small number of cases, small number of samples and other reasons) becomes identifiable, and thus sensitive

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56 NAIH2020/5138/2.

57 NAIH/2020/3506-2. See also: <https://hang.hu/belfold/koronavirus-csak-akkor-serulnek-adatvedelmi-jogok-ha-az-erintett-szemely-beazonosithato-115063>



data will accidentally be revealed, which may cause significant harm to the data subjects. “The high penetration of information technology and technical progress mean that, by analysing and combining the data provided, an external third party may obtain new information which the data provider did not intend to disclose (...) The problem is particularly acute at the territorial level: the small size of a territory, the limited population or the limited content of the data may jeopardise publishing them in an unbiased way. For instance, the disclosure of rare occupations (e.g. an opera singer living in a small municipality in the Budapest agglomeration, even without mentioning her name, results in a clear disclosure); Even the identity of an average occupation (e.g. shop assistant) becomes possible to identify if there is only one person in the area with this job; also certain specific, rare family circumstances or other rare circumstances in a small community (e.g. a family with 8 children; a high-income person) should be protected.”<sup>58</sup>

It is slightly disturbing that the President of the National Data Protection Agency (NAIH) does not recognize the data protection relevance of the disclosure error. As news portal Infostart put it on 1 April 2020, the President of the Data Protection Authority does not consider the table in which the Operation Task Force published the underlying disease of those who died during the coronavirus epidemic in Hungary to be of concern. The President of NAIH, Attila Péterfalvi, pointed out to InfoRadio that, with the exception of the British deputy ambassador, it is not possible to identify other victims.<sup>59</sup>

In this study, we claim that NAIH’s argument is not valid from a data protection point of view. From a data protection point of view, it is always illegal to reveal information related to the identity of a person

58 Virág ERDEI - Roland HORVÁTH, Az adatfeldedés elleni védelem statisztikai eszközei. Statisztikai Szemle, August 2004. [https://www.ksh.hu/statszemle\\_archive/2004/2004\\_08/2004\\_08\\_705.pdf](https://www.ksh.hu/statszemle_archive/2004/2004_08/2004_08_705.pdf)

59 <https://infostart.hu/belfold/2020/04/01/a-vezelyhelyzet-vegeig-fenntartja-a-jarvany-miatt-erendelt-rendkivuli-intezkedeseket-az-operativ-torzs-a-nap-hirei>

– especially if the information may lead to stigmatisation and negative perception, as in the case of alcoholism. Moreover, it is of concern to the family of the data subject, especially in the case of death, where fair treatment of the family is very important. In our view, it is not a valid argument that “with the exception of the British deputy ambassador, the victims cannot be identified”. Even one victim is unjustified.

The extent to which there was a statistical discovery error – as we argued in this article – is clearly illustrated by the fact that, after the Hungarian Government refused to change its disclosure practices and the layout of the charts, the breach no longer occurred with the increased number of cases and the larger sample size. In a similar case, the Czech Data Protection Authority stated as a “Frequently Asked Question” on health care that anonymous information about an 80-year-old male patient in Prague who, in addition to an infection, also suffers from lung problems does not infringe his rights. However, the same information in a small municipality, results in that man’s identity being revealed. Public health authorities have a responsibility to prevent the spread of identifiable information.<sup>60</sup>

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60 [https://www.uoou.cz/dp/id\\_ktg=5141](https://www.uoou.cz/dp/id_ktg=5141)

## Summary

The aim of this paper was to bring insight into the freedom of information practices in Hungary during the Covid-19 epidemic. In the first part of the paper, we described the legal environment that governed access to and dissemination of information of public interest from the beginning of the epidemic until the end.

Later, the paper summarised all major cases related to freedom of information and data of public interest in Hungary, with particular reference to the delayed disclosure of regional and territorial data. We also revealed and explained in the article inaccuracies of mortality data and the problem of separation of personal data from public data in the context of Covid-19 infections. The article devoted special attention to questions of best government practices and European examples.

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## Work deprivation and vaccination willingness during the coronavirus pandemic

### Abstract

This study seeks to answer how worsening labour market conditions affect the willingness to get vaccinated in times of coronavirus pandemic. Since previous research on Covid and other optional vaccinations presented contradictory results on the effects of labour market changes, we also examine how unchanged labour market conditions correlate with vaccination commitments.

With the help of a questionnaire based on a nationwide representative sample financed by Milton Friedman University in late November 2020, we first investigated how the labour market affects vaccination uptake while controlling objective socio-demographic variables among the working-age population. Our results show that the negative labour market changes led to a lower vaccination willingness. However, when we include social-psychological drivers and attitude variables in the model, the effect of the labour market becomes indirect. So, we further analysed different pathways deriving from a changed/unchanged labour market position through several drivers and attitudes leading to vaccination uptake/rejection using a path model.

Our results show that the vaccination propensity of those negatively affected by the labour market depends primarily on the perceived seriousness of the pandemic. In contrast, those working under unchanged conditions develop active risk-taking solidarity

attitudes, confidence in the effectiveness of the vaccine(s), and trust in decision-makers and professionals, which lead to vaccination uptake independently of the perceived seriousness of the pandemic.

## **Introduction**

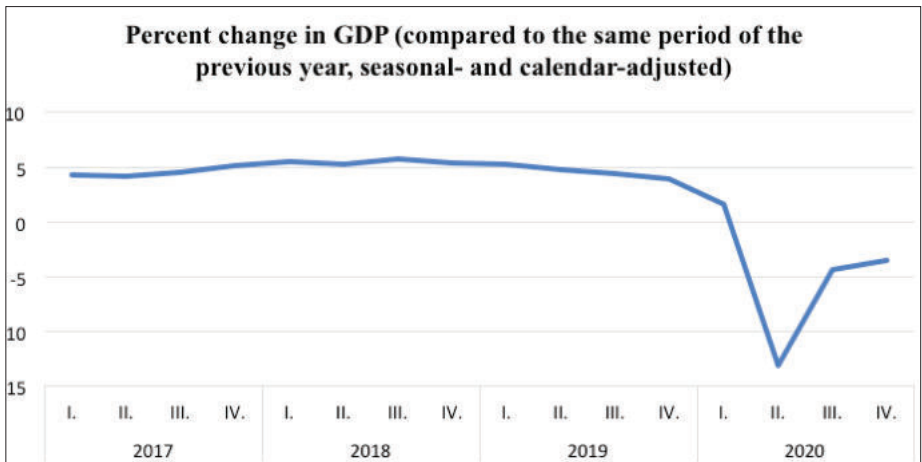
After the WHO declared the new coronavirus epidemic a pandemic in March 2020, restrictions and closures took place in Hungary. According to the September 2020 report of the State Audit Office of Hungary, the closures of the first wave affected various sectors of the labour market very differently, with immediate negative changes in the service sector. Initially, employers reacted with temporary lay offs, unpaid leave, and reduced working hours, but when it became clear that these were not transitional measures, dismissals began.

A prior condition for economic and labour market recovery was the defeat of the coronavirus pandemic, which was unlikely to succeed without herd immunity. However, even the widespread availability of vaccines does not guarantee the achievement of herd immunity due to vaccine refusal and vaccine hesitancy, driven by anxieties about the safety of vaccines developed in record time (vaccine vigilance).

In this study, we investigate how individual perceptions of the labour market crisis influenced the vaccination willingness, i. e. how social psychological drivers and attitudes led from work deprivation and crisis perception to the decision whether or not to get vaccinated. Our research is exploratory, with a sample of working-age people (18-65 years) and regression models exploring the relationships between labour market conditions, sociodemographic variables, social psychological drivers, attitudes, and vaccination willingness. We illustrate the possible underlying dynamics and processes by using a path model.

### *Labour market conditions*

In the spring of 2020, the Hungarian government announced an economic protection action plan (State Audit Office of Hungary, 2020). Still, the closures and restrictive measures hit the Hungarian economy hard in the first wave of the coronavirus pandemic, given its impact on the labour market. The performance of the Hungarian economy declined significantly from the second quarter of 2020, led by a drop in services. GDP volume collapsed at the end of the first quarter of 2020, while in the third quarter, it was still 4.4% lower than in the same period of the previous year, based on seasonal and calendar-adjusted data (Figure 1, Hungarian Central Statistical Office, 2021).



**Figure 1: Change in Hungary's economic performance between 2017 and 2020.**

Source: Hungarian Central Statistical Office 2021, own edition

The economic crisis induced by the coronavirus pandemic was also reflected in employment data, as János Köllő (2020) highlighted in his study analysing data from the Hungarian Central Statistic Office Labour



Force Survey<sup>61</sup>. A representative survey of 1,000 people by gender, age, education and settlement type conducted by Policy Solutions suggests that the number of people who lost their jobs as a result of the pandemic during the first wave was around 800,000 (Bíró-Nagy & Szászi 2021).

In addition to job losses, exclusion from the labour market and the fall in employment were also significant<sup>62</sup>. The share of people employed but not working also moved in a negative direction: the average working time of those employed fell by 3.5 hours per week and the share of people working less than usual increased from 10 to more than 30 percent<sup>63</sup>.

The most dramatic decline in employment was among career starters (32.4 percentage point drop in the investigated period - Köllő 2020). Regarding the chances of losing their jobs, unskilled workers remained at the highest risk, and the crisis disproportionately affected parents with small children, especially single parents (Bíró-Nagy & Szászi 2021). In terms of sectors, workers in the vehicle manufacturing and service sectors suffered the most from the crisis, as well as small entrepreneurs (Köllő 2020).

The share of teleworkers increased to 16.5% in April-June compared to the January-February 2020 baseline (2.6% of the employed). University graduates were the most likely to take advantage of teleworking: more than

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61 In the second quarter of 2020, the chances of employed people becoming unemployed and inactive in the labour market doubled compared to the previous year, and the unemployment rate as defined by the ILO/OECD increased by almost 0.6 percentage points (20 percent) in the same period compared to January-February. However, other definitions show higher unemployment rates.

62 Employment, measured according to international definitions (ILO/OECD), fell by 2.8 percentage points in the April-June period compared to January-February 2020. „The share of people who worked (at least one hour) in the week before the survey fell by a much larger 5.7 percentage points (7.6 percent)” (Köllő 2020:222). This data also gives a sinister picture compared to the crisis period of 2008/2009.

63 Full-time employment also showed a decline: the April-June employment rate was 9.3 percentage points lower than in the January-February period, which also represents a 6.6 percentage point (9 percent) decline even if calculated with adjusted working hours (Köllő 2020).

half of them (52.9% ) had already been working from home in the second quarter of 2020. While the share was also relatively high among college graduates (37.4%), it was only 10% among graduates. But manual workers (e.g. in the construction sector) mostly could not switch to teleworking, and teenage out-of-school youth could not work from home (Köllő 2020). Overall, telework was not been able to solve the employment problems of the most marginalized people (Köllő & Reizer 2021).

Köllő (2020) also pointed out that commonly used indicators such as employment or unemployment rates underestimate the dramatic changes in employment. This distortion is because the calculation of the employment rate ignores changes in the reduction of working hours, and the unemployment rate ignores the hopelessness of those looking for a new job after losing one because of the coronavirus pandemic. In the sectors hit hard by the crisis, unlawful employment was prevalent (e. g. tourism and the trade sector), and workers were not eligible for benefits (Köllő 2020; Köllő & Reizer 2021). The crisis, therefore, hit less skilled and precariat workers harder, deepening existing inequalities.

However, the above-mentioned public measures to create and maintain jobs have not been sufficient to address the difficulties of the groups most affected by the crisis<sup>64</sup>.

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64 The first economic action plan covered five main areas: job retention, job creation, sectoral support, enterprise support, family and pension protection. Later, a second package aimed at economic recovery (State Audit Office of Hungary 2020), but immediate direct spending to cover job preservation subsidies remained low by international standards (Váradi 2020). For example, under the job protection wage subsidy, the state took over part of the workers' lost income for the period of reduced working hours, while the employer agreed to keep the workers. However, under a later amendment, the retention obligation applied only to the workers covered by the support and not to all employees. Moreover, the innovation wage subsidy for researchers and developers was mainly available for the employment of engineers, researchers, IT specialists, and other highly qualified professionals, thus favouring those workers least affected by the labour market crisis (Bagó 2020). A further instrument was the job creation wage subsidy, which was available to employers as a non-refundable subsidy for the employment of jobseekers registered with the public employment service (Bagó 2020). However, as mentioned above, the hopelessness caused by the crisis has kept job search and registration rates low.

Some of the crisis management measures have favoured higher income groups, like the credit moratorium that supported those who were creditworthy before the crisis, i. e. those with savings and higher incomes. There was also a lack of unconditional or automatic occasional aid, which could have helped families and workers in difficulty (Váradi 2020). Thus, the groups most affected by the labour market crisis, i. e. those starting their careers, those with low educational qualifications, single parents, and small entrepreneurs, were not given special attention. Thus, the public package of job-support measures, which was relatively small by international standards in terms of the size of the payments, did not work well for those in need.

#### *Social psychological background and previous empirical results*

The primary emotion affecting people during a pandemic is fear (Bavel et al. 2020), which can relate to concern about the disease and the economic and social consequences. Fear as a reaction can be an adaptive action responding to the hazard or result in refusal or resistance, thus delaying adaptation (Witte & Allen 2000). Fear triggers an adaptive response when the individual does not feel completely powerless to cope with it (debilitating effect) and when a proposed solution is efficient, credible, feasible and guarantees the elimination of the hazard (Smith & Mackie 2004).

Optimism bias, the belief that bad things are more likely to happen to others than to us, influences the development of fear (Sharot 2011). It has an anti-anxiety effect, but in the event of an epidemic, it may lead to underestimating the likelihood of infection, ignoring public health warnings and refusing vaccination. Although vaccination is a crucial component of the response to the coronavirus pandemic, it makes a difference whether people are more afraid of a new vaccine's side effects or rather the seriousness of the disease. Social psychological explanations suggest that uptake occurs when the pandemic is

sufficiently feared, and vaccination and public measures are believed to be effective and will indeed avert the threat.

Several studies have investigated the trend in willingness to get vaccinated against coronavirus and show that willingness was connected to fear, which varied widely across countries (Sallam 2021). The most common reason for refusal was a general fear of vaccine side effects (Solís Arce et al. 2021). The wide variation in vaccination willingness across countries can derive from different levels of trust in public leadership (Lazarus et al. 2021) on the one hand. On the other hand, while many vaccine-preventable infectious diseases still cause thousands of deaths yearly in some countries, these diseases have been successfully eradicated in others. Thus different experiences result in different perceptions of the need for vaccination (Machingaidze & Wiysonge 2021).

Even before the coronavirus pandemic, studies had investigated the variables associated with the choice of vaccines. In this review, we discuss the results on the uptake of influenza and human papillomavirus (HPV) vaccines, as these vaccines, like the COVID vaccine, are not mandatory (but it varies by country if they are available free of charge or not). In the literature review, we focus on research on employment, which could be a component of socioeconomic status, employment position or labour market deprivation due to an epidemic.

Lucyk et al. (2019) examined the association between socioeconomic status and uptake of influenza vaccines based on the results of 42 studies. Half of the studies reported a positive association between influenza vaccination and socioeconomic status, some of them showed negative associations, and then there were studies that did not find any correlations. The different results reflected the different ways of operationalising the concept of socioeconomic status, such as using one or more of the variables of education, occupational status, income, or including other variables (e. g. social class, deprivation) (Budhwani & De 2016).

In the case of HPV vaccination, a large number of studies, mainly in the US, found no convincing evidence that income or education, which determine socioeconomic status, influenced the uptake of the HPV vaccination (Schmidt & Parsons 2014); rather ethnicity and insurance status were more influential (Fisher et al. 2013). HPV vaccination is available to adolescent girls<sup>65</sup>, so research in Denmark looked at the social status of mothers (Slättilid Schreiber et al. 2015) and found that lower maternal education, low income and unemployment decreased HPV vaccination uptake.

Studies examined the relationship between vaccination and unemployment for both the flu and HPV vaccines. Gai et al. (2017) treated US county unemployment rates as an independent variable and found them to be significantly and negatively associated with influenza vaccination uptake. A similar result was obtained by Héquet and Rouzier (2017) when analysing HPV vaccination uptake in France. However, this effect was no longer significant when including other variables in the explanatory model.

In the context of the coronavirus pandemic, studies also examined the relationship between vaccination uptake and unemployment at different levels. Malik et al. (2020) reported that unemployed respondents were less likely to uptake the COVID-19 vaccine than employed or retired respondents. They also suggested that communities disproportionately affected by the labour market crisis may be more vulnerable to new waves of infection, even if vaccines are already available. In contrast, Khubchandani et al. (2021), also in the US, showed that those who have lost their jobs/are unemployed have the highest propensity to get vaccinated, which may be because vaccination would greatly facilitate their re-entry into the labour market.

Roghani and Panahi (2021) investigated the relationship between

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<sup>65</sup> The review of research on HPV vaccination was also relevant because the minimum age for COVID vaccination was decreasing.

vaccination rates, unemployment rates, and other socioeconomic variables (poverty level, education, insurance rate, population density, elderly rate, home ownership) in fifty states in the United States. The study found a positive linear relationship between unemployment and vaccination uptake, but other factors were not significantly associated with vaccination rates.

Unemployment appears in relevant research as an element of socioeconomic status (as employment position), but other papers have taken a similar approach to our study, asking whether the coronavirus pandemic had affected labour market position.

The study of Wang et al. (2020) in China investigated the effect of sociodemographic characteristics, pandemic perceptions, work-impacts and attitudes on their willingness to get vaccinated against Covid-19. There were no significant difference between those vaccinated immediately and those who waited, neither in terms of labour market condition/position nor other effects of the pandemic.

However, Israeli research has also examined the relationship between vaccination willingness and other factors, including labour market deprivation (Dror et al. 2020). It found that those who lost their jobs during the coronavirus crisis were more likely to get vaccinated than those who did not lose their jobs or were temporarily out of work but confident that they could return to the labour market.

This review shows that studies on voluntary vaccination lead to contradictory results due to different definitions of the labour market situation and different levels of aggregation of the studies. There are also inconsistencies regarding COVID vaccination: the unemployed are less likely to get vaccinated in one study (Malik et al. 2020), while they are more likely to get vaccinated in others (Khubchanda ni et al. 2021; Roghani & Panahi 2021). The results are also ambiguous when looking at work deprivation: the fact that someone's labour market position changes negatively because of the pandemic either makes

them more likely to choose vaccination (Dror et al. 2020) or has no effect (e. g. Wang et al. 2020).

### *Methodology*

Funded by Milton Friedman University, we conducted a two-phase study on Covid-19 vaccination willingness in the autumn of 2020. As the topic was new, we could only partially lean on literature and previous research on perceptions and reactions to the outbreak, so we conducted exploratory qualitative research previous to the quantitative phase. In the qualitative phase, four focus group interviews (each with six participants) investigated the perceptions and attitudes towards vaccination<sup>66</sup>. Based on the results and the review of the available literature, 20-minute long telephone interviews (CATI) of 1,002 respondents were conducted by the polling company MASMI Hungary, between 15-25 November 2020<sup>67</sup>. The national sample was representative of the main sociodemographic characteristics, such as gender, age, educational level, settlement size and region. The base for this study is a sample of working-age people (aged 18 to 65; N=737).

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66 The presentation of the qualitative phase is beyond the scope of this paper, so we focus only on the quantitative results.

67 At the time of the data collection, the second wave of the coronavirus pandemic was taking place in Hungary, which initially did not have the same strict restrictions as the first wave: during the autumn, wearing masks in the community was emphasised. However, due to the increasing number of cases, restrictive measures came into force just before the data collection, on 11 November 2020, such as a night curfew, a ban on gatherings, digital education from grade 9, shortened opening hours, and restrictions on restaurants and hotels. Vaccines were not yet available, but there were high expectations, and the Council of Europe agreed on the main areas of vaccine cooperation on 29 October 2020.

## Results

First, we analysed who was more likely to get vaccinated against the coronavirus. Among the working-age population in Hungary, bivariate correlations show that people are more likely to get vaccinated<sup>68</sup> if they are:

- older,
- of higher social status,
- characterised by higher subjective well-being,
- non-deprived respondents,
- regularly informed about and not fatigued by the pandemic,
- not affected by the labour market crisis (employed rather than unemployed),
- those who perceive the pandemic as a serious problem,
- confident in the state's ability to offer people a reliable vaccine,
- risk-takers in terms of solidarity (early vaccine-takers),
- those who trust in the advice and recommendations of professionals or the government,
- pro-government voters (58%) compared to voters of the opposition (35%) and undecided voters (36%).
- The multivariate models give a more detailed picture, however

Looking at the possible role of work deprivation among the working-age population, controlling for objective sociodemographic variables, we find that the explanatory power of this variable is not very large, but the effect is significant. That is, the more a respondent is affected – because of a dismissal, unpaid leave, reduction in pay or working hours – the less likely they are to be vaccinated (Table 1).

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68 Would you get vaccinated by a vaccine authorised in Hungary? (4-point Likert scale, 1=definitely not, 2=probably not, 3=probably yes, 4=definitely yes)



<b>Would you get vaccinated by a coronavirus vaccine authorised in Hungary? (4-point Likert scale)</b>		
<b>People of working age (N=737) R<sup>2</sup>=0,07</b>	<b>Beta</b>	<b>Sig.</b>
gender	-0.088	0.051
<b>age</b>	<b>0.173</b>	<b>0.000</b>
social status <sup>1</sup>	0.073	0.121
<b>settlement size 1= Budapest</b>	<b>-0.108</b>	<b>0.020</b>
<b>work deprivation<sup>2</sup></b>	<b>-0.118</b>	<b>0.009</b>

**Table 1: Linear regression: sociodemographic variables explaining vaccination uptake**

Adding sociological and socio-psychological variables to the objective variables mentioned above, we see that the variables that primarily influenced vaccination willingness are: awareness (those who sought out information on the pandemic and possible vaccines), trust in the vaccines' effectiveness, trust in the government's and professionals' recommendations, and active risk-taking in terms of

solidarity, in addition to the many non-significant effects (Table 2).<sup>69</sup> Interestingly, the work deprivation variable fell out of the model, but we can assume an indirect influence, which will be shown in a path model below (Figure 2).

<sup>69</sup> **appreciation vs. collective relative deprivation principal component:** people like me are appreciated; people like me have the power to defend our interests; people like me get adequate remuneration for their work (originally 4-point Likert scales). Total variance explained: 53.5%

**well-being perception principal component:** how has the household's financial situation changed in the past year; how will it change next year; subjective financial situation (originally 4-point Likert scales). Total variance explained: 50.3%

**mental condition index:** whether respondents experienced isolation, diminished relationships, feelings of insecurity, conflicts at home

**health condition index:** presumed coronavirus infection without testing; confirmed coronavirus infection with serious symptoms; confirmed coronavirus infection with mild symptoms

**pandemic perception principal component:** perception of the course of the pandemic; how much the pandemic threatens the quality of life of the household members; whether there is a fear of household members becoming infected (originally 4-point Likert scales). Total variance explained: 51.1%

**fatigue vs. awareness index:** frequency of seeking information on the pandemic and possible vaccines; seeking less or more frequently information than in spring (originally 4-point Likert scales).

**trust in available vaccines (4-point Likert scale):** trust in the state's ability to provide reliable and effective vaccines to the population

**active risk-taking in the terms of solidarity, principal component:** I don't care who gets vaccinated in the first round, as long as it is not me; if I get vaccinated, I'm protecting those around me too; getting vaccinated won't make people less infected or sick in the country (originally 4-point Likert scales). Total variance explained: 52.1%

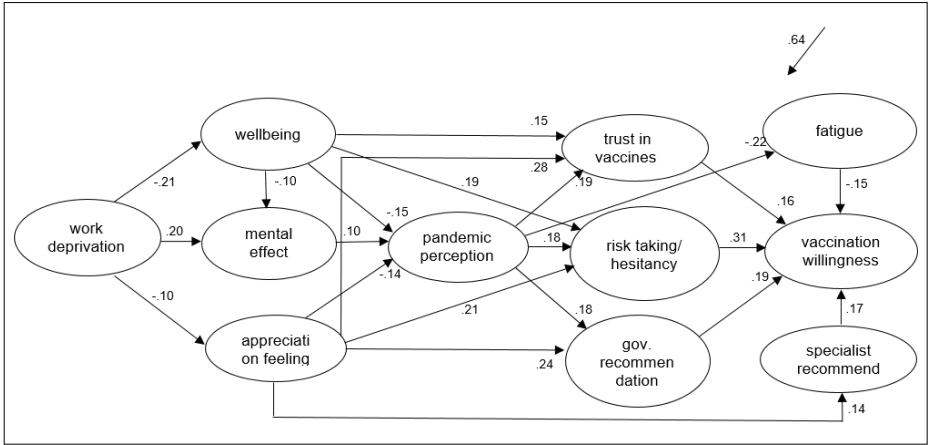
**government recommendation factor:** whether to get vaccinated on a recommendation of the Prime Minister, Ministry of Human Resources, Chief Medical Officer (originally 4-point Likert scales). **Professionals' recommendation factor:** whether to get vaccinated on a recommendation of a reputable professional, doctor, pharmacist, virologist, GP, or doctor friend (originally 4-point Likert scales). Total variance explained regarding the two factors: 73.5%, maximum likelihood method, varimax rotation, sig.=0.324

**recommendation of politicians in opposition (4-point Likert scale):** whether to get vaccinated on the suggestion of politicians in opposition

<b>Would you get vaccinated by a coronavirus vaccine authorised in Hungary? (4-point Likert scale)</b>		
<b>People of working age (N=737) R2=,413</b>	<b>Beta</b>	<b>Sig.</b>
gender	-0.020	0.737
age	0.102	0.087
social status	0.081	0.182
settlement size 1= Budapest	0.043	0.480
appreciation/deprivation	0.011	0.866
subjective well-being	-0.003	0.966
mental condition	0.004	0.942
work deprivation	-0.099	0.115
health condition	0.048	0.422
pandemic perception	-0.072	0.253
<b>fatigue/awareness</b>	<b>0.117</b>	<b>0.034</b>
<b>trust in the vaccines' effectiveness</b>	<b>0.170</b>	<b>0.018</b>
<b>active risk-taking in terms of solidarity</b>	<b>-0.219</b>	<b>0.001</b>
<b>government recommendation</b>	<b>0.242</b>	<b>0.000</b>
<b>professionals' recommendation</b>	<b>0.269</b>	<b>0.000</b>
recommendation of politicians in opposition	0.038	0.504

*Table 2: Linear regression, sociological and socio-psychological variables explaining vaccination uptake*

To discuss the phenomenon in a coherent logic structure, we can use the following path model, where the arrows show which phenomenon can lead to another phenomenon, and the numbers (so-called betas) belonging to the arrows show the strength and direction of the relationships between these phenomena. The negative numbers show the same correlation intensity as the positive ones, only the correlation between the phenomena is inverted (N=737; the original correlation between labour market condition and vaccination willingness: -0.12).



**Figure 2: Path model from work deprivation to the willingness to get vaccinated**

### *Interpretation of the path model<sup>70</sup>*

As the model shows, work deprivation does not have a direct effect on vaccination indeed, but it does have an indirect effect. Objective work deprivation can have three direct consequences. On the one hand, positive perceptions of the household's financial situation (well-being) decline, and pessimism about the future increases. On the other hand (together with the closures), the life of the household becomes mentally stressful, alienated, and conflictual. Thirdly, a sense of a collective downward spiral (a sense of injustice, presumably because of the precarious living conditions resulting from the closures) leads to a rejection of active risk-taking and ultimately of vaccine solidarity, and distrust in decision-makers, professionals, and the trust in vaccines, which, as we can see, can hinder vaccination.

However, the perception of the seriousness of the pandemic (as

<sup>70</sup> The explanatory power of the model is 36 percent, which means that we do not know exactly what explains 64 percent of the heterogeneity of the vaccination willingness variable.

a driver, indirectly) can play a crucial role in encouraging groups negatively affected by the labour market to get vaccinated. The negative perception of well-being, negative mental impacts, and feelings of deprivation (lack of appreciation) can lead to perceptions of the seriousness of the pandemic (and fear of infection/feelings of being at risk of being infected/having livelihood threatened). This leads to more intensive/frequent seeking out of information; more active vaccination risk-taking (vaccine solidarity); and trust in professionals, political actors, and vaccines (either as a coping mechanism or out of necessity). All of these can lead directly to vaccination.

Nevertheless, it is not only the phenomena described in the literature as relative „loser” pathways that may lead to vaccination (or its refusal). The relative „winner” path may arise partly from the invariability of livelihood security. Those on the winner path are more likely to trust in the vaccines’ effectiveness; they are less affected by diminished relationships, conflicts at home or anxiety; they are optimistic about their financial future and do not feel deprived or unjust. Remarkably, the winner paths do not require an emphasis on the seriousness of the pandemic. The perception of well-being and appreciation are both directly linked to active vaccine risk-taking and trust in the vaccine to be purchased by the state. The appreciation feeling also reinforces trust in government and professional recommendations. As we have seen earlier, all of these can lead to a willingness to get vaccinated.

In other words, the work deprivation via the path of the losers may hinder vaccination if the pandemic appears trivialised and/or a serious trust-crisis develops towards professionals or state representatives (mainly due to a labour market disruption). However, if these groups perceive the pandemic (and not the closures) as frightening for their households, it may lead to vaccination through the trust and attitudinal factors mentioned above. However, it is not the perception of the seriousness of the pandemic, but directly the risk-taking (ultimately

solidarity) and trust (in government, professionals, vaccine) that play a crucial role in the willingness to get vaccinated via the path of the winners.

## Summary and conclusions

The coronavirus pandemic and the following precautions led to a slowdown in the economy and a labour market crisis, which various rescue packages (at least during the first two waves) failed to tackle successfully. Public measures responding to the labour market crisis did not work for the most affected groups (career starters, people with low educational level, single parents, and small entrepreneurs). This may have reinforced mistrust in policymakers (cf. Örkény 2020) and thus undermined confidence in the future vaccines provided by the state.

In our study, we investigated how the labour market situation and its changes affected vaccination willingness, as the delta variant made it necessary to vaccinate all social groups, including those disadvantaged in the labour market, to achieve herd immunity and thus higher vaccination coverage (at the time of the investigation).

The literature review shows that the relationship between work deprivation and vaccination uptake is not clear. Several studies have concluded that those negatively affected by the labour market were less likely to get vaccinated. Our results, looking only at the effect of objective variables, also showed this. However, by including additional sociological and social psychological variables, this effect became indirect and the overall picture more subtle. We tried to illustrate this complexity using a path model, showing that from work deprivation, one can arrive at both willingness and resistance to vaccination through different perceptions, drivers and attitudes, depending on the degree to which they perceive the pandemic as threatening. If they underestimated the seriousness of the pandemic and lose trust in decision-makers because of the unjustified closures and the potential

existential insecurity, they would be less likely to get vaccinated. But if they perceived the impact of the pandemic as serious and threatening to their household, more frequent information-seeking, increased active risk-taking and trust could lead to vaccination uptake.

The social psychological theories known from the literature support these findings. Epidemic perception is a crucial determinant of vaccination uptake because if it is scary enough, it encourages action (Smith & Mackie 2004). Effective and credible policy proposals and government measures can support this, which in the path model manifested as trust in vaccines supplied by the state and in government's and professional's recommendations. At the same time, if work deprivation does not lead to a perception of the seriousness of the pandemic, the so-called optimism heuristic (Sharot 2011) may be triggered. Because health risks seem less threatening, people risk their health rather than their livelihoods and may blame decision-makers and professionals for the crisis caused by the closures. This attitude may reduce confidence and active risk-taking (as well as vaccine solidarity), which may lead to vaccine refusal.

At the same time, our results also showed that if the individual was not affected by the labour market crisis, the perception of the seriousness of the pandemic had less influence on the decision to get vaccinated. Trust remained strong in vaccines, professionals and decision-makers (closures were perceived as precautionary measures, which strengthened trust), and all of these, combined with a higher risk-taking attitude, could lead to vaccination uptake. Ultimately, we found that more transparent pandemic communication and greater emphasis on the emergency, alongside reduced negative impacts on the labour market and increased support for the most affected groups, could significantly contribute to greater trust, thus higher vaccination coverage and the defeat of the pandemic.

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Antal Örkény<sup>71</sup>

## The ethical implications of herd immunity and compulsory vaccination in relation to Covid-19

### Abstract

In our analysis, we look in detail at one aspect of the Covid-19 pandemic, namely the problem of mandatory vaccination against the virus. We seek to answer the question of what moral arguments can be made in favour of mandatory vaccination and what the arguments against it might be. In terms of social justice, what do both bring to the table. First, we clarify the concept of herd immunity as a form of social welfare. Since herd immunity is considered an important public good, ethical questions arise regarding the obligations to implement a vaccination policy, which could be coercive if necessary, allowing herd immunity to be achieved. The individual interest and the public interest do not necessarily always coincide, and individuals are often required to contribute to the public good even at the expense of their own interests. The second half of the paper examines the dilemma of compulsory vaccination in the context of the ethical norm of justice. The ethical aspect arises if we accept the principle that vaccination policies 'should' aim at universal vaccination and not merely consider pragmatic political considerations. The most important ethical consideration is that the state has a duty to 'protect the common good', which in the case of an epidemic situation means achieving herd immunity. The principle

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of equitable justice, based on the principle of fair burden sharing, may justify the requirement of compulsory vaccination.

## **Introduction**

Perhaps the greatest global health, political and social challenge of our time is the Covid-19 epidemic. The dramatic speed at which the epidemic is spreading poses a huge challenge to humanity and a problem that, for the time being, seems insurmountable. Since 2021, countries have invested enormous intellectual and material resources to tackle the problem, but a definitive and complete solution is still to be found.

The pandemic is primarily an epidemiological challenge for the world, particularly for healthcare systems. At the same time, because of the scope of the pandemic, it is having a dramatic impact on the way we live and on human relations, whether economic, social or political. In this paper, I want to analyze primarily the ethical aspects of the epidemic, with a particular focus on the social justice perspective.

Dealing with the epidemic raises several dilemmas that affect the nature of social relations and offer new perspectives for discussing decisions about justice.

From the very first moment of the epidemic, medical science has considered that the most important means of combating the epidemic would be through vaccination, which required the rapid development of a vaccine and the prompt, effective and efficient mass vaccination of people to immunize them and to prevent the worst effects of the viral infection. Surprisingly quickly and effectively, by the end of the first year of the outbreak, vaccines against Covid-19 were available. However, this is only the first, albeit very important, prerequisite for successful management of the epidemic. The next step is how to vaccinate people as quickly and effectively as possible, making them immune to the infection and preventing the worsening of symptoms associated with the virus infection.

In this analysis, we will first look at the concept of herd immunity, with a particular focus on public welfare. The ethical dilemmas of herd immunization will then be discussed including the pro and con perspectives on compulsory vaccination.

### **Covid-19 outbreak and herd immunity**

Getting people vaccinated is not in itself sufficient to stop the spread of an epidemic. It requires that the number of people vaccinated reaches a level that creates herd immunity. This occurs when a large part of a community becomes immune to a disease, making the spread of this disease from person to person unlikely. As a result, the whole community becomes protected —not just those who have been vaccinated, but also those who have not. The percentage of people who need to be vaccinated to achieve herd immunity varies from disease to disease; for example, it ranges from 90% to 95% for measles and 80% to 85% for polio. In addition, the required percentage of people vaccinated varies not only from disease to disease but also from vaccine to vaccine, as newer and newer mutants of each virus appear. In the case of the Covid-19 virus, it was originally estimated that 67% of the population needed to be vaccinated against the original coronavirus to achieve immunity. For later variants, such as Delta, these thresholds are well above 80% and can approach 90%.<sup>72</sup> Therefore, widespread vaccination and the subsequent achievement of herd immunity remain the most effective means to control the disease. This is true not only for those who have been vaccinated and become immune to the virus, but also reduces the chance of infection for those who have not yet been vaccinated. Herd immunity has four benefits for society as a whole: it protects those who are vaccinated, it protects those who may not be vaccinated, it reduces public spending on health, and it improves the economic performance of the country.

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72 <https://www.bloomberg.com/news/articles/2021-08-13/the-world-may-never-reach-herd-immunity-against-covid-19>

But how to achieve the required vaccination coverage? Clearly, only governments can organize and implement such a huge logistical and medical task, as it requires an incredibly large amount of material and human resources and effective professional work in the health sector. In addition, this task also requires a clarification of ethical aspects.

From a socio-philosophical perspective, creating awareness among the population that only vaccination can protect them against the virus is an important but not sufficient condition. At the individual level, personal choices can lead to the ‚right‘ solution for the individual, but this is significantly influenced by whether herd immunity is reached. It follows from this latter condition that herd immunity in welfare societies is a ‚pure public good‘, similar to public health.

„That herd immunity is a collective good means, quite simply, that the cooperation of a sufficiently large number of people is required to realize it (Dawson 2007): no individual or small group of individuals can realize herd immunity. That herd immunity is a public good means that it is both non-excludable and non-rivalrous.” (Giubilini, 2019:20) Non-exclusivity means that goods are available to all citizens, and non-rivalry means that the supply of goods does not decrease as more and more people consume them. Public goods include, for example, clean air, access to drinking water, a lighthouse or a police force, a national defense, a fire brigade or flood protection, and all the things that a society must maintain for the benefit of all through a collective effort.

Since herd immunity is considered an important public good, ethical questions arise regarding the obligation to implement a vaccination policy, which could be coercive if necessary, for herd immunity to be achieved. The individual interest and the public interest do not necessarily always coincide, and individuals are often required to contribute to the public good even at the expense of their own interests. Contributing to the public good implies a kind of inclusive macro-solidarity towards others, but individual interest may dictate that people

reject the difficulties and risks of complying with epidemiological measures for the sake of their livelihood security, keeping their jobs, and maintaining their family's material well-being (Grajczjár, Pauló 2021). Institutional coercion is often necessary to achieve the public interest, in this case, the proportion of vaccination coverage needed to achieve herd immunity, as individuals often lack the incentive to contribute to the public good. At the individual level, a number of factors may influence the willingness or reluctance to be vaccinated. Rejection may be due to doubts about the efficacy of vaccines, assumptions about their adverse health effects, or doubts about the experimental stage of available vaccines, as well as psychological reasons such as distrust or prejudice towards health, science or the state. Individuals may consider that health-related decisions are a fundamental right of freedom of the individual and that the state should not interfere in the private sphere of the individual. But there may also be other moral considerations, such as religious prohibitions, or restrictions arising from particular group identities, cultural considerations, or differences in values. Finally, the impact of the widespread media coverage of scare stories and conspiracy theories about the epidemic on people's behaviour cannot be underestimated. Péter Krekó and Andrea Hegedús, in their study on virus denial *The Coronavirus and Disinformation: A Vicious Circle*, write that "Where mass disinformation has been rampant, infection rates have also risen. The virus and the information epidemic, the pandemic and the "infodemic" have started a vicious circle, reinforcing each other and our lives and institutions." (Hegedús, Krekó 2021) All of this can lead to an insufficient number of vaccinated people, which seriously compromises reaching the required rates for herd immunity.



## Ethical dilemmas of herd immunity

In this article, we discuss the ethical aspects and dilemmas related to the Covid-19 pandemic and the issue of herd immunity and compulsory vaccination. The book *The Ethics of Vaccination* by Giubilini, Alberto, written in 2019 on this issue, serves as a basic source for our analysis. The book was written before the Covid-19 pandemic, which struck in 2020, but the problems, questions and interpretations it presents have become extremely relevant in the last two years.

It is worth briefly considering the role of the state in epidemic management and in achieving herd immunity. The theoretical rationale for the role of the state is based on the idea that a state has a moral duty and responsibility to protect and promote the health of individuals and to protect vulnerable people from infectious diseases caused by viruses. At the root of this is that individuals have a duty to contribute to the achievement of a desirable collective social goal, in our case universal vaccination; however, in return for fulfilling this duty, they have a right to expect the state to implement policies that ensure that sufficient numbers of people contribute to the achievement of herd immunity as a social public good and to use all possible means to prevent the opposite outcome. To this end, the state is in the strongest possible position if we accept the principle that the legitimacy of the democratic state derives from the principle of popular sovereignty. This is a very broad mandate, which may even include special rules and procedures in the field of legislation and enforcement.

However, there are strict limits to this in democratic political systems: for example, the state may not quarantine vaccine refusers in violation of their constitutional right to freedom of movement; or the introduction of special legal orders cannot be maintained unnecessarily and without democratic authority, as Hungary provides a bad example of the management of epidemics. The rules of the rule of law and democracy provide a strict framework for the limits of state action,

though it does not preclude the state from using special powers in a specific situation. The other side of the coin, however, is that in order for this political will and action to be realized, there is also a moral obligation for the individual to accept and justify the political actions of the state to achieve herd immunity, i.e. by inoculating the required percentage of society, by force if necessary. This raises the question of whether the state has the right to impose compulsory vaccination on all the members of society or whether it has the right to impose this obligation on certain groups of society, such as health workers, teachers, public administration and law enforcement. Where the limits of state intervention and coercive measures lie is an open question, a social dilemma involving moral considerations.

There are many pros and cons to compulsory vaccination. There are arguments against it, such as that vaccination is unnatural and that natural immunity is more effective than vaccination. Or that compulsory vaccination violates the constitutionally protected freedom of religion, as some religions oppose some vaccinations.<sup>73</sup> Or that the business interests of pharmaceutical companies control national vaccination strategies and should not be trusted to produce and regulate vaccines that have not been sufficiently tested. The most important universal objection, however, is that the freedom of a person to control his or her physical existence is the most fundamental human right (such as a right to bodily autonomy or bodily integrity), and in a free society people are free to control their own bodies. When governments use their power to make medical decisions for people, they are essentially limiting our control over our bodies, which is unacceptable. According to those opposed to vaccination, governments should not interfere with individuals' decisions about their health.

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73 <https://index.hu/belfold/2021/04/04/a-teologusok-szerint-az-oltoorvos-javaslat-az-elsodleges/>

However, there are also strong arguments for making vaccination compulsory. For example, health organizations (including the WHO and the EMA) claim that vaccines are safe and effective against the virus and that side effects are negligible. Or that herd immunity is the only effective way to fight infection. Or that the sustainable functioning of the economy, the existential security of families and the safe lives of people can only be achieved through universal vaccination, and that vaccine-preventable diseases have not disappeared, so vaccines are still needed to protect the health of future generations.

It is difficult to do justice between the pro and con arguments. But there is a general dilemma that is definitely worth considering. Namely, given that herd immunity is often not achieved through the free will of individuals to vaccinate, which would require a shared will and commitment from all members of society, how far does the power of politics and the state extend to favouring certain rights over others? This brings us to two different aspects of social justice, namely the principles of distributive and retributive justice. If we look at aspects of distributive justice, what are the aspects that lead to a fair sharing of the burden? And where are the limits of the punitive aspect in achieving herd immunity? To what extent are restrictive measures by the state acceptable in disease management?

The ethical aspect arises if we accept the principle that vaccination policies 'should' aim at universal vaccination and not merely consider pragmatic political considerations. The most important ethical consideration is that the state has a duty to 'protect the common good', which in the case of an epidemic situation means achieving herd immunity. This allows it to protect people whose health status is at risk from potential harm. Compulsory vaccination is a means to this end. The yardstick of the ethical criterion is that, in order to achieve a given objective, the State adopts the least restrictive policy that least interferes with individual autonomy and freedom. A policy that limits

the freedom of fewer people is always preferable to one that limits the freedom of more people. The state must tolerate objections to a certain number of vaccinations, such as when some disease or religious requirement is a barrier to vaccination. A lower degree of coercion is always preferable. During the confinement, governments applied a number of restrictions: they imposed a ban on people leaving their homes, although they generally allowed people to go shopping or to the doctor. In many places, going to work was allowed only under strict conditions. Masks were compulsory in public places and on public transport. Social distancing rules were introduced. Visiting relatives in hospitals and elderly homes was banned. The temperature of people was checked. The majority of people took note of the restrictions and more or less obeyed the rules, and those who broke them were punished. Not many people protested, as they saw the restrictions as temporary, proportionate, tolerable and fair, and often not imposed on everyone or for every situation.

But public opinion on vaccination is strikingly diverse, maybe because what is at stake is the physical existence of the human being, the rights associated with it, the inviolability of personal autonomy and the possession of the right to decide about it. The crux of the dilemma can be summarised as follows: one side argues that our autonomy over our bodies is a fundamental right and therefore the state has no justification for infringing on the bodily autonomy of the individual, even for a public good that is otherwise very important to the community. The counterargument is that the state may be justified in implementing coercive policies that infringe certain individual rights if those policies are necessary to prevent harm to others. These two positions represent the two extremes of the interpretation of the dilemma, where the principles of liberty and equality are in conflict. But there is also a third aspect, namely the principle of equity. Even among those who take a libertarian view, there are those who accept that equity does indeed

play a fundamental role in determining how the burden of preserving certain goods and preventing certain harms should be distributed: „ the state has the authority to coerce vaccination, though there are good reasons for it to use as little coercion as is necessary to achieve the goal of herd immunity” (Navin 2015, p. 12).

Equity, or justice understood as fairness, may conflict with the libertarian approach, but as an ethical consideration in its own right, it can also be incorporated into it. Fairness is an important ethical and social value that is about sharing the burden of preserving the public good . Giubilini poses the question of the relative importance of equity, expected utility and freedom in the formulation of public policies to achieve herd immunity. He argues that fairness is a value that should not and must not be compromised by weighing it against other values in policymaking, such as individual freedom and expected utility (i.e. the achievement of herd immunity). A properly implemented compulsory vaccination policy would meet all the requirements set out in these principles without the need to implement more stringent policies. If we expect public policies to guarantee individual freedom and equality of all people, we also expect public policies to be just.” Perhaps the most fundamental distinction is between fairness as equity and fairness as equality. The former implies that a fair distribution of burdens is one where everyone is burdened according to some morally relevant criterion, such as her capacity to bear the burden, or considerations of deserts or lack thereof. The latter implies that a fair distribution is one where everyone is burdened the same, regardless of capacities or of any other factor.” (Giubilini 2019:103) Giubilini parallels this with the problem of taxation. Taxation is the duty of citizens to contribute to the creation of the public goods necessary for all. At the same time, taxation must also be equitable and therefore does not distribute the tax burden equally, but considers the ability of each individual to bear the burden. This is not far from John Rawls’ classic formulation that the

ideal of social justice is that, in addition to the fundamental principle of guaranteeing individual freedoms, the order of social and economic inequalities should be such as to benefit all.

Giubilini's final ethical conclusions are very strong on the importance of introducing compulsory vaccination. „The state has an institutional responsibility to implement vaccination policies that can guarantee at least the realization of herd immunity. If the aim of vaccination policies were merely the realization of herd immunity, then a principle of the least restrictive alternative would imply that the state has an institutional responsibility to implement the least restrictive policy that would be effective in achieving this goal. However, a principle of fairness requires that everybody –not just the smallest number of people that can realize herd immunity – makes their fair contribution to herd immunity by getting vaccinated. The existence of an individual obligation to be vaccinated or to vaccinate one's children implies that the state is morally justified in requiring each individual to be vaccinated or to vaccinate their children, in the absence of legitimate medical reasons for exemptions; in other words, compulsory vaccination without non-medical exemptions is ethically justified. A principle of fairness in the distribution of the burden entailed by an important public good like herd immunity implies that the state ought to require each individual to be vaccinated or to vaccinate their children, in the absence of legitimate medical reasons for exemptions; in other words, enforcing compulsory vaccination without non-medical exemptions is an ethical obligation of states. (Giubilini 2019:120-121)

The theoretical argument for accepting the principle of compulsory vaccination on the grounds of ethical justice is not an accepted principle in practical politics. It is as if governments and states are very reticent about taking this restrictive step. Although governments are imposing compulsory vaccination for certain social groups in some cases, they have not imposed it on the population as a whole.

In many European countries, vaccination has been made compulsory for healthcare workers; in the United States it has been made compulsory at the federal level for office workers, for workers in companies with more than 100 employees and for healthcare workers<sup>74</sup>; and in California, it is compulsory for schoolchildren. In Italy, this has been supplemented by the Italian State's acceptance of employers making it compulsory for workers to be vaccinated.<sup>75</sup> In Hungary, it was first made compulsory for health workers, although even this selective restriction has provoked heated public debate. Today, vaccination is compulsory for teachers, and employers may require proof of vaccination from employees. The political fear of imposing strict measures is illustrated by the fact that when one theatre wanted to require proof of vaccination from the audience, the Data Protection Commissioner immediately protested

74 <https://index.hu/kulfold/2021/09/11/koronavirus-a-vilagban-percrol-percre-hirosszefoglalo-egeszsegugy-covid-19-jarvany-oltas-vakcina/biden-komolyan-veszi-a-koronavirust/>

75 <https://index.hu/kulfold/2021/09/22/koronavirus-jarvany-fertozes-oltas-egeszsegugy/kotelezo-a-munkavallaloknak-a-vedettsegi-igazolvany-olasorszagban/>

By mid-November 2021, the following countries had made vaccination fully or partially mandatory: to whom where

Mandatory for public sector workers:

United States, Costa Rica, Denmark, Egypt, Fiji, Canada, Latvia, Hungary, Italy, Russia (Moscow), Saudi Arabia, Tunisia, Turkey, Ukraine

Mandatory for health care workers:

Australia, United Kingdom, France, Greece, New Zealand

Mandatory for all persons over 18 years of age:

Indonesia, Micronesia, Turkmenistan

Mandatory for special occupational groups:

Philippines (public transport, confined space workers), Kazakhstan (employers with more than 20 employees), China (construction, restaurants and catering)

Source: Oben Mumcuoglu and Dagmarah Mackos: „Factbox: Countries making COVID-19 vaccines mandatory” Reuters (2021. november 15); Közli Hungler Sára: „Sérti-e az alapvető emberi jogokat a kötelező oltás?” Qubit, 2021. 11.23, <https://qubit.hu/2021/11/23/serti-e-az-alapveto-emberi-jogokat-a-kotelezo-oltas>

because such information was personal health data, which only the state can collect.<sup>76</sup> In any case, when the principle of compulsory vaccination was applied to certain social groups, members of these groups felt that it was unfair and discriminatory. If, however, vaccination was compulsory for all, this view would become irrelevant. There are plenty of examples of compulsory vaccination. In the case of infants, such vaccination provides protection against diphtheria (D, diphtheria), tetanus (T), pertussis (P; whooping cough), polio (inactivated polio vaccine - IPV) and Haemophilus influenzae type B (Hib) and Hepatitis B (HepB).<sup>77</sup>

In the case of the Covid-19 vaccine, the reason for the political indecisiveness about the general compulsory vaccination is anyone's guess. On the one hand, one can assume that governments are backing down because of legal considerations. On the other hand, the indecisiveness may be due to the uncertainty of health professionals, who believe that the burden of imposing compulsory vaccination is not commensurate with the expected benefits. Or maybe no one is willing to take the loss of political popularity that would result from taking this type of radical step.

The point we have made so far is that if compulsory vaccination were not seen as a political intervention by a restrictive state, but as a difficult decision taken for the common good, which requires individual and collective contributions from citizens, social solidarity and the moral aspect of justice, it would not only make a significant contribution to the effective management of the epidemic, but would also strengthen the moral foundations of social cohesion and community coexistence.

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76 <https://magyarnarancs.hu/belpol/nem-kerhetnek-vedettsegi-igazolvanyt-a-szinhazak-241724>

77 [https://www.publichealth.hscni.net/sites/default/files/Immunisation%20for%20babies%20up%20to%201%20year%20old%2006\\_17\\_HUNGARIAN\\_Final-title.pdf](https://www.publichealth.hscni.net/sites/default/files/Immunisation%20for%20babies%20up%20to%201%20year%20old%2006_17_HUNGARIAN_Final-title.pdf)



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Nándor László Magyari<sup>78</sup>

## Interpreting the pandemic and lockdown in social scientific terms Epistemological challenges for the current paradigmes

### Abstract

The essay reflects on the questions that have arisen as challenges in the field of social sciences in recent years following the pandemic and lockdown. First of all, I am writing about the fact that the pandemic has dramatically accelerated the migration to online field, which may still be partially reversed after the emergency, but will significantly affect the world of education, the economy, culture, and even politics. It exerts its influence mainly in the wake of hyper-networking, to which the social sciences must give adequate answers, they must certainly change their offline research strategies and paradigms. After that, I will very briefly consider the most common philosophical-type visions of the future, conceivable scenarios, arguing that the social sciences must change in the case of every imagined scenario. Sociology must change with digitization and the ever-increasing spread of big data research, and sociocultural anthropology must make use of its digital opportunities, changing the methodology of field research. Finally, discussing the political perspectives, I consider the chances of the development of digital democracy and post-populism in a period following the pandemic, as well as the chances of resilience from the perspective of the deontology of the social sciences.

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## Introduction - the nature of the challenges

It is a general phenomenon, and not just a consequence of the exceptional situation caused by the pandemic, that the so-called “Western world” is increasingly digitalising and moving into the virtual space. When I refer here to the Western world, I am thinking first of all of the “political/economic West”, which is not defined by geographical coordinates but rather in political/economic/sociological terms. It refers to the long-dominant process of civilisation, as Norbert Elias understands civilised a concept in which “the self-consciousness of the West is expressed”(Elias, 2004).

And then there is the “civilizational space-shift”, as Manuel Castells puts it, which indicates that it accommodates not only all existing cultures, but also the different logics of power, economy and culture. Castells, when he speaks of „civilization” (Castells 2005), focuses on the way in which social organisation and subsystems are interconnected (social morphology); he focuses on networking rather than the historical process followed by Elias. Well, the gradual migration of the Western world, or civilization, into virtual reality, a process going back at least three decades, has now suddenly accelerated.

The space of virtual reality is populated by a multitude of cultures and subcultures, etc., always nuanced and worthy of numerous interpretations and definitions. However, its *modus operandi*, as well as the technology that makes it possible, is fundamentally a product and expression of Western civilisation. This is easy to see if we consider the dominance of “digital”. English in virtual space and the unequal access to the internet. It is important to note this because, on the one hand, despite all the annoying connotations, it is Western civilisation that is at the forefront of the move into virtual space, regardless of any value judgements, including the negative consequences that follow from this and which do not (yet) affect other societies, communities and enclaves not yet able to reach virtual spaces. On the other hand, I also share Elias’ view that *civilisation is a process*, and I am trying to

describe such a current process and to outline its possible directions and consequences.

When people talk about the virtual world and moving into it, they are not primarily referring to the fact that some online activities simply „replace” or substitute offline activities that existed before, but to what is created and functions only in virtual space. Examples of the former are, first and foremost, the formerly offline media (print or audible-visible analogue), but also the various markets, e-commerce or stock exchanges that have gone online, or the move online by libraries, museums, art performances, and some forms of distance learning, etc.. The latter can be seen on social media platforms, the prosumer practices, interactive forms of entertainment, as well as the cryptocurrency market, etc., that have been created directly on the web.

The networking of societies has taken place and continues to take place on different scales and with different dynamics in all parts of the world, but it has also had its own characteristic dynamics in various social, economic and cultural contexts, even in the predigital era. A good starting point for understanding this process is Castells’ original idea of the emergence of a network society, according to which „the new social morphology of our civilisation is based on networks” (Castells, 2000). This has broad implications that extend to almost all aspects of life. Castells et al. discuss these, from the economy and education to the dynamism of cultural change, globalisation and the dominance of capitalist production systems, in their subsequent writings (Castells, 2004, 2010).

The coordinates of space and time that characterise classical, predigital civilisation – delimited and segmented space, linear time, uninterrupted from past to present to future – are fundamentally different in the case of the information society, where „a space of flows and timeless time are created”. „Society is built around flows in networks”, which in turn creates new spatial practices, a new structural model if you like. Space

becomes dense and almost irrelevant as it moves into networks. The notion and perception of time also changes, as the time of flows evokes the „simultaneity of the moment” (real time), while the persistence of digital footprints evokes „eternity” (Dessewffy, 2019, 18).

Virtual, digital and Internet networks are synonymous in our case, as in the case of social science disciplines, based on the assumption that „the Internet is the largest and most fully interconnected social network” (Barry Wellman, 2001, Wellman et al., 2002, Kollányi et al., 2007) and that the former are separate – if not entirely – from offline network reality. Offline and online realities are dialectical, mutually shaping and interconnected, but also different. At the same time, hyperconnected networks operating in virtual space not only redraw familiar behavioural patterns and practices from our human heritage, so to speak, but also invite new ones, which have already shown in the last few decades the human resilience and capacity to develop new behavioural patterns. Their importance, however, has been brought to the fore in the wake of the pandemic and lockdown, when the first step, the networking of the morphology of civilisation (Castells, 2004), is followed by a second step, the networking of virtuality (Wellman, 2001).

My basic assumption is that first, the pandemic and the lockdown that accompanied it, interrupted the dynamics and radically accelerated the shift to online, for our Western civilisation as a whole, although, again, in a different way at the level of societies. The pandemic and the radical changes in biopolitical, educational, economic, social and cultural, etc. policies it triggered resulted in a kind of “forced onlineisation”, a forced shift of activities from one day to the next into the online space, while at the same time causing radical changes in lifestyles and, in many ways, chaotic relations at the level of everyday life. (The most obvious example is the shift of education to online and all the problems that this sudden and in many ways unprepared transition brought to the surface).

Secondly, I also assume that we witnessed a „forced onlineization” directly linked to the pandemic; good examples of mostly forced changes were education, medical care, culture, communication, economic and commercial activities, exchange and consumption habits. Because of this, a „backward reorganization” is bound to occur. By ‚backward reorganization’, I mean the shift from online to offline activities, the density and intensity and morphology of network activity, and not at all a general shift back into the “same river” and civilisational path we were treading before. As Fareed Zakaria suggests (Zakaria, 2020), “a new normal has now emerged. It is unlikely that we will ever go completely back to the past. The pandemic served as a forced mass-product test for digital life - and the tools mostly passed, including our technological tools”.

I consider the most important upcoming changes, that the forced transition to online platforms and networks, and the return to face-to-face and offline spaces at the end of the pandemic, above all in education (e.g. face to face teaching in schools), cultural performances (especially theatre, music, artistic activities but also sports that have an audience), economy and accommodation (e.g. transport, tourism, hospitality and accommodation) and partly in political activities (mass events, offline campaigns). The other areas of media, communication, much of the economy, commerce, distribution, etc. have been and will continue on a gradual path of networking and virtual reality.

I propose the thesis that this hyperconnectivity, the conquest of the online world, represents not only a radical change in the structures and mechanisms of the real world, but also a fundamental challenge – both theoretical and methodological – for the social sciences. The social sciences must adapt, both theoretically and, above all, methodologically, to the new conditions. Here I am thinking in particular of online and desktop research, digital ethnography (or, for example, the increased demand for auto ethnography), and Big Data-type studies, „digital

sociology” (Dessewffy, 2019), digital anthropology (Horst-Miller, 2012, Pink et al., 2016), internet pedagogy (Postill, 2011), etc.

Digitalization is only one aspect of the theoretical and methodological challenges, when data and content, hitherto offline, media-practices and content „migrate to the web”. At the same time, however, there is a growing and pervasive virtual world “developed directly on the web” of data, information, knowledge and practices that are born digitally and are the result of these practices (Rogers, 2013). The ontological distinction then has theoretical and methodological implications. Post-digitised data and information, the “real, i.e. offline facts”, can in principle be researched using traditional, offline, or analogue methods. The “digitally born”, on the other hand, can only be researched using new, digital methods, which differ from traditional ones.

The trauma of the pandemic, the realistic and moral panic and the mass paranoia that are flooding online spaces (especially, of course, social media spaces) are challenges that make it a priority to interpret them in social science terms, to explore the possibilities for change, to create a new scientific perspective and a new expert vision.

In this paper, I will focus first on the challenges and the changes that have emerged in the field of philosophy, and then on the challenges and possible responses in sociology and cultural (first of all, political) anthropology.

### **The age of political philosophy - post-pandemic scenarios**

Philosophy is buried nowadays, above all in the name of a kind of utilitarianism or pragmatism which suggests that systematic and in-depth reflection on the state of things, the course of things and the prospects of the world, is superfluous, that an abstract perspective – and anything else that does not supposedly facilitate lightning-fast practice and universal profit – is undesirable. I don’t share the viewpoint of those who don’t realise (don’t want to realise) that a philosophical

perspective is particularly important when it comes to possible and desirable scenarios for the future. For what will become of us? Who are we? The pandemic and the radical changes it has brought about, the lockdown, have raised metaphysical questions about where the world and humanity in it are heading.

I am not claiming that metaphysical theories (or at least prototheories) have already been developed that would accurately account for the consequences of the pandemic and lockdown and indicate scenarios of how to proceed. I am only indicating the need for such a thing, that it is most urgently needed. I could sum it up by saying that there is a need for philosophically elaborated *utopias* or maybe *dystopias* at the level of civilisation. For utopias and dystopias create the possibility of “ideal-typical” comparisons with the *,real’* and show where we are and where we are going, as well as the speed of change. Visions, utopias and dystopias will now supposedly grow out of interpretations of the pandemic. In the current situation – when the health, epidemiological, and medical-professional problems that have arisen have been „politicised” at lightning speed – critical political philosophy has become the focus of metaphysical theorising and is expected to provide the scenarios for the future.

In a seminal study, Gerald Delanty summarises the current writings and positions of six different political philosophers and authors (Delanty, 2020) on pandemics and possible scenarios. The range of these theoretical experiments is very wide and could be extended further. In any case, the six trends and theoretical attempts on which the author reflects are very important: first, utilitarianism, which advocates herd immunity as the realisation of the common good, the rapid eradication of the epidemic and a return to “normality”. The second interpretation is the Kantian position, mediated by Habermas, which subordinates action to the supreme value of „universal human dignity” and stresses the importance of saving human life (the individual) above all else.



Third is the libertarian philosophical interpretation, where the liberties of the individual override, and supersede, almost all forms of restrictive measures. Fourthly, there is Foucault, like Giorgio Agamben, who flog the “permanent state of emergency” and the systems (in our region, including the Hungarian one) that seek to perpetuate austerity and government by extraordinary measures by invoking the pandemic. Fifthly, there is Slavoj Žižek’s theory, which argues that the pandemic is a chance for a “post-capitalist” turn, i.e. a “rediscovered communism”. Lastly, Delanty mentions the „Nudge Theory”, that the pandemic could provide a major „boost” to development. I would mention two more authors here, and then come up with a theoretical hypothesis of my own.

Fareed Zakaria, already quoted in the introduction (who is famous for being the first to use the term „illiberal democracy”), starts from the premise that there is a strong likelihood that not only technologies but also human behaviour will change rapidly beyond anything we have ever imagined. This is likely to happen as a result of a networked and hyperconnected society, on the one hand, and the spread or “revolution” of artificial intelligence (AI), on the other. AI, in his view, will eat up a large proportion of jobs (he refers to a survey which shows that there are already 32-50 million jobs in the USA that could be done by robots, AI-controlled machines) and may even make humanity itself redundant (which, in the worst case, could lead to alcoholism, drugs and depression). According to him, the pandemic can also be understood as a „litmus test for digital mass production - which our technological tools have passed by a good margin”, i.e. our technological tools are ready to be thrown at the mass production and spread, and thus to displace humans from numerous productive areas of the world of work (Zakaria, 2021).

The Israeli (notorious) historian-philosopher Yuval Noah Harari is the most radical in his critique of AI and biotechnologies, when he

envisages that they could lead to „the separation of humanity into two biological castes, even two different species” (Harari, 2018). Conversely, in his more recent reflection, he praises digital technology and its performance during the pandemic (what would the world have been without the internet?) and hails the now centrally important crafts and their practitioners, such as doctors, assistants, internet network operators, transport and service workers, who keep the world running. But he warns us not to give in to the “digital dictatorship”, “surveillance capitalism”, the use of our data to manipulate us, to keep control of our lives. Finally, let’s not allow the crises caused by natural disasters to be exported to the political arena and subject ourselves to the misguided political decisions and the whims of populist leaders (Harari, 2021).

If so far the globalisation’s, as most clearly explained by Zygmunt Bauman, stratifying factors where the “freedom of movement”, the availability of mobility and consequently “extraterritoriality” (Bauman, 1998), the main identifying factor of hyperconnectivity is access to Web 2.0, being online and constantly using it. Hyper-networking creates not only a kind of space outside of space, the “space of flows”, but also “time without time”, i.e. the (foot)prints left in both synchronous (real time) and timelessness, but not for everyone. Digital hyperconnectivity became more or more a “total social fact”, as Rogers Brubaker notes: “recast social relationships, lifting them out of here and now, disciplining and re-formatting them”, at the level of cultural, economical, political and even personal. Digital hyperconnectivity also challenges individual identities, „colonizing the self” (Brubaker, 2020). On the other hand, we can’t avoid the digital hyperconnectivity at all; digital illiteracy today is as much an obstacle to navigating the “new time” as illiteracy was a hundred years ago.

## Theoretical paradigm shift in sociology - digitalisation and Big Data

I believe that only a paradigmatic epistemological science, i.e. a radically rethought and transformed science, renewed on a theoretical and methodological level, is competent and has a chance to respond to the challenges of social science. There are only a number of social science paradigms it is worth talking about in plural, which I have in mind and which can form the basis for the theory and practice of new and innovative social sciences. The paradigms that provide the theoretical and practical framework for scientific research can start from the internal logic of scientific development, as Thomas S. Kuhn explains. From his original definition, what is most characteristic of the social sciences is that there is a common (and minimal) “professional matrix”, a kind of structural arrangement commonly professed and practised by researchers that “binds” them to all research backgrounds, and often made explicit in the design of research. The internal structure of the matrix is provided by ‘symbolic generalisations’ (laws, ‘metaphysical parts’), binding beliefs and models, and ‘shared values’ (predictions and ‘parable’ manuals, educational experiments and their contents) (Kuhn, 1959). Another approach draws attention to an even broader context of social scientific practice, namely the ‘sociological imagination’ (and, in its wake, also, for example, the anthropological one), described by C. Wright Mills, which is based on the professional knowledge, practical competence and intuition of researchers. Erving Goffman’s ‘framing analysis’ starts from ‘valid’ situational definitions and procedures of thinking and behaviour in everyday life. The researcher’s focus here is on identifying and interpreting, naming the interpretive schemas that enable ordinary people and communities to „situate, conceive, identify and label” events and their contexts (Goffman, 1986). (There are a number of other paradigm definitions and conceptions, but I won’t complicate matters further.) Whichever of these conceptions we take

as authoritative, the social scientific study of the new situation brought to light by the pandemic requires a rethinking of our existing theories and methodologies.

The reality produced by the sociological imagination is admittedly – at least in its mainstream, i.e. quantitative/empirical variety– generated and operated as „model-dependent realism” (Howking-Mlodinow, 2010). It is framed by methodological considerations, by what can be researched with existing theoretical and technical tools, and by what the ‚sociological imagination’ can contain. Sociological reality is that part of the world, and consequently the imagination of mainstream sociologists, is preoccupied with that limited segment of reality which has been ‚sociologized’, institutionalized, or can be studied by social statistical methods, etc. (Mills, 2000). The central concept of this is ‚abstract empiricism’, as the author, criticising Paul Lazarsfeld, puts it, meaning the basic units of what he calls the empirical ‚reality’ of ‚re-sociologised’ social statistics. Wright Mills, on the other hand, articulates his critical sociology, and most importantly, the priority of critical theory over what he calls the ‚abstract empirical’, factual, or limitedly sociological craftsmanship.

It is important to raise a fundamental point here, namely that the challenge is not primarily in the area of sociological topics and methods in the classical sense, since topics such as social identities, everyday life, groups, social institutions, inequalities, conflicts, etc. can still be researched using well-established methods (Lupton, 2015,43). However, often it is precisely the most sensitive and therefore the most public interest questions that are difficult to answer using traditional small-sample data collection. This is not really problematic even though we are now increasingly producing and analysing/interpreting our data in a hybrid way, as a lot of knowledge and information, sociological data, is subsequently digitised by researchers or others. And the on-line survey is now an accepted, indeed, almost mandatory, process due

to the pandemic. But it is the data and its processing/interpretation that is a challenge, „digitally born” on the web, generated almost permanently there. As I mentioned above, Richard Rogers makes an important distinction in his book *Digital Methods*, saying that we need to distinguish ‚post-digitised data’ from data that is ‚digitally born’ (Rogers, 2013). The latter raises the question, in the case of online research, what kind of research can be conducted, using post-digitised methods (such as online surveys and data collection), on phenomena that were originally born digital? (Lupton, 2015)

For the small-sample sociological survey, however, Big Data is a challenge not only as a „methodological paradigm” (Dessewffy, 2019), but also as a theoretical framework, which, like it or not, requires a critical reassessment of existing research. For research of the Big Data type (Mayer-Schönberger and Cukier, 2010, Stephens-Davidowitz, 2017, Csepeli 2020), which is gaining ground following the exponential growth of reality in virtual space, is expanding and simplifying the ever-emerging problem of framing. The basic technique of digital sociology (with small restrictions, the „N=all” sampling+) for Big Data type data collection and algorithm analysis it’s „segmentation can capture the diversity of reality” due to the sample size (Lupton, 2015, Marres, 2017, Dessewffy, 2019, 24). The result is not merely a model of reality, but „directly empirical”. Paradoxically, metadata in virtual space are more real than those collected directly in the pre-digital era, as they are free from the biases that arise from sampling limitations, respondent honesty, feedback, ideological commitments, political expectations, etc., in classical small-sample ‚abstract empirical’ research. In this sense, analysing internet data could be an excellent control method for data obtained via classical survey methods, because of the almost total lack of conscious distortion of the informants and the pressure of social desirability (Davidowitz, 2019).

Our digital footprints are not only directly collectable traces, but also persistent ones that cannot be hidden, data that can be retrieved at

almost any time although virtual, they are more „real” than the small samples of data collected through direct human contact, which are distorted in many ways because they are not intended for research but simply „unreflected”. There is no space here to explain the many distorting effects, so I will illustrate with just a few of my own examples.

It is often the case that the formulation and interrogation of the most sensitive problems are problematic, as respondents produce standard answers to standard questions due to their knowledge of the expected answers in every social interaction and context ; this then renders their answers almost useless to the analyst. For example, if you ask someone if “the environment is important to them,” they will almost invariably say that it is very important, while they are standing next to a small creek of stable drain, which flows straight into the stream where it meets the contents of the outside toilet. The digital representation of the ecological footprint, on the other hand, is a more accurate indicator of their level of environmental awareness. If we ask whether it is important to have democracy, almost every one will answer that it is one of the basic values they promote, of course not in their everyday practices or their own attitudes, but generally speaking. Or when asked if it is important to learn the Romanian language in Szeklerland (part of Romania, where the local people speak Hungarian), we constantly get the same answers: “very important”, although this is not at all confirmed at the level of attitudes and behaviour. These answers are usually not interpreted/used by researchers.

Another example is that answers to factual questions, often claimed to be objective, are no more than opinions, because, for example, they say something (often say nothing) to a question about monthly individual/family income, but it may be far from the truth. I know that there are methods of comparison and correction, but it would be much more reliable to have a real digital database from the tax office or other sources that are already available digitally. There are plenty of other examples that can be cited to demonstrate the greater reliability provided by Big Data

(i.e. meta-data). Here is one of them, borrowed from Stephen Davidowitz, on racial bias and hatred. At a time when not only the naïve public but also the scientific public knew and communicated that the post-racist era had arrived in the US – Obama’s election was explained whit that matter – Big Data studies showed that this was not the case at all. Google searches for racist content have shown exactly that this is not the case, that prejudice is very much a feature of the digital footprint, even if it is less and less expressed in public, in real life (Davidowitz, 2019).

All the problems raised by the new Big-Data procedure are not primarily technical or epistemological, but deontological and ethical, related to who can access data and information and to what extent/for what reason, who use the digital footprints on the internet? In addition to the big tech companies, do researchers have access, and does the procedure respect the personal rights of potential researched and researchers? How secure, well-regulated and transparent are access and usage patterns? And so on.

The transformation of the general paradigm of sociology goes back to the beginnings of critical sociology, to the critique formulated long ago by Gabriel Tarde (Tarde, 1893) and, more recently, by C. Wright Mills (1959) of what Mills calls „abstract empirical” data, the „sociological facts”, the statistics used in classical sociological surveys.

## **The transformation of the socio-cultural anthropological imagination - digital anthropology**

Socio-cultural anthropology (and its applied variety, political anthropology), barely half a century after the ‚homecoming’ and the interpretive turn, is already facing fundamental changes, not least as a result of the pandemic ‚nudge’. The change in approach and methodology that is now to be expected starts with George Marcus’s ‚multi-sited’ anthropology (Marcus, 1995), who recommends that instead of ‚classical’ (Malinowski) fieldwork by a solitary anthropologist in a well-established

field, the researchers must follow the events being researched to where they continue, in space and time. Now, cyberspace, online reality, is a new terrain into which the anthropologist must follow his subject and his actors, and it fundamentally changes the theory and methodology of anthropological research. The most important development is virtual ethnography (Hine, 2000, 2015, Boellstroff, 2008), i.e. the change of field (Mátyus 2015) and the transformation of the theoretical background of research in virtual reality. Digital anthropology, which aims to study digital culture, the principles of which were formulated by Miller and Horst (Miller-Horst 2020) on the one hand, and Sarah Pink et al. on the other (Pink et al., 2015), operates on a new form of field that collects data through mediations rather than through the intensive and direct, somewhat participatory communication (participant observation) that has been familiar from anthropology.

Christine Hine paints virtual ethnography and its new online field in the palette of the new sciences with the idea that this field has its own autonomous life, but it is not entirely separated from offline reality; digitally born „textual artefacts” are intertwined with the meaning-attribution practices and institutional frameworks of everyday (offline) reality. On the other hand, online communities behave, communicate and interpret through the very principles and procedures that characterise real life. Finally, as with all ethnography, the virtual cannot be separated from the researcher’s personality, knowledge, methods, etc. Thus, online reality can be researched and „textually re-created” (Hine, 2000) through ethnographic methods.

Sarah Pink et al. talk about digital ethnography in the context of anthropological data collection and fieldwork and summarise the characteristics of the research process in five points: 1. Versatility: it is always worth approaching digital reality from multiple planes, taking into account all the devices and media through which it is accessible (wi-fi, smart-phone, Skype, Google Chat, etc.) 2. Non-digital centrality:



this addresses digital existence through the central, digital reality; research through digital means is in fact indirect, pointing beyond the digital reality and bringing new discoveries about the real world. 3. Openness: research is a collaborative and interactive process aiming at continuity, along the lines of “live sociology”. 4. Reflexivity: digital research always involves a reflexive moment, asking question such as how do we produce knowledge and what is the role of the researcher; this then leads to further ethical questions. And finally, 5. Heterodoxy (unorthodoxy): i.e. reflect on the fact that there are always alternative forms of communication, which digital ethnography uses, for example, in dissemination (Pink, Sarah et al, 2016).

In turn, the ethnographic data, knowledge and texts thus preanalysed can lay the foundations for digital anthropology, building on the model of how Internet media research is already being conducted. Horst and Miller summarise the problems and concerns about digital anthropology in six points. The first stems from the nature of digital data, the way it is created and the dialectical relationship that operates between the particular and the universal, and between the virtual and the real world. The second is that humanity has not changed in the process of digitisation in the sense that the predigital or analogue world is more ,real’ or ,original’ than the digitised one. Thirdly, holism remains the most important principle of the anthropological process, with events, real ,life’ taking place both in a specific framework and in another, more general, reality. Fourthly, it reinforces the importance of cultural relativism, the way we engage with digital reality globally, by not marginalising others and by seeking to give visibility and voice to those who otherwise fail to do so. The fifth principle is that digital culture is fundamentally ambivalent in terms of its openness or closedness, ranging from politics or privacy to ambivalence about authenticity. Lastly, and sixthly, we acknowledge the fact that digital reality is no more material than that which preceded it (Horst - Miller, 2012).

The shift in terrain thus occurs as anthropology as a whole retains its own principles, including that „fieldwork is a test of theory” (Clifford, 2003). However, instead of participant observation, it employs other intensive and usable techniques to explore the virtual world, to explore and analyse its complex forms. The new virtual field does not allow for unmediated participation, but it meets anthropological expectations in that it explores people in their ‚natural habitat’, which now includes ‚online habitats’ (Halett-Barber, 2014) and the relationship between the online world and its inhabitants. And although the researcher and researched only meet directly and in an alien space, the virtual encounter is real (mediated not only by texts but also by sounds and images, films and documents, etc.); the interaction can be intense and insider, i.e. sufficiently personal (Mátyus, 2015).

It is an interesting development, and also raises many ethical questions, that what was almost unanimously forbidden in older anthropology, i.e. excluded from acceptable methods, namely experimentation, is now being unwittingly brought to the fore in the virtual space. Whenever and however many of us go online, we are likely to become, against our will, experimental subjects (if not outright rabbits). In many ways, virtual reality is an almost infinite laboratory in which experiments (even if not designed by Millgram or Zimbardo) are being conducted in places invisible to us and with unstated or unpublicised aims.

### **Some final remarks**

In my view, the problems and arguments raised in this text allow for three kinds of conclusions, not as a series of closed and definite statements, but in a conditional mode, in the form of questions.

**First.** The dramatic changes resulting from the pandemic and the shift to networking and online, which have radically reshaped not only the communication space but also the whole style of political communication, its mechanisms of operation and the mechanisms of

control that power uses here and elsewhere. I also cite Castells when I look for a starting point: ‚network morphology is also the source of a dramatic reorganization of power relations’ (Castells, 2005, 600 p), just as the current rapid hyper-networking and onlineization are bringing about even more radical changes than before in the techniques of power and in the whole mechanisms of how politics operate.

Let’s add that the political scene, in a sense, had already entered cyberspace, since it was played out almost from the very beginning on the mediatised and virtual scene. Now, moreover, as Szakolczai and Horváth put it, the world of politics has become a world of unreality, since „media-politicisation is not ‚like’ theatre - it is theatre” (Szakolczai-Horváth, 2018, 192). Now, politics as theatre (sometimes comedy, sometimes tragedy, sometimes one or the other, alternating very quickly), operating in the labyrinths of virtual space, should, in an anthropological approach, grasp this „unreality”, interpret it and integrate it into its own framework. The challenge here is not that political activity is shifting from parliaments, various councils, governments and other decision-making bodies to online space or, in other words, digitally mediated. It is that decisions and the whole leadership, by definition, do not operate within institutional frameworks, but according to the logic of the media, and even according to the rationale of the social media’s *modus operandi*, structuring procedures, discursive rules, etc. It is a sign of politicisation transformed into theatrical performance and untruth that politicians today are more in TV and radio studios than in their offices, where they should be. Or that political mobilisation is taking place on social media platforms, and even the fragmented and degraded forms of political communication – leadership itself, the decision-making of leaders and its communication – are taking place on Twitter or Facebook.

Allow me – referring back to the scenarios mentioned in connection with political philosophies – to announce my most optimistic vision.

My hope is that, although at first it seemed that the repoliticisation of the pandemic would favour (alt-right or illiberal) populism, once it has passed, it may eventually serve as a „nudge”, a push to an era of post-populist political life. This will not mean an ultimately reformed governance or politics with the common good in mind, but it may mean the dominance of ‚common sense’, of more or less rationality in the political field (too), inseparable from the rehabilitation of elites and expertise. The restoration of expertise to its fair and rightful status is also a function of the experts’ mastery of the rules of digital communication, and as such is a crucial challenge. All in all, the development of a set of rules and operational modalities for *digital democracy* seems to be an indispensable challenge that requires expertise and learning from all (public or private) actors.

**Second.** In our globalised and fast-changing world, just like for a novice cyclist, speed gives the illusion of balance, and not the stability of subsystems, not the integration and cooperation, or our own autonomous balance. Thus, the resilience of societies is generally low. I think this is indeed a „post- or neo-” condition, even compared to Ulrich Beck’s risk society (Beck, 1992). Hence the sudden slowdown, or in many cases stagnation, has brought dramatic imbalances to the surface. Only change is certain; everything else is, apparently, contingent. Our civilisation is characterised by *liminality*. On the one hand, we suffer from speed. As Thomas Eriksen puts it, we are suffocated by the ‚tyranny of the moment’; for, as he says, man needs ‚slow time’, meditation, relaxation, etc. (Eriksen, 2009). On the other hand, we are not only living in truly new times, because what has happened in the wake of the closures is not that people have rested and freed themselves from the pressure of fast, sometimes hyper-fast time, but that they are constantly longing for it. This is another manifestation of the *anthropological ambivalence of man*, as Christakis and Fowler explain (Christakis-

Fowler, 2009), in which we are trying to move into virtual space, into hyper-networks, but the behavioural patterns that have been ingrained in us since time immemorial only partially function in the new virtual reality. Hence the many misunderstandings about the online world, the fears, the inhibition, the profiteering, the envy and the almost pervasive forms of hatred, disguised by clichés of live or printed speech in the offline world, but which have surfaced in their own right in online communication.

**Third.** As regards the situation of the social sciences, the challenge is not caused by technical difficulties or lack of flexibility, but above all by the unresolved ethical and deontological issues of the new dimension of reality. We need to cut through the jungle of the ‚moral upheaval‘ caused by the new digital technologies, to articulate the new possibilities offered by AI and biotechnologies in terms of legal regulation and moral values, in order to give digital social sciences the confidence to assert themselves. We will not get to the essential questions, from the interplay of correlations to science, from *how* to *why*, until the epistemological paradigm shift, which requires moral clarity, takes place.

Referring back to the above facts and reflections on the dynamics of some of the effects – the pandemic, lockdown and move online had on social science theory and practice, there are more questions than certainties. And in a sense, this is just as well, since, as Clifford Geertz notes, the strength of anthropology (and accordingly other social sciences) lies precisely in its ‚hesitancy‘, its uncertainty, its indecision and at the same time its openness (Geertz, 2007), and like this the constitutive doubt remains further on.

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## Self-Representation on Social Media During the First Five COVID-19 Pandemic Waves

### Abstract

The present pilot study provides details on changes in self-representation on social media during the COVID-19 pandemic, as well as on their potential link to mental health. The aim was to contribute to our knowledge both of mental health contexts underlying engagement on social media and of the pandemic's psychosocial consequences — a topic calling for an interdisciplinary approach including sociology, psychology, and communication and media studies. Via a four-step online survey, the study assessed participants' current mental health status, alongside their self-perceived social media usage and self-representation habits. The survey asked the same 20 questions four times during each of the first five COVID-19 pandemic waves in Hungary, between April 22, 2020, and January 20, 2022. The research indicated that (1) time spent on social media and (2) willingness to share self-representative content increased during the pandemic up to the fourth wave. The findings associated these changes with (3) a growing risk of the subjects' developing a major depressive disorder during all five waves and (4) an even higher risk of depression among the most active social media sharers, as the embedded PHQ-2 questionnaire demonstrated. This leads to the conclusion that the multidimensional

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societal consequences of the COVID-19 pandemic are worth further examining.

## Introduction

Recent research has addressed the psychosocial effects of the COVID-19 pandemic and its associated lockdowns at length. According to scientists, the related extraordinary limitations to disease prevention could be linked to acute panic, anxiety, compulsive behaviours, hoarding, paranoia, depression and post-traumatic stress disorder (Dubey et al., 2020). The COVID-19 crisis has involved uncertainty about the future, dread of infection, resource shortages, unprecedented public health measures curbing individual freedoms, monetary losses, and conflicting media messages (Pfefferbaum & North, 2020).

The pandemic's psychosocial effects have been magnified by our living 'in a connected world', 'a connected age', within the 'human web' and a 'web society' (van Dijk, 2020) – the era of the so-called 'new media' (Thornham et al., 2009). Many believe social media to be the most prominent new media, employing 'mobile and web-based technologies to create highly interactive platforms via which individuals and communities share, co-create, discuss, and modify user-generated content' (Kietzmann et al., 2011 [214]). Users create virtual self-representations on social media platforms influenced by 'real-world' individual and societal events, while also learning a great deal about 'real-life' happenings from others' posts (Hogan & Quan-Haase, 2010).

COVID-19 is a respiratory illness stemming from a new coronavirus known as 'severe acute respiratory syndrome coronavirus 2' (i.e. SARS-CoV-2, formerly 2019-nCoV), first detected in Wuhan, China (Cennimo, 2020). The United States Centers for Disease Control and Prevention (CDC) warned that 'COVID-19 is thought to spread mainly through close contact from person to person, including between people who are physically near each other (within about 6 feet)' (CDC, 2020). The

virus has proven to be highly contagious, fast-spreading, and especially dangerous to people with compromised immune systems. Curfews, lockdowns, quarantining and physical distancing were recommended and implemented across the world as preventive measures against the pandemic (Sanche et al., 2020).

Hungary detected its first COVID-19 case on 4 March 2020, with the first COVID-19-related death in the country occurring within 11 days. In reaction to this initial wave of the pandemic, the Hungarian government declared an epidemiological emergency on 11 March 2020. The lockdown began on 28 March and was initially supposed to last two weeks, but the administration extended it on 9 April and then progressively until 4 May. Borders, educational institutions, recreational facilities, restaurants, cafés, bars, clubs, and some private industry service providers, among many others, were closed during the first wave. Meetings, events, and non-emergency visits to health and social care institutions were consequently prohibited, and people had to wear masks publicly in enclosed spaces, e.g. on public transport and in stores.

Few limitations beyond the face mask requirement remained in effect in Hungary during that summer. However, autumn brought the pandemic's second spike in infections, and the government once again announced an epidemiological emergency, on 4 November 2020, imposing a curfew the very next day. Everyone in the country was forced to stay indoors from 8 p.m. to 5 a.m., and those in cities of more than 10,000 inhabitants had to wear masks in all public spaces, indoors or outdoors.

A third COVID-19 wave followed the second as the Alpha variant hit Hungary in mid-February 2021, leading to the limitations remaining in force for a longer period than those in the first wave. As more than half of the country's population had been vaccinated by then, the government gradually eased restrictions, including lifting the curfew

and requirement to wear masks in public spaces by the end of May 2021.

People saw themselves forced to mask up in enclosed spaces once again and temporarily switch to taking their university courses online with the arrival of the Delta variant, and hence the fourth wave of the pandemic, that autumn. By the end of 2021, the most recent COVID-19 variant, Omicron, had merged the fourth and fifth waves together, with Hungary's declared epidemiological emergency being extended until 1 June 2022.

As a high-impact, 'real-world' event, the COVID-19 crisis has affected social media use, which, when frequent, has been linked with an elevated risk of depression among users during the pandemic. Researchers had observed such links prior to the pandemic (Lin et al., 2016). The present pilot study sought to substantiate them for the ongoing crisis, validating the following multipart hypothesis: (1) time spent on social media and (2) willingness to share self-representative content increased during the first five COVID-19 waves in Hungary, and these were associated with (3) a growing risk of major depression among users and (4) an even higher risk among the most active sharers (according to the embedded PHQ-2 questionnaire).

## **Methods**

An online questionnaire represented the most efficient way to collect data from social media users amid the methodological challenges the social sciences have faced during the COVID-19 waves and lockdowns. This anonymous survey contained the same 20 questions in Hungarian for everyone, with a few modifications in their phrasing to match the different periods at hand. This researcher shared it via Facebook and Instagram during each of the pandemic waves in Hungary, to obtain an overview of changes in self-representation on social media and test their hypothesised connection to users' deteriorating mental health.

The questionnaire was designed to record participants' basic demographic traits (gender, age, type of settlement, education level), social media use patterns (platforms, types of shared content, frequency of sharing), and current mental health state via the Patient Health Questionnaire-2 (PHQ-2). Two open-ended questions were included, to allow users to share their thoughts on their own and their peers' social media use and on self-representation amid the five COVID-19 waves mentioned. Data for the first wave was collected from 170 survey respondents during the first strict lockdown, between 22 April and 11 May 2020, via answers related to their social media use before and during the pandemic (Sándor, 2020).

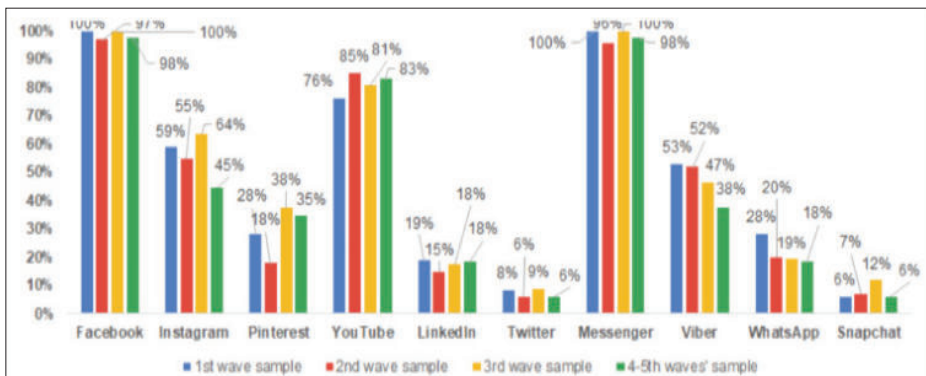
The flux of the pandemic then did not allow for a long sampling process, as the timing, duration, and severity of subsequent waves seemed entirely unpredictable. The rapidly changing scenario required the fastest and most effective suitable method: convenience sampling. Hence, during the second round of data collection (between 20 November and 2 December 2020), the samples were made comparable by adjusting the second to match the first, since two samples cannot contain exactly the same participants.

The second version of the survey covered the second-wave lockdown and the 'lockdown-free' period between the first two COVID-19 waves in Hungary. This researcher selected 100 sets of answers from 119 participants in the second sample to match it to the first in terms of gender and age, with less than 0.5% difference. In both the selected samples, 79% of the respondents were women and 21% men, among which 2% were aged 13–19, 34% aged 20–29, 31% aged 30–39, 16% aged 40–49, 13% aged 50–59, and 4% aged 60–69 (Sándor, 2021). The third survey round, corresponding to the third wave, began on 13 March and ended on 4 April 2021, and included 157 respondents and 135 sets of answers chosen in proportion to the gender and age statistics of the two preceding samples.

The final data collection round pertained to the combined fourth and fifth COVID-19 waves. A total of 202 social media users filled out the survey between 7 January and 20 January, from which 130 sets of answers were selected to match the previous three samples.

## Results and Discussion

The answers to the first social-media-use question (‘Which social media platforms do you use?’) revealed that the most popular platforms among the respondents were Facebook and Messenger. Respectively in each of the four samples, 100%, 97%, 100% and 98% had used Facebook, and 100%, 96%, 100% and 98% had used Messenger (Figure 1).

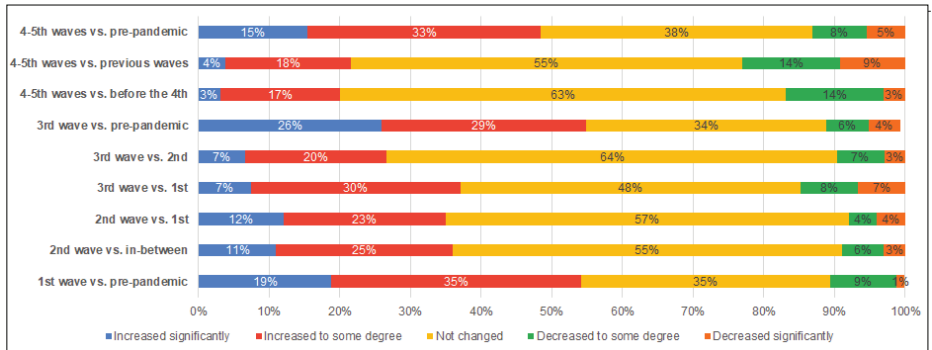


**Figure 1: Social media platforms used by participants**

Source: the author

The responses to the next question (‘How has your total time spent using social media changed?’) pointed to the first COVID-19 wave as the most momentous: 54% of participants reported they spent more time on social media during the first-wave lockdown in the spring of 2020 than they did pre-pandemic. By the third wave, 55% of individuals said they had come to spend more time on social media than before the COVID-19 outbreak, indicating a significant cumulative effect from the first three waves. However, that rate went down to 48%

during the final round of responses, in winter 2021, indicating that that cumulative effect may have faded during the combined fourth and fifth waves (Figure 2).

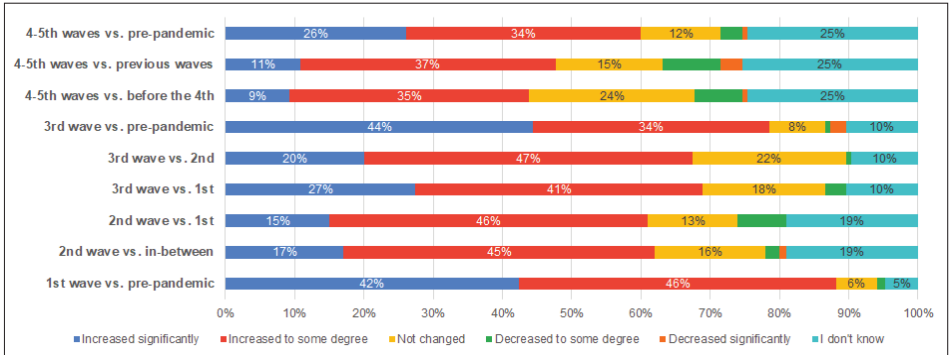


**Figure 2: Overall perception of one's own time spent on social media**

Source: the author

Interestingly, the survey results show a significant discrepancy between respondents' impressions on changes to their own social media use and that of others. To a similar extent in the first, second, and third waves, they noted bigger changes in others' social media usage patterns (in both time and frequency) than in their own. During the first COVID-19 wave in Hungary, 42% of participants said that others' social media use 'increased significantly' and 46% said it 'increased to some degree', compared to 44% and 34%, respectively, in the third wave. Despite the fact that the second and third waves were merging (although to a smaller extent than the fourth and fifth), two-thirds of respondents (67%) saw an increase in others' social media usage times. During the fourth and fifth waves, 48% noticed that others spent more time on social media compared to the previous three waves (Figure 3).





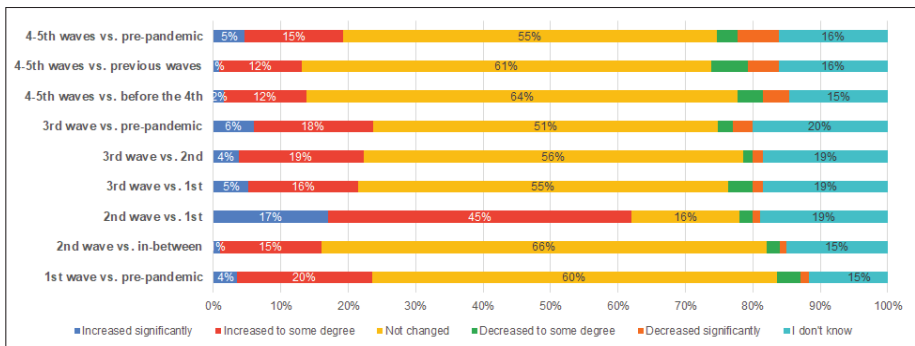
**Figure 3: Overall perception of time others spent on social media**

Source: the author

Participants were asked to answer the following related open-ended question: ‘How do you think others’ social media use has changed as a result of the entire pandemic and the current fourth and fifth wave? What kind of pictures and videos do they post about themselves, and how much time do they spend on it?’ One of the participants wrote: ‘I spend more time on it, even 5–6 hours a day. I also share more content, preferring to share [content] about me on Instagram or Snapchat, and other people’s content on Facebook.’ Another respondent pointed out that ‘due to contact restrictions, contact with family and friends could only be limited to social media.’ Reasons for increased social media use may not only be personal but also professional, as a third user emphasised that ‘before the pandemic, I didn’t use any social media other than YouTube at all. I was forced to use FB [Facebook] as a teacher, but I only use it for work.’

However, pandemic-related changes in social media use may fade over time, as indicated by a fourth respondent: ‘During the current [fifth] wave, I’m already posting less and reading less about the pandemic.’ A fifth respondent suggested that trauma response may be a reason for sharing content more often during the pandemic, writing that ‘my acquaintances share more pictures and posts, especially those

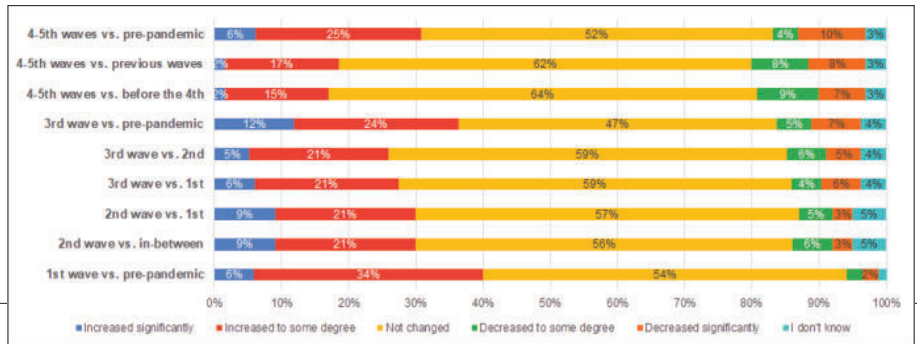
who have already gone through the [COVID-19] disease or lost a loved one'. The quoted responses may help explain the numbers in Figure 3. Survey participants saw the most notable increase in responses (likes, other one-button reactions, comments) to the self-representative photos and videos they shared on social media during the second COVID-19 wave (Figure 4). At that time, 62% felt other users reacted more to their posts. Interestingly, as the pandemic progressed, the spike in reactions perceived compared to pre-pandemic times gradually decreased.



**Figure 4: Overall perception of amount of reaction received**

Source: the author

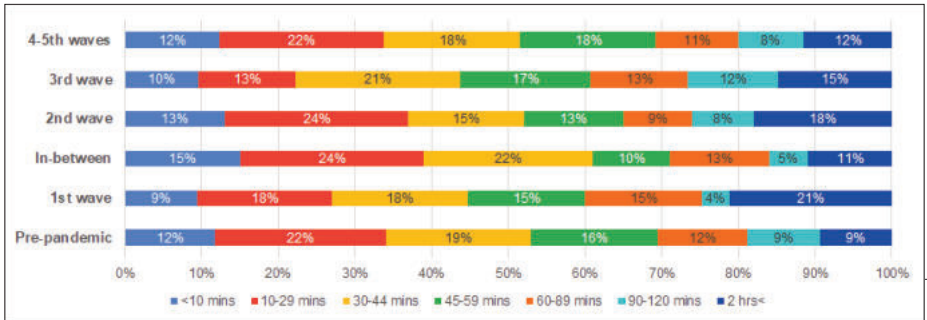
Concerning one's own responses to other users' posts (likes, other one-button reactions, comments), the biggest change vis-à-vis pre-pandemic times was observed during the first and third COVID-19 waves (Figure 5), when 40% and 36%, respectively, thought they had come to react more on social media. Conversely, the period of the fourth and fifth waves saw a more modest 17% increase vis-à-vis the months between the third and fourth waves, which could mean that certain psychosocial effects of the pandemic were stronger during the first waves, then lost some of their momentum — at least in terms of social media activity.



*Figure 5: Overall perception of amount of reaction given the author*

According to data from matrix questions (multiple-choice grids with time intervals in their columns and social media platforms in their rows), the time respondents spent on social media increased dramatically during the COVID-19 pandemic. Participants answered these matrix questions twice in the first two survey rounds: the first time to record their platform-specific perceived social media usage prior to and during the first lockdown, and the second time to evaluate it prior to and during the second lockdown. Likewise, the third-wave data collection assisted in quantifying users' perceived social media use during the third lockdown, and the fourth assessed it for the period of the fourth and fifth waves.

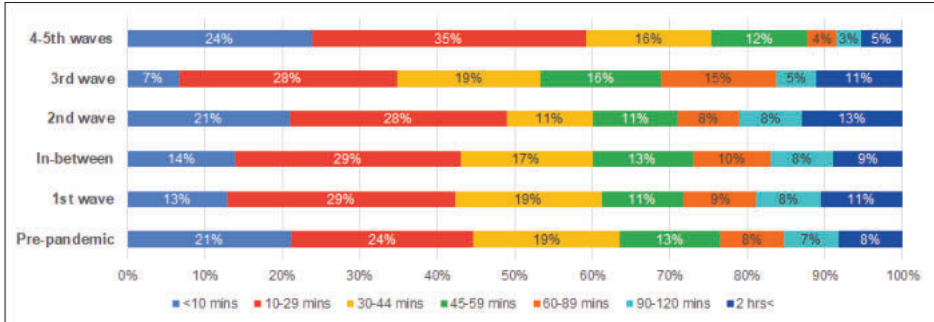
The most remarkable changes in time spent on social media occurred among Facebook users. During the first lockdown, the most common response to this question was 'over two hours' (21%). The rate of participants who used Facebook for such extended periods daily fell to about half (11%) between the first two lockdowns, only to rise again during the subsequent wave to 18%, then fall slightly to 15% (Figure 6). The corresponding rate in the fourth and fifth waves (12%) was closer to the in-between period of the first two waves (11%). However, more users reported '90–120 mins' of use during the fourth data collection round (8%) than in the first in-between period (5%).



**Figure 6: Time spent daily on Facebook (before, during, and between pandemic waves)**

*Source: the author*

Messenger was the most popular social messaging platform among the respondents, and its use also increased prominently. Vis-à-vis the pre-pandemic era, the proportion of the least-assiduous users (less than 10 minutes per day) decreased from 21% to 7% by the third wave but bounced back up to 24% during the combined fourth and fifth waves. Meanwhile, extended Messenger use (more than two hours per day) was the most frequent during the second wave (13%), and least frequent during the fourth and fifth waves (5%). Interestingly, this ratio is even smaller than that of the pre-pandemic-related data (8%), which might be explained by the supposedly evanescent psychosocial effects of the pandemic.



**Figure 7: Time spent daily on Messenger (before, during and between pandemic waves)**

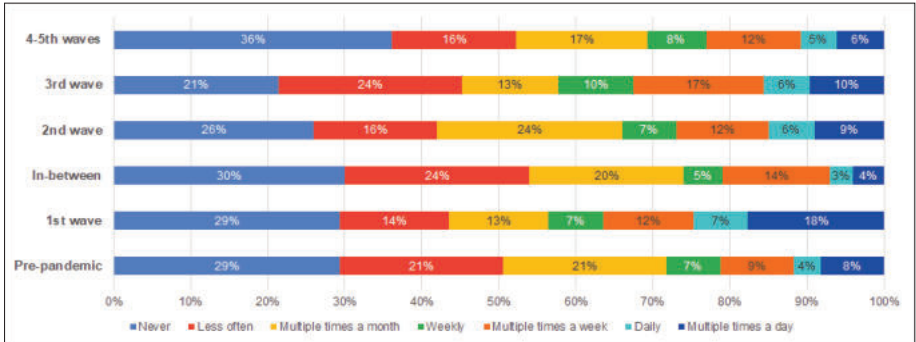
Source: the author

Participants also reported how frequently they shared photos or videos of themselves or close relations (including their pets) on social media prior to, between and during the COVID-19 waves in Hungary. Changes in this behaviour were more noticeable on social messaging platforms (Messenger, Viber, WhatsApp, and Snapchat), according to the data collected, than on social networking sites (Facebook, Instagram, LinkedIn, Twitter, Pinterest, and YouTube).

Changes were most apparent on Messenger, where 18% of participants reportedly shared personal photos or videos ‘multiple times a day’ during the first COVID-19 wave, at more than double the pre-pandemic rate of 8% (Figure 8). In between the first two waves, the proportion of the most assiduous sharers dropped to 4%, only to climb back up to 9% during the second lockdown and 10% during the third. It then dropped back down to 6% during the fourth and fifth waves, which was less than the pre-pandemic rate.

The proportion of those who sent or shared personal photos or videos daily increased from 12% pre-pandemic to 25% during the first lockdown. Between the first two lockdowns, it decreased to 7%, then more than doubled to 15% in the second lockdown, reaching 16% in

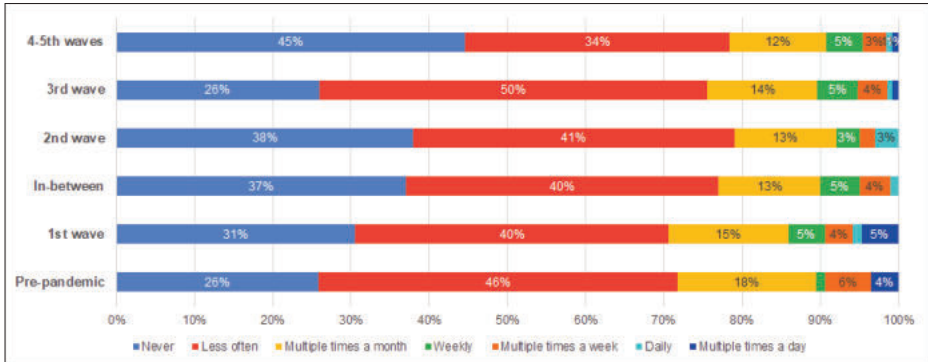
the third and finally dropping to 11% in the fourth and fifth waves. Non-sharers had increased to 36% by the fourth and fifth waves, which is the highest proportion recorded, meaning that the respondents' willingness to share then was the lowest among the pandemic waves.



**Figure 8: Frequency of self-representative photo or video posts on Messenger (before, during and between pandemic waves)**

*Source: the autho*

Despite being the world's most popular social network, Facebook appeared to lose self-representational value among users as the pandemic progressed (Wright & Bullock, 2021). During Hungary's first COVID-19 wave, the rate of users who shared at least one personal photo or video per day on the platform went up from 4% to 6%. It then fell to 1% between the first two waves, increased to 3% during the second wave, and dropped back down to 2% during the third wave, staying there during the fourth and fifth waves (Figure 9). The proportion of non-sharers climbed to 45% by the end of the data collection, representing the weakest level of desire to share amid the pandemic, as was the case on Messenger (Figure 8).



**Figure 9: Frequency of self-representative photo or video posts on Facebook (before, during and between pandemic waves)**

Source: the author

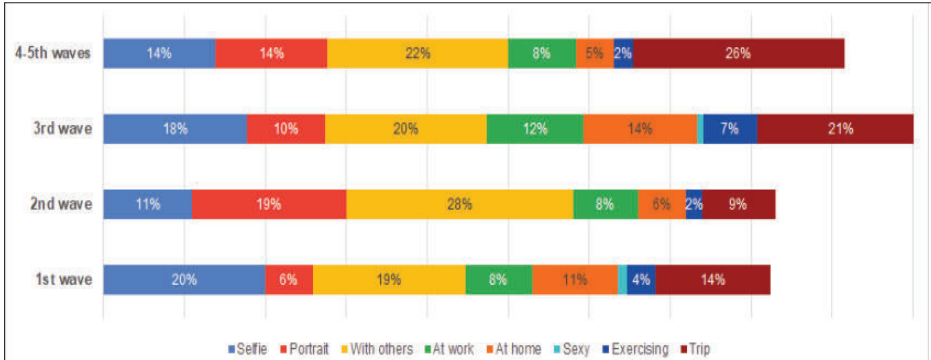
In response to the corresponding open-ended question, a participant explained that ‘as we gained more “practice” in confinement, the time we spent there [on social media], the desire and need to share and read, decreased.’ To another survey participant, social media functioned more as a communication channel than a self-representation one: ‘I communicate more on social media than I did before the pandemic. I don’t post more pictures of myself, rather less, because I rarely go to a place that’s worth it.’ This means that social media is not premised upon self-representative content for everyone, while having become central for social interaction during the pandemic. Rarely going out the traditional way may mean going out more frequently ‘online’, as a third participant pointed out that ‘a fundamental change during the pandemic is that with people we met with before frequently, e.g. with former colleagues, we now have a beer online instead of a pub every month. In the summer, we met in person outdoors, before [during the third wave] and after [during the fourth wave] on Messenger.’

Asked about the type of self-representative photos and videos they posted, a considerably higher rate of participants indicated posting

in this way during the third lockdown and fourth and fifth waves than during the first two waves. They reported having posted ‘selfies’ more than any other type of self-representative content during the first lockdown, on all social media platforms mentioned in the study (Facebook, Instagram, Pinterest, YouTube, LinkedIn, Twitter, Messenger, Viber, WhatsApp, and Snapchat). Despite what one may think, the predominance of selfies on Facebook decreased during the second lockdown (from 20% to 11%), going up to 18% during the third wave and down to 14% during the fourth and fifth waves. By the second wave, selfies had been overtaken by the previous runner-up, images and videos shot ‘with others’, whose frequency climbed from 19% to 28% by the second lockdown and experienced a similar up-and-down pattern, going from 20% to 22% during the last two data collection periods.

Travel photos and videos became the single most popular self-representative post type by the third wave (21% of posts), a trend strengthened during the fourth and fifth waves (26%). However, selfies and portraits together composed the most popular among such posts during each wave (Figure 10). (The distinction between selfies and portraits is that in selfies, the photographer is the subject of the image, but in portraits, the photographer and subject are separate.) It is worth noting that the preventive restrictions were lighter between the first two waves and during the third, fourth, and fifth waves in Hungary. Thus, one probable reason for this trend of taking photos or videos on a trip or while spending time with people otherwise was the less strict set of limitations enabling individuals to connect, attend numerous public or private events, and enjoy a summer or winter vacation. Obviously, a single shot or video may fall under more than one category (for example, ‘workout selfie’).

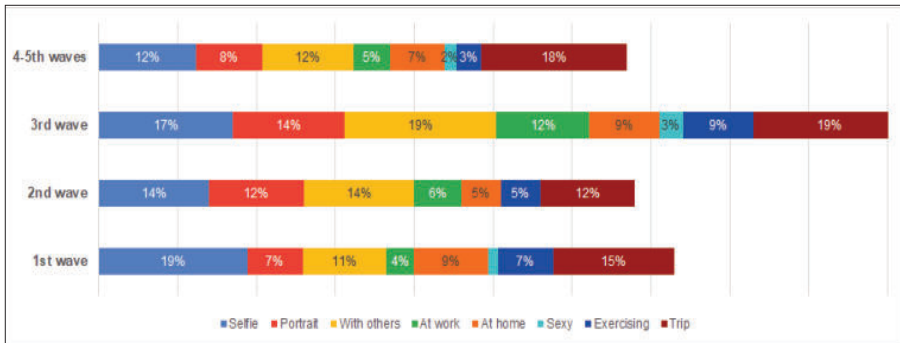




**Figure 10: Types of self-related photos or videos shared on Facebook during COVID-19 pandemic waves**

Source: the author

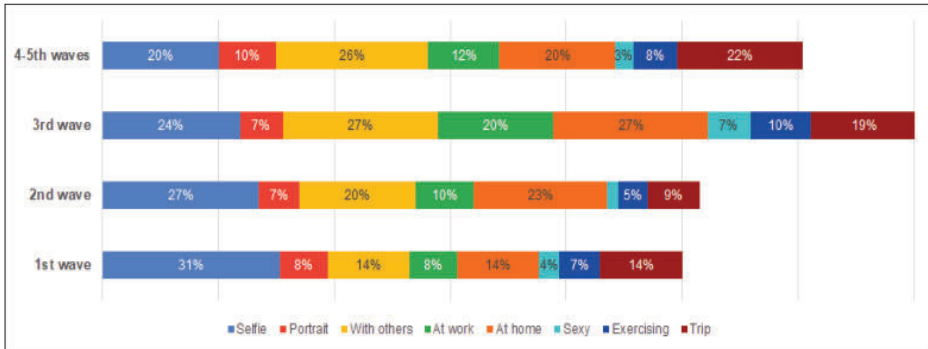
Instagram, another popular social network, showed a similar trend, with selfies and portraits together composing the most frequent self-representative posts, and photos and videos taken during travel and/or spending time with others surpassing selfies' popularity (Figure 11).



**Figure 11: Types of self-related photos or videos shared on Instagram during COVID-19 pandemic waves**

Source: the author

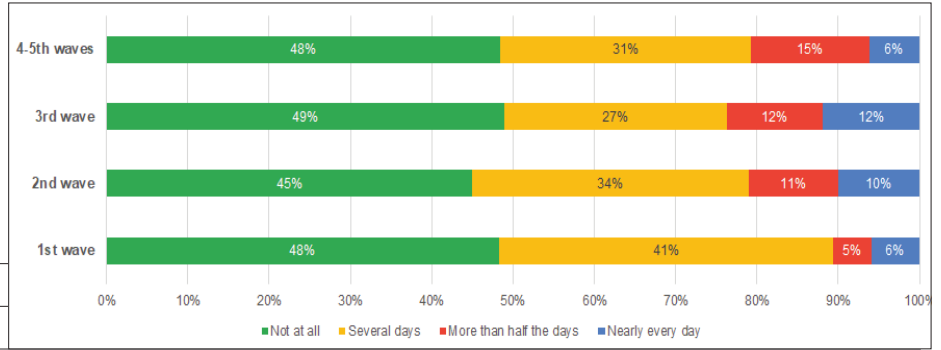
The essential difference between social messaging and social networking is that the former offers a more private way to exchange content (with only one user or a small group), implying that the user-generated content there is often not intended to be shared publicly. Hence, it is not surprising that the respondents reportedly tended to share more explicit photos and videos of themselves on Messenger (with 4%, 2%, 7% and 3%), which is among the world's most popular social messaging platforms. Posting trends were similar between social messaging and social networking, but photos and videos taken 'at home' had a greater importance in the former (with 14%, 23%, 27% and 20%, respectively, during the data collection periods), just like photos and videos taken 'at work' (with 8%, 10%, 20% and 12%). 'I think [others] must be browsing and posting more overall. Many people from my environment have started a new hobby, a job, posting pictures at home', explained one of the participants, answering the open-ended question about the perceived changes in others' social media use patterns.



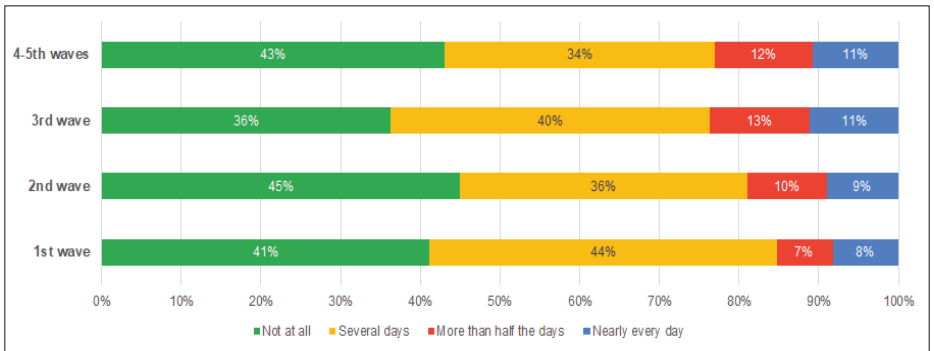
**Figure 12: Types of self-related photos or videos shared on Messenger during COVID-19 pandemic waves**

Source: the author

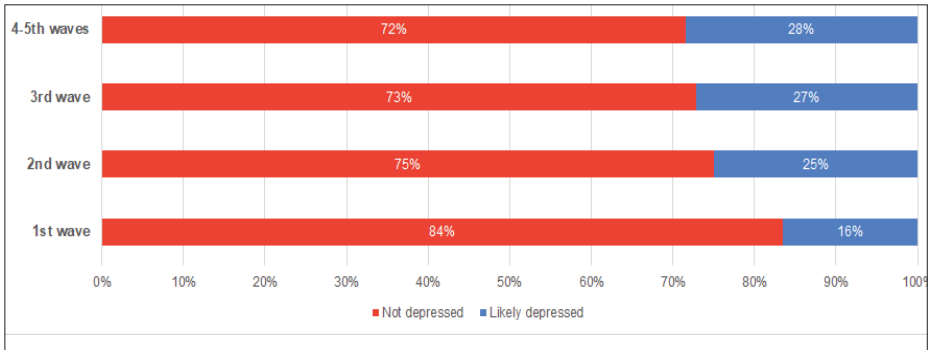
The online survey incorporated the Patient Health Questionnaire-2 (PHQ-2) to gauge respondents' mental health. Two PHQ-2 items were included under the same question: 'Over the last two weeks, how often have you been bothered by the following problems?' The first item was 'little interest or pleasure in doing things', and the second was 'feeling down, depressed or hopeless', with the possible answers being 'not at all' (0 points), 'several days' (1 point), 'more than half the days' (2 points), or 'nearly every day' (3 points). Accordingly, PHQ-2 scores range from 0 to 6. Scoring a 3 or higher would suggest a major depressive disorder and need for additional evaluation. Based on the PHQ-2 data, a rising proportion of respondents had symptoms of major depression during the pandemic waves (Figures 13–15).



**Figure 13: PHQ-2 answers on ‘little interest or pleasure in doing things’ during COVID-19 pandemic waves**  
 Source: the author



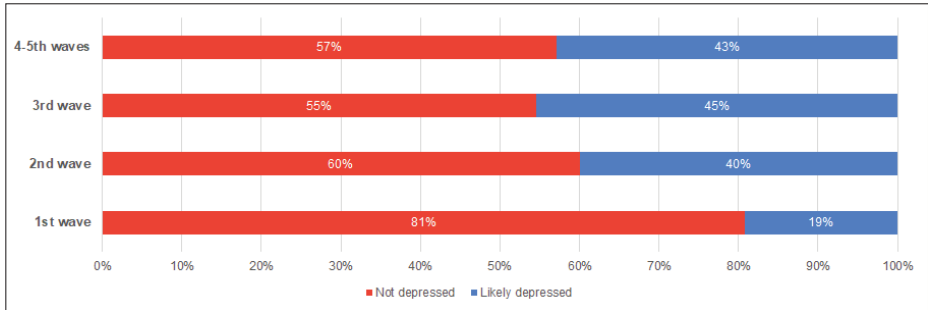
**Figure 14: PHQ-2 answers on ‘feeling down, depressed or hopeless’ during COVID-19 pandemic waves**  
 Source: the author



**Figure 15: Proportion of those likely to experience major depression during COVID-19 pandemic waves**

Source: the author

These PHQ-2 findings show that an increasing number of participants (16%, 25%, 27% and 28%) reported symptoms emerging with such frequency that their overall PHQ-2 score was at least a 3, meaning that they likely had a major depressive disorder (Figure 15). Symptoms of depression were most frequent (and the likelihood of having depression the highest, with 19%, 40%, 45% and 43%) among those who shared photos or videos of themselves or close relations on Messenger at least once a day (Figure 16).



**Figure 16: Proportion of those likely to have major depression among respondents who shared photos or videos of themselves or close relations on Messenger at least once a day during COVID-19 pandemic waves**  
*Source: the author*

## Conclusion

All four parts of the hypothesis were confirmed by the results of the four-step data collection during the first, second, third and combined fourth and fifth COVID-19 waves in Hungary: (1) time spent on social media and (2) willingness to share self-representative content increased during the pandemic waves up until the fourth wave, and these changes were associated with (3) a growing risk of subjects' developing major depression during the first five waves and (4) an even higher risk among the most active sharers, based on the embedded PHQ-2 questionnaire.

The fact that more than a quarter of the total sample and more than two-fifths of the most active self-representative content sharers qualified for further examination due to the probability of having major depression raises serious public health concerns. It implies that mental health and conscientious social media usage should be prioritised in addressing the social-psychological consequences of pandemic-related lockdowns. The multidimensional societal impact of the COVID-19 crisis and social media use is worthy of further examination.

## Acknowledgment

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**(Footnotes)**

<sup>1</sup> social status: principal component using educational level, employment position transformed to an ordinal scale, and per capita income. Total variance explained: 51.3%

<sup>2</sup> work deprivation index: whether affected by dismissal, pay cut, reduction in working hours, unpaid leave



Földes Annamária

## Changes in the consumption habits of the Hungarian population since Covid-19

### **Abstract:**

In 2020, Covid-19 emerged in Hungary, marking it as a significant global crisis. This pandemic had a profound and continuous impact on various aspects of life, including health, daily routines, and the things we usually take for granted. The sudden disruption of these routines led to feelings of fear, uncertainty, and frustration amongst the population. Consequently, social and economic changes were either initiated or accelerated, ending the previous era of “happy peaceful times.” The absence of a clear “new normal” brought about panic and required constant responses in both daily life and the economic landscape. As a result, priorities, attitudes, behaviours, and responses to different situations continuously evolved. The pandemic led to the transformation of everyday life, requiring individuals, households, and workplaces to adapt their habits and functioning. While some changes were relatively easy to implement, others necessitated a return to fundamental principles. Data from Ipsos research in Hungary and globally, obtained through online surveys, offers insights into the permanent and ongoing changes experienced since March 2020 and highlights both local and global phenomena.

Covid-19 appeared in Hungary in 2020. Many believe that coronavirus was the biggest global crisis in living memory. From the beginning, it had a continuous impact on our lives, health, daily

functioning, everything we take for granted. In everyday life routines meant security. The coronavirus abruptly terminated this routine, creating fear, uncertainty, and frustration. The epidemic brought an end to the “happy peaceful times”; social and economic changes took root or accelerated. The panic caused by the lack of a “new normal” required a constant response in both our daily lives and the economic environment. At the same time, priorities, attitudes, behaviours, and responses to situations have changed continuously.

### **The article:**

Everyday life was transformed, habits had to be adapted at the level of the individual, and the functioning of households and workplaces were transformed too. Some changes were easily put in place, while a few measures had to start by going back to basics.

Data from March 2020 onwards seen on the following pages illustrate the changes experienced — how many were permanent and how many are still in progress. The data is from Ipsos research in Hungary and internationally, from online surveys, illustrating local and global phenomena. Each case represents the views of the population of the country by gender, age, region and type of settlement.

Let us jump back to mid-March 2020. In most of the countries surveyed, people believed the epidemic would be short-term, with initial measurements showing that in most countries people had the perception that life would return to normal by June (Ipsos Global Advisor survey, N= 28.000, adult population in xx country). More than 40% of Hungarians (Ipsos Omnibus survey, April 2020, N=1.000 persons/wave) hoped that we would have the virus behind us by June. In the meantime, we were quarantined with imposed curfews and health protection measures and awaited the summer. After the virus had not passed by June, people became more realistic/pessimistic. There was no way of knowing how long the situation would last, which adversely

affected people's mental health. Consumers had to cope, and companies had to manage the challenges in this new environment.

We continuously measured changes in consumer behaviour in 2020. Based on our data, we saw two groups of respondents distinguished by (1) general mood and well-being, (2) frequency of going out, and (3) consumption habits. These two groups were:

- 1. LESS CHEERFUL CONSUMERS WHO STAYED AT HOME AND HOARDED**
- 2. CONSUMERS WHO WERE IN A BETTER MOOD, WENT OUT AND DID NOT CHANGE THEIR CONSUMPTION**

It is clear that the phenomenon of hoarding is inversely proportional to subjective mood, i.e., the larger the excessive food purchase, the more negative the perception of general environment. These two groups also diverged along key demographic indicators. We found that hoarding three or more food items was more common among people living in the capital than in the villages. By educational attainment, the trend was that those with lower education tended to be more likely to have not bought more of anything than they had previously, i.e., the “non-hoarders” were less educated. As for differences by age, the proportion of respondents who self-reported having purchased larger quantities of three or more types of goods, rather than just one or two, was higher among respondents aged 18-29 than among older consumers aged 40-59 (Ipsos, CX tracking, 20. April 2020, N=3,500)

Service providers have tried to react quickly to the changed consumer environment. The winners were those who could at an early stage provide their customers with an omnichannel customer experience, i.e., the same service path and quality across all channels and devices. In addition to the channel, the content of services was tailored to pandemic needs, while staff protection was also a priority.

The desk research part of the Ipsos CX tracking survey in April showed that the very first measures included the following:

- Disinfectant placement
- Increasing the limit of contactless payments to reduce the use of cash
- Stickers and posters to raise awareness of social distancing
- Direct communication with customers about health and safety measures, changes in opening hours, and online/telephone services

*Some examples illustrate how the service content of each sector changed:*

- AUTOMOTIVE INDUSTRY:

For several brands, pickup and delivery service including disinfection became available almost immediately. This way, the customer did not have to leave their home, nor was the virus transmitted by way of the vehicle. Air conditioning became a preferred extra, online ordering started in many places, and legal barriers around self-driving cars started to be removed.

- HORECA:

Physical menus were replaced by a QR code and a menu written on the wall. Immune-boosting additives and vitamins were added to the meals to reduce anxiety. More restaurants started to deliver food and started offer local producer's goods who were serving them earlier. This would support eating in more during lockdown.

In elevators, it was indicated when it had been sanitised and the elevator buttons were replaced to have a smooth surface that could be easily disinfected.

- TELCO:

Free additional services appeared (free internet + minutes)

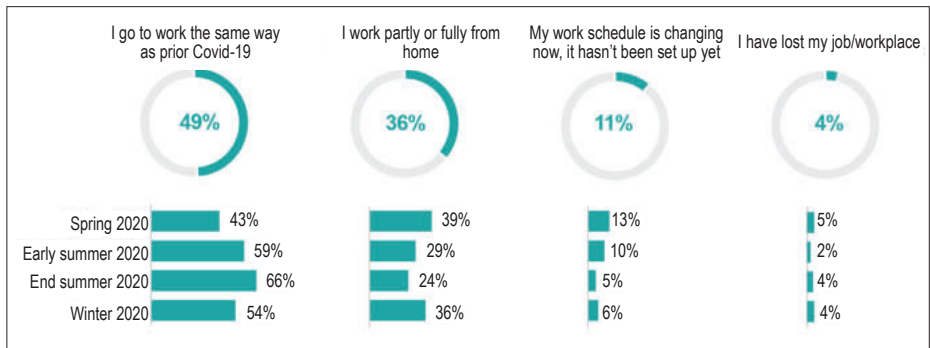
- ENTERTAINMENT:

Among live-streaming services were DJs (with sound and light effects), online concerts and theatre performances people could follow. There

were also local guides reporting live from tourist sites; people could even “participate” in sports and go to museums online.

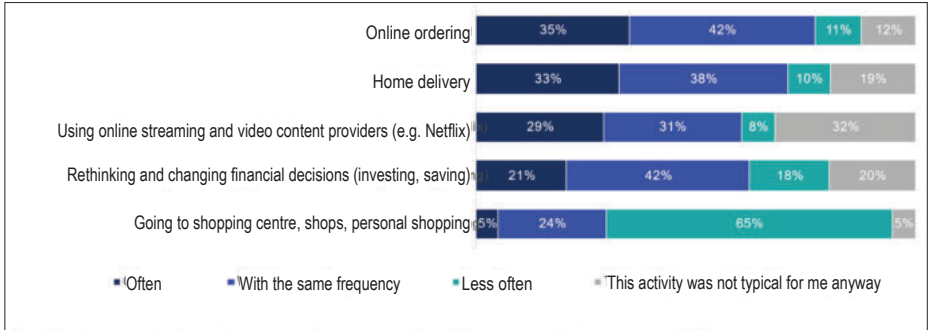
- **BEAUTY INDUSTRY:** Even many of the premium brands added disinfectant products to their portfolios. Online skin diagnostics were launched, online skin and hair care instructional videos were posted on the internet in large numbers, and experts from the companies taught people how to use professional products and tools at home.
- **FMCG:** It was a big realization early on during the epidemic that the routine of drinking coffee gives a sense of security and people associate it with being active at work. Not only did home coffee consumption increase significantly, but many people also bought coffee machines, often replacing the ones they had with better ones.

Thanks to curfew restrictions and health and safety measures by employers, home office, which used to be common in Hungary, has become available to a larger group of workers. The proportion of first and second wave commuters has remained almost unchanged.



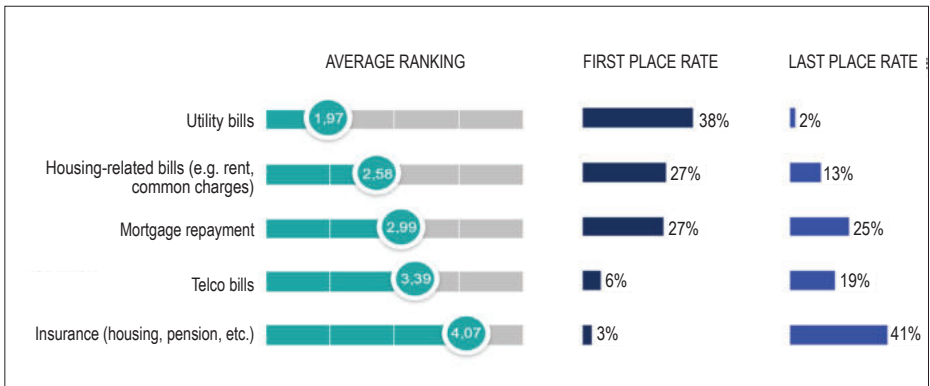
**Figure 1. Proportion of people working at home – Ipsos CX tracking survey, based on active working status, N=2.381 persons**

By December 2020, the financial awareness of Hungarians had also started to change, with nearly a quarter of the population becoming more focused on their finances.



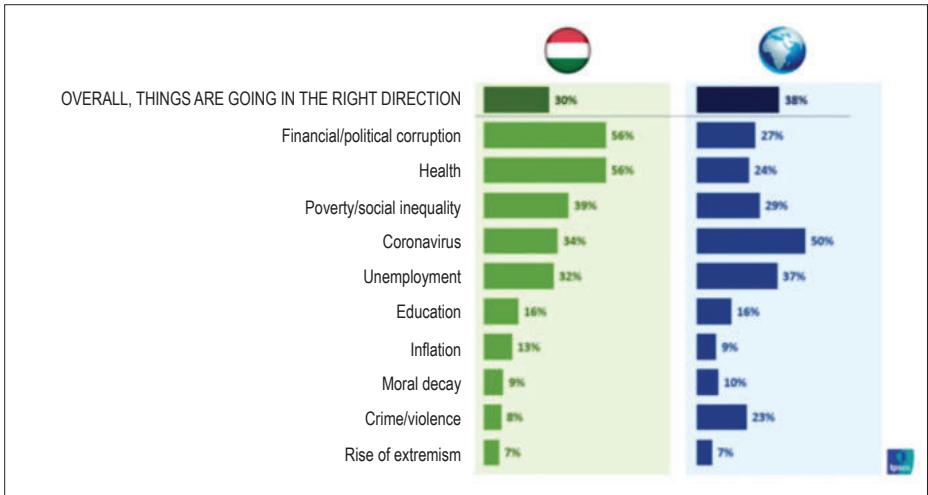
**Figure 2. Would you say you do the following activities more or less often than in recent weeks? Ipsos CX tracking survey, adult population, N=3.501 people**

While spending did not change significantly, priorities did; utility bills took priority alongside other housing-related bills in 2020, and also housing loan repayments.



**Figure 3. Paying utility bills is the top priority - Ipsos CX tracking survey, based on adult population, N=3.501 people**

At the end of the first year of the pandemic, the Hungarian population reacted to many situations very similarly to most countries in the world but showed significant differences in some areas. The fear of epidemics and unemployment no longer dominated, as in most countries in the world, but the fear of corruption and the state of the healthcare system.



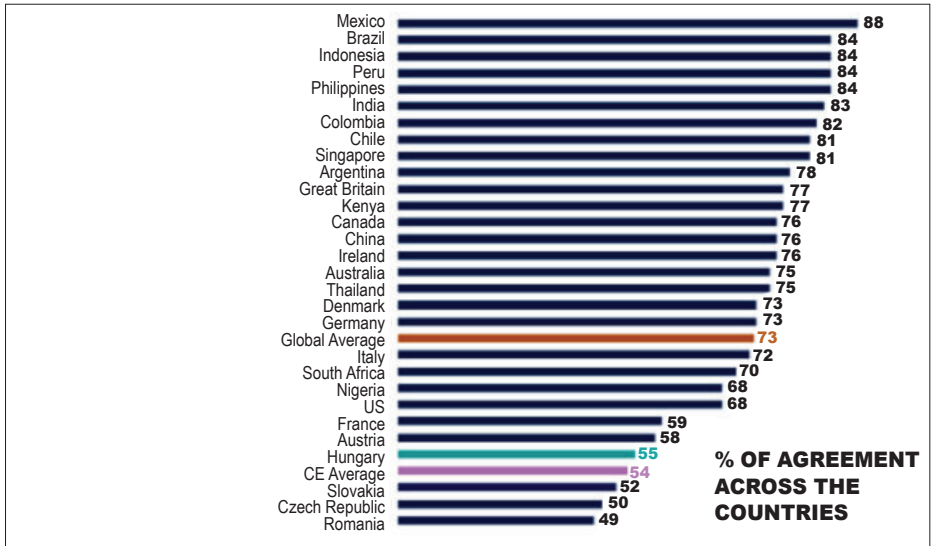
**Figure 4. What are our main fears - What Worries the World survey, January 2021, adult population, Hungary N=1.000 persons, total respondents: N=22.003 persons**

Before the advent of the Covid-19 vaccine, the main protection against the virus was vitamin D along with hygiene measures (wearing a face mask, disinfection, keeping distance) for adult Hungarian citizens. We trusted in that more than anyone else did in the world. According to 44% of Hungarians, increased intake of vitamin D reduces the risk of severe symptoms when infected with the disease. In contrast, the global average of people who believed this was 26% (*Diet and Health under Covid-19 Ipsos global survey, October-November 2020, based on adult population, Hungary: N=1,000 and total respondents N=22.003*).

When citizens of 30 countries were asked, only two countries agreed less on the importance of sports or reducing excess weight than Hungary. At the end of 2020, 29% of Hungarians believed that regular exercise could reduce the likelihood of developing serious symptoms. The global average was 38%, but the Chinese are worth highlighting with nearly 80% believing in the power of sport, followed by the Spanish and Italians right behind. As for the threat of obesity, a global average of 17%

and only 8% of Hungarians thought that reducing excess weight could reduce the severity of the disease if it became worse. Only Russians and Chinese were more sceptical about this.

What did we expect from 2021? The population of some countries expected rapid economic regeneration, while we Hungarians strengthened the camp of the average optimists according to a November 2020 survey. Three out of every 10 Hungarians expected a full economic recovery by 2021. Chinese optimism was overwhelming with over 90% having positive expectations for 2021, while the British, Belgians and French barely saw the reality of this at 10%.



**Figure 5. I believe all recommended vaccines are beneficial for me and my family, October 2021 Ipsos Global Trends Series: 500-1,000 adults aged 16-75 (18-75 in US and CA) per market per year**

Looking back at 2021, they were right. The epidemic came in several new waves with a more lasting impact on societies and economies. Change became permanent, and society faced many other challenges.

The pandemic accelerated digitization, which the country was not



necessarily prepared for. It gave service providers the opportunity to gain a competitive advantage with an easy-to-use digital solution while also dividing society along the lines of info-communication skills. The automotive industry suffered another big hit after the 2008 economic crisis due to supply chain disruptions, but it also accelerated e-mobility, community car sharing and micro-mobility.

Health prevention became more prominent, the consumption of seasonal vegetables and fruits increased, and consumers started to prefer locally bought products — not only for health consciousness but also to save local businesses. Curfew restrictions during the pandemic meant that buying locally was the only option, and this in turn boosted purchases from small local producers and also saved them from going out of business.

Climate concerns stimulated the use of renewable energy by the public, and fellow citizens have been watching with excitement the impact of lobbying by different sectors.

Ever-changing systems of rules have exhausted and polarized people. Social isolation and online dependence increased people's vulnerability to disinformation and propaganda. Relations with and trust in the authorities became fragile.

Hungary's immediate geographical environment was politically charged, and political relations became fragile in neighbouring countries. If we look at the economic impact, record high inflation is the first issue people will think of. Increasing energy costs and supply chain difficulties limited production, and rising house prices were a social and political time bomb.

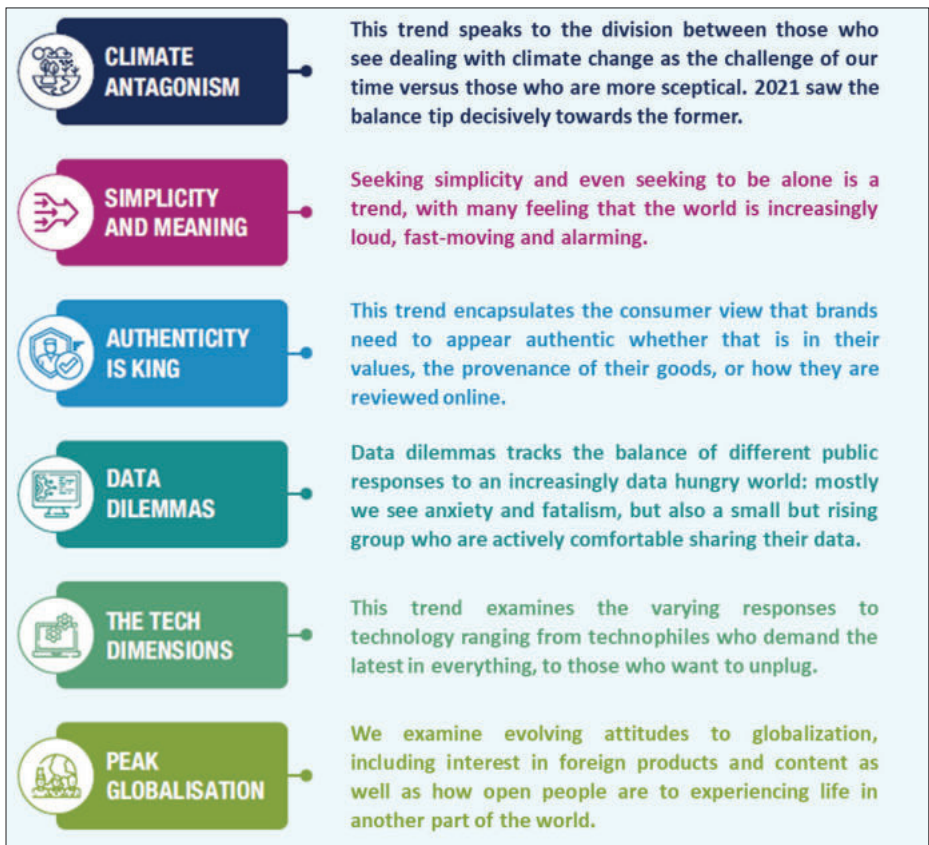
Every year for more than 20 years, Ipsos has identified the most important trends of the period in its Global Trends study, the topics and areas of most concern to the public and the attitudinal changes that drive them.

The study asks citizens in 29 markets around the world about their lives and their attitudes to vital global issues such as climate change,

globalization, technology, data & privacy, the economy and Covid. It focuses on 12 global trends and seeks to understand how they are shifting. (*Ipsos Global Trends Series: 500-1,000 adults aged 16-75 (18-75 in US and CA) per market per year, October 2021*)

What were these trends that shape the political economic, and social environment after the second year of Covid-19? The following classification was part of the Global Trends Report prepared by Ipsos.





Let us discuss these trends in detail

**CLIMATE ANTAGONISM:**

Climate change as a challenge represents the top theme in global trends. Hungarians are concerned with environmental threats (87%), with the most from Central European (CE) countries and above the global average (85%). The younger generation especially supports this topic. Products, services and innovations aimed at the younger generation typically bear some link to being “green“. Also, the level of scepticism toward environmental science is higher among them than the global average (54% vs 46%). Even the scientists don't really know what they are talking about on environmental issues. Scepticism to environmental science is spread in the population with the exception of people with higher education.

**CHOICES ABOUT HEALTHCARE:**

Faith in vaccines has been shaken by Covid. People in Hungary became divided in their opinion on vaccines. Hungarians share very sceptical views as well as the whole of the Central European region.

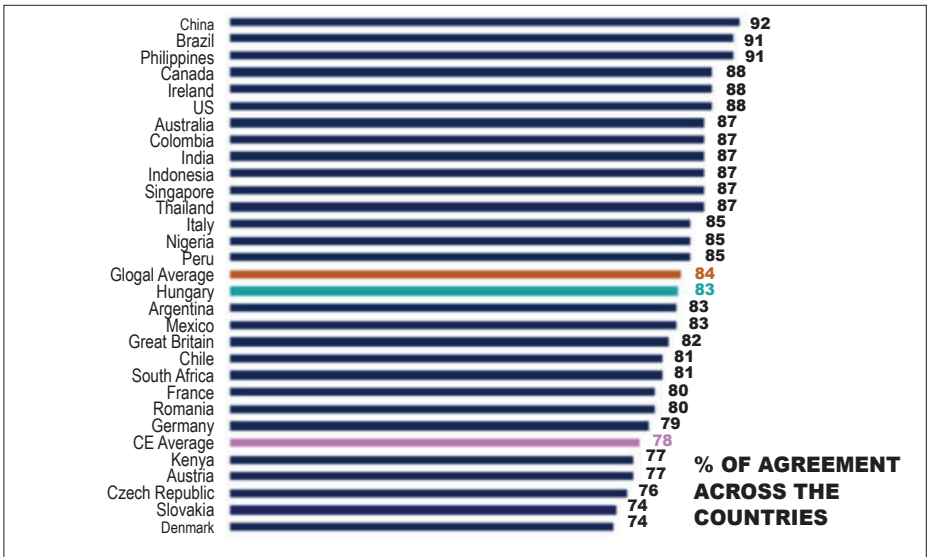
**PEAK GLOBALISATION?**

Views of globalisation continue to improve over time in major markets. (+10 ppt in China, +14 ppt in Britain, + 13 ppt in the US, +12 ppt in France according to *Ipsos Global Trends Series: 500-1,000 adults aged 16-75 (18-75 in US and CA) per market per year*) Europeans are generally far less optimistic that globalisation is good for their countries. Hungary belongs to the more sceptical countries (global average 64% vs Hungary 46%). Businesses should carefully consider how to tackle globalisation issues and how to present their value propositions to the general public. Local or global perception of brands could be an important factor when it comes to customer decisions.

## AUTHENTICITY IS KING:

Brands need to appear authentic in their values, the provenance of their goods, and how they are reviewed online. The importance of brand purpose has risen significantly in big markets over the years. Hungarians are already relatively willing to pay a premium for it.

Online recommendations are trusted by almost three-quarters of people among the surveyed population, more than in other CE countries. These shouldn't be underestimated in Hungary. Brand values have to be consistently communicated. Cost advantages and convenience still remain key, but people in Hungary are already ready to pay more for brands with certain values. People globally agree to a large extent that a brand can support a good cause and make money at the same time, with Hungary no exception.



**Figure 6. It is possible for a brand to support a good cause and make money at the same time, October 2021 Ipsos Global Trends Series: 500-1,000 adults aged 16-75 (18-75 in US and CA) per market per year**

## REACTIONS TO UNCERTAINTY AND INEQUALITY:

The world feels more dangerous and unequal than ever. There are tendencies towards populism and a retreat to nationalism and tradition. The world today is changing too fast, especially for older generations. Many societies are more and more divided – France (90%) and US (89%) rank very high for this trend. Hungary, at 84%, is also above the global and CE average (81%).

The immigration question is one of the divisive topics in Hungarian society; however, problems with the number of migrants spring up all over the world. Austria signals the biggest problem from European countries (64%). Hungarians are in line with the CE average at 49%.

**A DIVIDED WORLD?** The importance of personal values and ethics is high in Hungary. A less responsible lifestyle (preferring today's opportunities and not caring much about the future) is not so popular. Tolerance of sexual minorities is at a high level in the majority of Hungarian society (Hungary 74% vs global average 77%). Tolerance exists in all groups of society, although people with high education are even more tolerant.

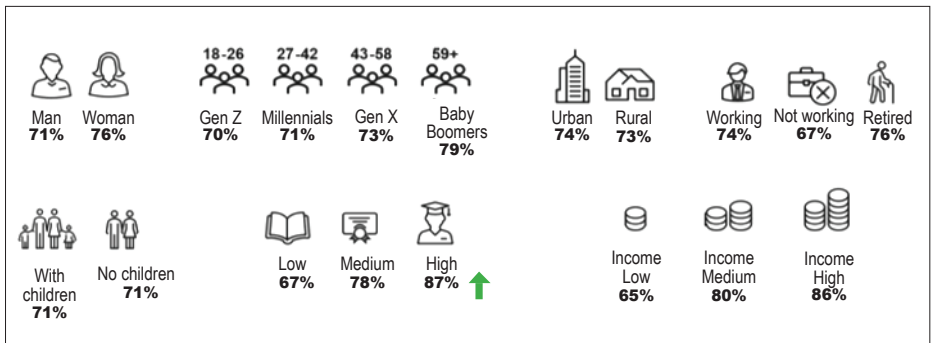
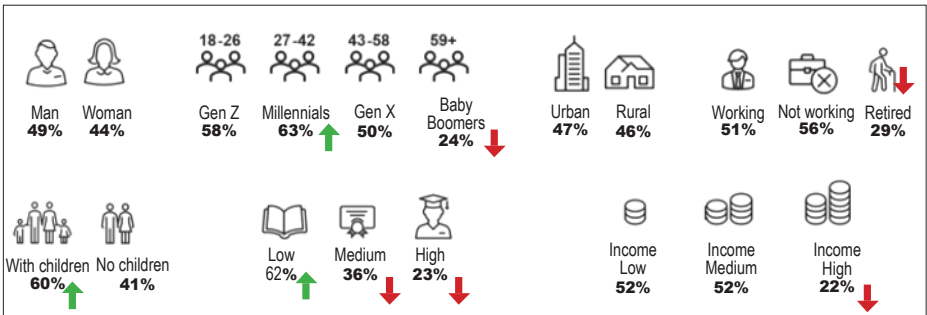


Figure 7. **Q. Transgender men and women should be free to live their lives as they wish, Ipsos Global Trends Hungary, N=500, October 2021**

**THE ENDURING APPEAL OF NOSTALGIA:**

A **higher** level of nostalgia is typical for post-communist countries in the CE region (60% on average) and to a much less degree in Austria (53%). China feels almost no nostalgia at all (24%). Nostalgia is felt more by people with lower income or without children. Nostalgia-based business concepts could be successfully utilized in several markets in Europe. When it comes to age, elderly people are below average for this trend – they still remember the atrocities of the past.



*Figure 8. Q Given the choice, I would prefer to have grown up at the time when my parents were children, Ipsos Global Trends Hungary, N=500, October 2021*

**SEARCH FOR SIMPLICITY AND MEANING:**

Many people feel that the world is increasingly loud, fast-moving and alarming. A desire for a simpler lifestyle is ever-present around the world but to different degrees. This topic strongly resonates in the population of Hungary. Hungary sits almost on top of the list, with 88% of the adult population wishing to have a more simple life. This is one of the unifying themes in Hungarian society.

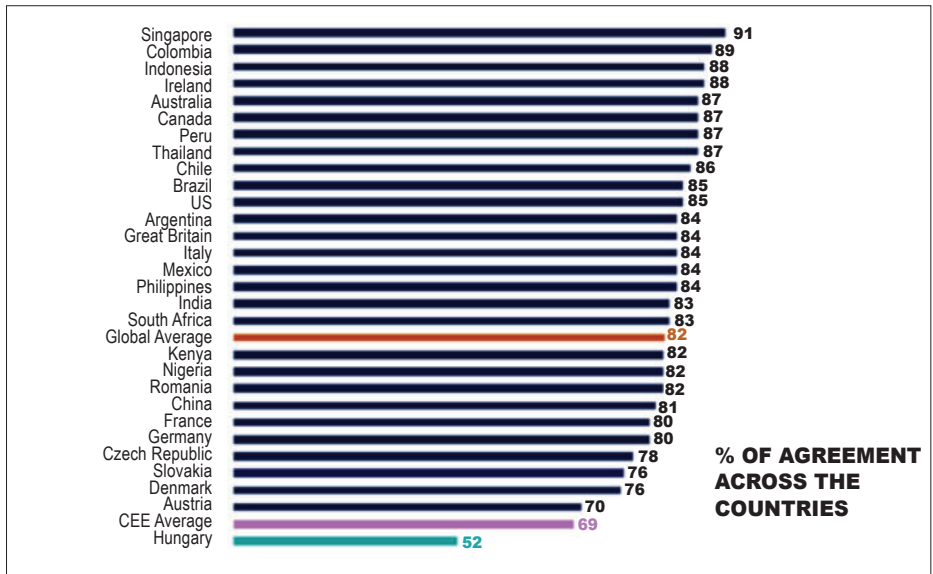
**THE TECH DIMENSION:**

Opposition against the power of social media is one of the strongest and most unifying themes around the world. Fear of technological progress

being made too rapidly is also strong in Hungary. The whole CE area (33%) is behind the global average (44%) in the number of early adopters. It is interesting to note, however, that Hungarians tend to try out new things earlier (37%) than our neighbouring countries. The highest number of early adopters live in India (70%) and South Africa (63%)

### DATA DILEMMAS:

People in Hungary are concerned with their data privacy more than those living elsewhere. They don't want to reconcile that modern life means less privacy online. Almost two-thirds of people are also concerned about how information collected online is being used by the government. Personal data care and safety is an absolute must in the region. The digitalization of public services could advance less quickly due to mistrust and concerns.



**Figure 9. Q. It is inevitable that we will all lose some privacy in the future because of what new technology can do, October 2021 Ipsos Global Trends Series: 500-1,000 adults aged 16-75 (18-75 in US and CA) per market per year**



**CAPITALISM’S TURNING POINT:**

Egalitarianism is strong in Central Europe as well as in many other European countries. Three-quarters of the people in Hungary believe that having large differences in income and wealth is bad for society overall. Achieving a prominent position is a strong factor mainly outside of Europe. Hungarians are closer to the average than people in Czechia or Slovakia. Four out of 10 Hungarians say that fulfilment in life depends on achieving a prominent position in your career.

Trust in business leaders is rather low in many countries, including Hungary (30% vs global average 37%). On the contrary, more than 60% of the population of Hungary trusts that leaders have a responsibility to speak out on social and political issues affecting our country. More than half of our population also trusts that businesses care for the environment.

**CONSCIENTIOUS HEALTH:**

People actively think about their health and generally agree that they need to do more to look after themselves physically. Seven out of 10 people in Hungary are ready to sacrifice convenience in order to get healthier products, above the CE average (71% vs 64%). People from all walks of life in Hungary agree that they have to do more to look after themselves.

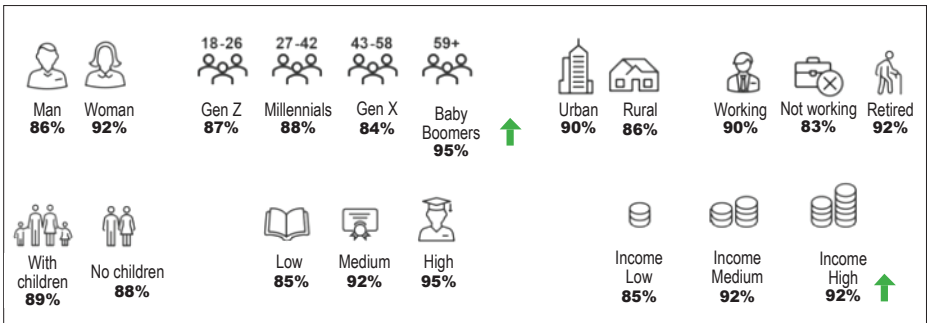
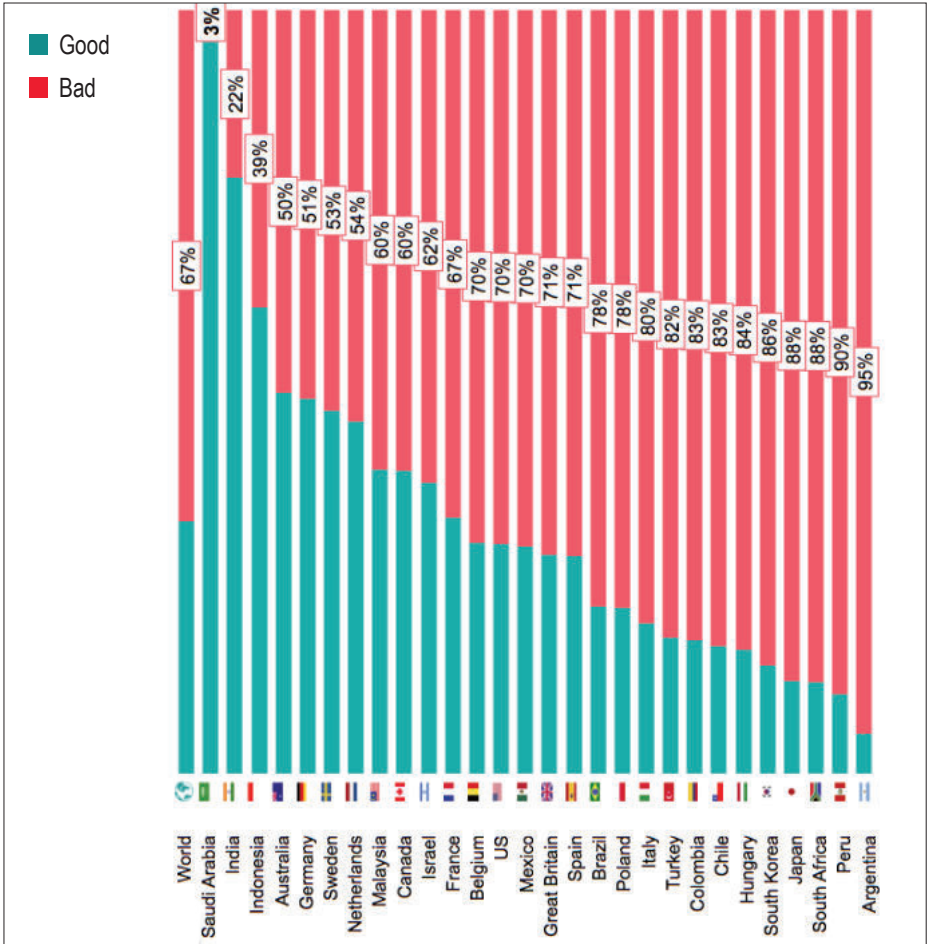


Figure 10. Q. I have to do more to look after myself Ipsos Global Trends Hungary, N=500, October 2021

Where are we now in August 2022? One in two (50%) in Japan consider the pandemic to be a top worry, the first time a country has had a level of concern around 50% since March. After two months of coronavirus not being a top worry in any country, it is now the number one in Japan. (Ipsos What Worries the World survey, August 2022, N=19,508)

Concerns about inflation have risen for the 13th consecutive month, and it is the number one global concern for the fifth month in a row. On average globally, almost four in 10 (39%) say inflation is a top issue facing their country. Across 28 countries, a third of people say the current economic situation in their country is good (33%), while two-thirds say it is bad (67%). As for Hungary, the study shows that the greatest threats are inflation (52%), poverty and social inequality (47%), and financial and political corruption (45%) (Ipsos What Worries the World survey, August 2022, N=19,508)



**Figure 11. Q: How would you describe the current economic situation in your country? Global Advisor series, August 2022 N= 19,508 adults aged 16-74 in 28 participating countries (p163)**

All of this data would suggest that consumers across the world had to change their daily habits to protect themselves and their immediate surrounding due to the coronavirus. They became less concerned about certain causes like the environmental impact of their behaviour, their health became less important, and their focus turned to inflation and the economic situation. There is no such thing as a new consumer behaviour, but instead a continuous change in everyday habits.