Shifts in Emancipative Values during Times of Crises:
Longitudinal Evidence from the Covid-19 Pandemic in Russia

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Abstract

This study explores the dynamics of emancipative value orientations (EV) in Russia throughout the course of the COVID-19 pandemic, using data for the period from June 2020 until December 2021 based on three panel waves of the international longitudinal survey "Values in Crisis". Despite the profound impact that the pandemic has had on Russian society, we don't find any substantial decline in EV among our sample, in line with the "baseline stability theorem" in value research. However, we observe opposite trends for two components of EV: mean scores on choice values have been negligibly increasing over time, whereas the scores on equality values have been negligibly decreasing. Also, in line with the "baseline stability theorem", we interpret these subtle value shifts as a periodic situational adjustment to Corona-specific infringements into people's daily lives. As for within-individual dynamics, such indicators of the personal pandemic experience as (1) encountering the disease personally or in family; (2) losing a job/business, or (3) health-related anxiety, do not have any effect on choice values, although we find a weak positive association between equality values and (4) worries about a potential economic recession. In addition, latent growth mixture modelling suggests that considerable changes in EV occurred only among a very small fraction of the population (about 2% of the panel sample). Overall, our results are the first to demonstrate that the "baseline stability theorem" in value research holds even in the face of a most dramatic external shock, with radically new threats to the economic sustenance and physical health of everyone.

Keywords: emancipative values; COVID-19 pandemic; modernization theory; Values in Crisis

The COVID-19 pandemic has caused large-scale social changes and a decline in living standards all over the world. The number of infections exceeded hundreds of millions worldwide; several million people died, and many of those who survived did not fully recover. Almost all countries faced an economic downturn, as well as an increase in unemployment, inequality, and poverty. Moreover, the uncertainty generated by the rapid spread of a new, simultaneously highly contagious and lethal infection (Lai et al., 2020; Shereen et al., 2020), skyrocketed the levels of anxiety and depression (Choi et al., 2020; Fazeli et al., 2020; Nochaiwong et al., 2021). Social restrictions and massive lifestyle changes introduced due to the pandemic depressed people's psychological well-being (Heo et al., 2021; Koopmann et al., 2021; Zhao et al., 2020, but see: Delhey, Hess & Welzel et al. 2023).

Furthermore, the pandemic has affected life priorities and value orientations of the population. Such evidence exists, for example, for Schwartz's basic values (Schwartz, 2007), which are generally sensitive to crisis situations (for more details see Daniel et al., 2013; Sortheix et al., 2019). Recent studies suggest an increase in the prevalence of conservation and tradition values (Bonetto et al., 2021; Bojanowska et al., 2021), and a decrease in the prevalence of self-enhancement (Aschauer et al. 2022, Daniel et al., 2021), openness to change (Bonetto et al., 2021), and self-transcendence (Daniel et al., 2021) during the initial stage of the pandemic.

At the same time, there is little evidence regarding the effect of the pandemic on another important type of value orientations, namely emancipative values (Akaliyski et al. 2023 is a rare exception). This concept of values continues a lineage from postmaterialist to self-expression values, with a joint emphasis on valuing freedom of choice and equality of opportunities — in short: human emancipation (Inglehart, 1971, 2015; Inglehart & Welzel 2005; Welzel 2013, 2014). From the viewpoint of Inglehart and Welzel's "revised modernization theory" and its extension into Welzel's "evolutionary emancipation theory", rising emancipative values mirror the society-level shift from historically prevalent materialistic and survival orientations to a growing emphasis on self-expression, personal freedom and equal opportunities stimulated by steady economic development, an increase in existential security, rising life expectancies and expanding education in most regions of the world since the end of WWII. According to this theory's "baseline stability theorem", individual value orientations develop during people's formative years and crystallize around the ages 20-25 to remain rather stable

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throughout the rest of the life course. Robustness of value orientations, however, does not foreclose short-term shifts in response to situational changes, such that people's emancipative orientations decline to some degree under more pressing circumstances while they incline to a certain extent under more permissive circumstances. Yet, these situational value adjustments within individuals' life course are not lasting and relatively minor in scope, remaining centered on stable baselines that last throughout people's life course once their formative phase of socialization is finalized[1] (Welzel 2006, Inglehart, 2016; Inglehart & Norris, 2017).

To date, however, this theorem has only been confirmed (albeit mostly at the aggregate level) within the regular economic cycles that make existential conditions recurrently somewhat more pressing/permissive. In other words, the "modest shift postulate" has rarely been tested in the context of disruptive external shocks that pose a sudden threat to everyone's living standard, livability, and life. The COVID-19 pandemic is an exemplary instance of such a pervasive shock, since it has posed a direct threat to existential security and stunted economic development all over the world, thereby creating the conditions prompting the reversal of the cultural modernization process. Thus, the question arises naturally whether the "modest shift postulate" still holds or whether the shifts in emancipative values are more far-ranging in scope when the external shock is big enough.

To answer this question, our study examines the dynamics of emancipative values, including individual trajectories in value shifts during the COVID-19 pandemic. For this purpose, we leverage the data from three waves of the 'Values in Crisis' survey (VIC, an international longitudinal online study aimed at the exploration of the societal effects of the pandemic), conducted in Russia, which was severely hit by COVID-19, from June 2020 till December 2021. Our results confirm in surprising clarity the "modest shift postulate", showing hardly any significant shifts in emancipative values during the period, neither in terms of the average prevalence of emancipative values among our respondents nor at the individual level.

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[1] Welzel (2006: 199) provides a neat depiction of this general logic: (1) When economic conditions become more pressing/permissive, individuals' emancipative values decrease/increase correspondingly. (2) These situational adjustments fluctuate around stable cohort-specific baselines. (3) Each cohort-specific baseline follows a modest but steady upward slope, reflecting improving living conditions throughout individuals' life course.

Previous Research

Emancipative Values and Cultural Modernization

The concept of emancipative values refers to the importance of freedom of choice and equality of opportunities for individuals or entire communities (Welzel, 2013, 2014). This term was proposed by Welzel as a refinement of the "revised modernization theory" developed by Inglehart (1971, 2015), now portrayed as "evolutionary emancipation theory". This theory asserts that, being an intelligent species capable of self-determination, humans naturally strive for individual life control, which implies a deep-seated appreciation of freedoms. Yet, this emancipatory drive is functionally adaptable to external circumstances beyond individuals' control, thus remaining dormant under pressing existential conditions that make life a source of threats and only awakening under permissive existential conditions that turn life into a source of opportunities. Hence, as progressing socioeconomic modernization gradually transforms the nature of life from a source of threats into a source of opportunities, value orientations shift in accordance with this threat-to-opportunity transition in existential conditions. This way, prevailing value orientations themselves provide a key marker of social development, the progression of which is visible in the extent to which prevailing value orientations have shifted from survival values, which focus on material sustenance and physical security, to emancipative values, which prioritize freedom of choice, equality of opportunities (Welzel, 2013; Inglehart & Baker, 2000; Inglehart & Welzel, 2005; Inglehart, 2018) and altruistic individualism (Kaasa & Welzel 2023; Kaasa & Minkov 2022). Welzel identifies four main domains of emancipative values: the priority of personal independence ("autonomy"), freedom of speech and political participation ("voice"), sexual and reproductive freedom ("choice") and gender equality ("equality").

The values of a single individual are determined primarily by the conditions of life at the time of their adolescence, or *formative*, years (the so-called "socialization hypothesis"). If the overall level of well-being was low during person's childhood and adolescence, this person is more likely to adopt survival values (the so-called "deficit hypothesis"). By contrast, those people who grow up in better conditions do not need to worry about physical survival daily, so they appreciate the intangible aspects of quality of life to a greater extent. Because of this, such things as equality, personal freedom, human rights, and democracy become more important for them than immediate survival concerns (Inglehart,

2015). These attitudinal changes refer to the "utility ladder of freedoms": upon reaching a certain level of economic development, universal freedoms become a more beneficial "asset" in exploiting life's grown opportunities for self-realization, and therefore they become more appealing for a larger number of people (Welzel, 2013).

The theory of modernization/emancipation in the Inglehart–Welzel version suggests that with the growth of well-being in society, the average level of support for emancipative values should also increase. As for the stability/variability of individual social values, the "baseline stability" (or "modest shift") theorem posits that they remain stable throughout the life course (Inglehart & Welzel, 2010; Brunkert, Kruse, & Welzel, 2019). However, few empirical studies focus on this issue (van Deth, 1983; Duch & Taylor, 1993); thus, the degree of stability of emancipative values in times of deteriorating living conditions also remains unclear, especially when disruptive external shocks cause a sudden and ubiquitous incision into people's daily living conditions.

Against this backdrop, the COVID-19 pandemic allows us to study how a large-scale social and economic shock affects the prevalence of emancipative values on both the societal and the individual levels. Some recent studies observed a decline in emancipative orientations (Akaliyski et al., 2023), an significant rise of institutional trust (Delhey et al., 2023; Reeskens et al., 2021), and specifically of confidence in political authority (Foa & Welzel, 2023), an increase in conservation values (Bojanowska et al., 2021; Daniel et al., 2022; Vecchione, 2022), and a decrease in Schwartz's openness to change and self-transcendence values[2] (Bonetto et al., 2021; Daniel et al., 2022) during the pandemic. Based on this, we expect that the pandemic led to a decrease in the average prevalence of emancipative values in Russia, and personal negative experience during the pandemic could lead to a decline in individual support for emancipative value orientations among the Russian population. The critical question is whether the scope of these decreases matches the severity of the Corona shock or whether the respective shifts remain so modest that the baseline stability theorem is reconfirmed within a more conclusive test setting than ever before.

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[2] Both correlate with emancipative values (Dobewall & Rudnev, 2014; Welzel 2013: 204, Figure 6.2)

COVID-19 in Russia

The first cases of COVID-19 in Russia were reported at the end of January 2020. Since then, based on official statistics, more than 22.5 million people have been infected; more than 390 thousand have died[3]. At the same time, researchers report a 17% increase in mortality (Druzhinin, Molchanova, & Podlevskih, 2021), as well as find around 0.5 m. of excess deaths (Karlinsky & Kobak, 2021; Scherbov et al., 2022) already in the first year of the pandemic. Later estimates suggest that almost 1,3 million excess deaths (880,7 deaths per 100,000 population) had occurred in Russia since the start of the pandemic by September 2023, which is the second-largest death toll among all countries with 500K+ population in the world, behind only the USA. The death toll per 100K in Russia is the third-largest in the world, behind only Bulgaria and Lithuania[4]. In addition to enormous excess mortality, the pandemic brought about other negative demographic changes, such as delayed childbearing (Kazenin, 2022) and decline in birth rates (Sobotka et al., 2023).

Recent research also indicates growing income inequality (Freije, Matytsin, & Popova, 2023), unemployment, and shutdown of small and medium-sized businesses (Otrachshenko et al., 2022; Zemtsov et al., 2022). In particular, the crisis has affected the well-being of women, since they made up the majority of those employed in the economic sectors most severely stricken by the pandemic (Bluedorn et al., 2023; Kartzeva & Kuznetsova, 2022). In addition, the level of domestic violence, most of which inflicted on women, has increased (Pisklakova-Parker & Efanova, 2021).

Social and economic difficulties have affected the mental state of many Russians: concerns about the consequences of the pandemic for health and economic well-being became widespread (Konstantinov et al., 2022; Reshetnikov et al., 2020). Overall, abrupt changes in social and economic life induced by the COVID-19 pandemic in Russia have created conditions that, from a theoretical standpoint, lead to a decline in the support for emancipative values.

To sum up, Russia appears as a quite relevant case to study the effect of the pandemic on value orientations which have been theorized to be potentially sensitive to the changes in the levels of

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[3] According to the Ministry of Health and Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing: https://xn--80aesfpebagmfblc0a.xn--p1ai/

[4] According to Dmitry Kobak's estimates available at GitHub: https://github.com/dkobak/excess-mortality (see the *Excess mortality in Russia* section and Kobak (2021) for the details on methodology).

individual and societal well-being, as the COVID-19 has had a huge impact on health and life conditions in the country and triggered massive socio-economic and demographic changes. Overall, the prevalence of emancipative values in Russia was medium before the onset of the pandemic, with equality values being relatively more widespread than choice values (Inglehart 2018, Almakaeva & Mavletova 2018), In addition, there is some evidence that several issues that belong to the domain of emancipative values, are in fact quite salient in the Russian society and public opinion regarding those issues is quite polarized: for instance, attitudes toward abortion (Mason, 2019) and homosexuality (Edenborg, 2023).

Data and Methods

To analyze the changes in the support for emancipative values we use the data from three waves of the 'Values in crisis' (VIC) survey for Russia. 'Values in Crisis' is a cross-national panel online survey aimed to capture various social consequences of the COVID-19 pandemic. Particularly, the survey focuses on the change (or the lack of thereof) in value orientations during the pandemic (Aschauer et al., 2021). Data for all three waves of the VIC in Russia were collected via an online opt-in panel operated by the polling organization Online Marketing Intelligence (OMI). Quota sampling by gender and age group (according to the then-latest national Census conducted in 2010) was employed. The first wave of VIC was conducted in June 2020 with 1,527 respondents (Ponarin et al., 2021a), the second wave - in April – May 2021 with 1,169 respondents (Ponarin et al., 2021b), and the third wave - in November – December 2021 with 1,203 respondents (Ponarin et al., 2023). The participation rate wass 2.01% in wave 1, 4.30% in wave 2, and 9.96% in wave 3; drop off rate was 8.03% in wave 1, 8.64% in wave 2, and 8.16% in wave 3. A considerable number of initial participants withdrew from the survey after waves 1 and 2 (35.95% after wave 1, and another 19.22% after wave 2). Dropped-out participants were replaced with new respondents to maintain the established quotas. As for the balanced panel, the total number of respondents who participated in all three waves of the survey was 737. Women, younger respondents, and respondents with lower levels of education were more likely to drop out of the panel (more detailed analysis of the panel attrition patterns in the VIC data is presented in the Appendix 2).

In the VIC questionnaire choice values were measured using items reflecting the respondents' opinions about the overall justifiability of homosexuality, abortion, and divorce. Equality values[5] were measured as the attitudes to gender equality in the labor market, politics, and education. Choice items were 10-point ordinal scales (with 1 meaning '*never justifiable*' and 10 meaning '*always justifiable*'), whereas equality items were 4-point ordinal scales (1 – '*strongly agree*'; 4 – '*strongly disagree*'). We computed individual scores on both constructs using composite indices created as average raw scores over the respective items. To ease interpretation, we transformed the scales of both composite measures and individual items so that they vary between 0 and 1, where 0 corresponds to the least emancipative position and 1 corresponds to the most emancipative one.

In the subsequent analyses, we also include variables that measure various facets of respondents' negative experience during the COVID-19 pandemic. We consider both actual negative experiences as well as the anticipation of such negative experiences. We assume that the respondent had a COVID-19 experience if they or people close to them[6] had 'received a positive test result', 'had mild or moderate symptoms of COVID-19', or 'had severe symptoms of COVID-19'. Further, we assume that the respondent had a negative job market experience if they had 'lost a job', 'lost their business', or 'had to work part-time'. Importantly, those survey items asked whether a respondent had a negative health- or job-related experience during the period since the latest previous wave, not whether they had ever had such an experience since the beginning of the pandemic (i.e., both are wave-specific measures of the pandemic experience, not cumulative measures). Regarding prospective negative effects of the pandemic, both health- and job-related concerns were measured using a 5-point Likert scale (1 – '*not concerned at all*', 5 – '*concerned a lot*').

Further, we account for the socio-demographic characteristics of the respondents, such as gender, age, education, income, and area of residence. The initially recorded educational levels were grouped into 2 categories – '*tertiary education*' and '*no tertiary education*'. The survey item recording

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[5] VIC data provides information about other types of values, for instance materialist/postmaterialist values. However, we opt for looking only at choice and equality values because of their better measurement properties (Sokolov, 2018).

[6] We compared the trends in value orientations of those who experiences COVID-19 personally and those who only had afflicted relatives and found no significant differences (see Appendix 4).

the area of residence was only asked in the first wave of the VIC, therefore, the missing values for the second and third waves were filled using the responses from the first wave. This variable was also grouped into two categories, namely, '*urban*' and '*rural*' area[7]. Income was calculated by dividing the reported household income by the number of people in the household. Accordingly, the respondents were grouped into 4 quartiles of income based on that variable' distribution in wave 1 of the survey.

We employ various exploratory analyses and multilevel regression to examine the group-level and individual-level trends in support for choice and equality values, as well as multivariate "latent class linear mixed modelling" (Proust-Lima, Philipps, and Liquet, 2017), to identify groups of individuals with similar trajectories of value shift during the pandemic.

Data Analysis

Socio-demographic Characteristics

As a start, we compare socio-demographic coverage of the VIC to the respective population benchmarks from the 2010 All-Russian Census (see Appendix 1 in the Supplemental material; henceforth, SM). The VIC data oversamples people with tertiary education, those living in urban areas, and the middle age group 55-64; likewise, it undersamples younger (age group 18-24) and senior (65+) age groups. Gender proportions do not significantly deviate from the Census data in the first wave of the VIC. Yet, due to attrition the share of women in the balanced panel is considerably lower (see Appendix 2 in SM).

Table 1 illustrates the distributions of the responses to the survey items on concerns about the negative effects of COVID-19 on health and jobs, as well as personal experiences with those two concerns. Most of the respondents indicate relatively high levels of concern (3.7–4.1 on a 1 – 5 scale) about potentially threatening effects of the pandemic, with a negligible lead of economic over health concerns. As for pandemic experience, in wave 1 about 20% faced job market difficulties. The share of such respondents declines to about 15% in wave 3. On the contrary, more respondents report a negative

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[7] Since education and area of residence are only used as control variables, we dichotomize them to simplify visualization.

health experience with the COVID-19 infection as the pandemic progresses: the respective share

skyrockets from just about 13% in wave 1 to about 52% in wave 2 and 62% in wave 3[8].

Table 1

Concerns about negative effects of COVID-19 pandemic and the pandemic experience by wave.

	W1*	W2	W3	P1	P2	P3
Concerns about health	3.7	3.8	3.9	3.7	3.8	3.9
	(3.6-3.8)	(3.7-3.8)	(3.8-4.0)	(3.6-3.8)	(3.7-3.8)	(3.8-4.0)
Concerns about economic recession	4.1	3.9	4.0	4.0	3.9	4.0
	(4.0-4.1)	(3.8-4.0)	(3.9-4.1)	(3.9-4.1)	(3.8-4.0)	(3.9-4.1)
COVID-19 experience (%)	12.9	52.2	61.8	12.8	50.6	58.6
	(11.3-14.7)	(49.3-55.1)	(59.0-64.6)	(10.4-15.4)	(46.9-54.3)	(55.0-62.2)
Negative economic experience (%)	21.9	19.2	15.2	19.8	18.7	14.5
	(19.8-24.0)	(16.9-21.5)	(13.2-17.4)	(17.0-22.9)	(16.0-21.7)	(12.1-17.3)

Note: *Entries are sample means/proportions (with 95% CIs in parentheses) *W1, W2, W3 – pooled data (all respondents), P1, P2, P3 – balanced panel

Aggregate trends

Table 2 presents the mean scores on the six VIC items measuring choice and equality values

across the waves[9], both for full wave-specific samples and for the panel respondents only. The mean

scores for the full samples in waves 2 and 3 are compared to the scores in wave 1 using t-test for partially

paired data[10], a so-called "p-value pooling test" (Qi, Yan & Tian, 2022). The scores remain fairly stable

throughout the survey with two exceptions. Attitudes toward abortion become more favorable in later

waves: the mean score for the full sample increases by 0.04 (on a 0 – 1 scale) between waves 1 and 2,

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[8] The shares of VIC respondents with COVID-19 experience in wave 1 resemble the shares estimated in population-based seroprevalence studies, conducted in St. Petersburg, the second-largest Russian city, in 2020-2021 (Barchuk et al., 2021, Barchuk et al., 2022). The estimated share of those who previously contracted COVID-19 is around 9.7% (95% CI: 7.7–11.7) in these studies. In February-April 2021 (around the time of the VIC wave 2 data collection) the estimated share is lower (43.9% with 95% CI 39.7–48.0) than that in the VIC; however, the VIC data captures the experiences of not only the respondents themselves but also their relatives, which may lead to a greater share of those who report having COVID-19 experience.

[9] We checked configural, metric, scalar, and strict longitudinal measurement invariance of choice and equality values across the waves (using a two-factor longitudinal confirmatory model) and found that all levels of measurement invariance hold in the balanced panel, so latent means on choice and equality values are comparable across waves among the panel respondents (Appendix 3). Although we use raw scores, not factor scores, for our analyses, the two are correlated at a very high level (Pearson's ρ 0.94-0.97) for both constructs, so we believe that the comparability assumption implied by our measurement invariance results for a CFA model can be quite safely extrapolated to raw composite scores. Finally, since there are almost no differences in average scores on value indices between full wave-specific samples and panel wave-specific samples (two-sample t-test p-value >0.05 for both constructs in all three waves), we also assume that non-panel respondents do not differ significantly from panel respondents. CFA models for wave-specific participants and panelists also show the presence of measurement invariance, which further corroborates the assumption (detailed analysis is available upon request).

[10] We use the t-test for partially paired data because full samples for W2 and W3 overlap with that of W1 (i.e., they include both follow-up respondents, who participated in W1, and new respondents recruited to replace lost participants).

and by 0.05 between waves 1 and 3 (p <0.01 in both cases). However, these changes are quite small in terms of their size (Cohen's d = 0.12 and 0.14 respectively). By contrast, support for gender equality in the labor market gradually declines between W1 and W3; yet once again these changes, although statistically significant (p = 0.04 between wave 1 and 2, and p <0.01 between wave 1 and 3), are mostly negligible (Cohen's d = 0.07 and 0.12 respectively). Regarding the composite indices, we find a significant increase in choice values (p = 0.03 between waves 1 and 2, p <0.01 between waves 1 and 3), and a decline in the support for gender equality by wave 3 (p = 0.04). As with the dynamics in individual items, these changes are elusively small in absolute terms (no Cohen's d exceeds 0.2). The results for the balanced panel are generally the same[11].

Table 2

Mean scores for value items across waves (full samples and panel only)

Item	W 1	W 2	W 3	P 1	P 2	P 3
Choice values:	.46 (.44-.47)	**.47*** (.45-.48)	**.48**** (.46-.49)	.46 (.44-.47)	**.47*** (.45-.49)	**.48**** (.46-.5)
Homosexuality	.22 (.20-.24)	.22 (.20-.24)	.22 (.21-.24)	.21 (.19-.23)	.21 (.19-.23)	.21 (.18-.23)
Abortion	.46 (.45-.48)	**.50**** (.48-.52)	**.51**** (.49-.53)	.48 (.45-.50)	**.52**** (.49-.54)	**.53**** (.51-.55)
Divorce	.69 (.67-.70)	.68 (.67-.70)	.69 (.68-.71)	.68 (.66-.70)	.68 (.66-.70)	.70 (.68-.72)
Equality values:	.62 (.61-.63)	.61 (.60-.63)	**.61*** (.60-.62)	.62 (.6-.63)	.61 (.59-.62)	**.60*** (.58-.62)
When jobs are scarce men should have more rights (reversed)	.68 (.67-.70)	**.67*** (.65-.68)	**.66**** (.64-.67)	.69 (.67-.71)	.67 (.65-.69)	**.65**** (.63-.67)
Men make better political leaders (reversed)	.48 (.47-.50)	.48 (.47-.50)	.48 (.47-.50)	.47 (.45-.49)	.48 (.46-.50)	.46 (.44-.48)
Education is more important for boys (reversed)	.69 (.68-.71)	.69 (.67-.70)	.69 (.67-.70)	.70 (.68-.72)	.68 (.66-.70)	.68 (.66-.70)

Note: *p<.05, **p<.01. Entries are sample means (with 95% CIs in parentheses). Mean scores for full samples were compared using t-test for partially paired data as described in Qi, Yan & Tian, 2022. Mean scores for panel data were compared using paired t-test. Scores significantly different from the scores in the first wave are in bold.

**Individual-level value shifts**

Using balanced panel data, we analyze the personal trajectories in support for choice and equality values, as well as look at their association with pandemic experiences. Starting with a

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[11] We also analyzed the dynamics across social groups (by gender, age, income, education, and area of residence) and found no particular patterns in either sample (see Appendix 5).

descriptive analysis, Figure 1 shows the distributions of individual changes in choice and equality values between waves 2 and 1, waves 3 and 2, and waves 3 and 1. Positive scores indicate an increase in the support for choice or equality values, whereas negative scores imply a decline; zero means no change between waves. Overall, most of the respondents show no or only little change in their choice and equality values as most of the individual between-wave differences are close to 0. However, a certain variation is present nevertheless, although drastic changes occur only among a small fraction of the respondents.

Figure 1

Individual changes in choice and equality values (balanced panel data).
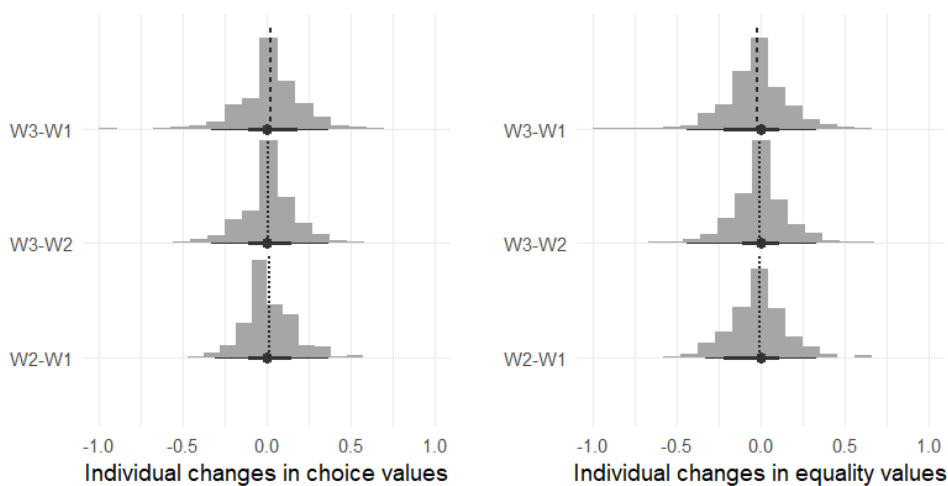
Note. Dotted vertical lines represent the respective means, horizontal boxplots represent distribution quantiles (median, 75%, 95%).

Further, we use multilevel linear regressions with random intercepts (but not slopes) to analyze the relationships between emancipative values and COVID-19 experiences. Intraclass correlation coefficients indicate high variation of both choice and equality values across the respondents (ICC in the null models for choice values = 0.758, for equality values = 0.639). Results (Table 3) indicate no relationship between choice values and either health or economic issues, whether experienced or anticipated. Regarding equality values, health-related experiences and expectations do not make a difference either, whereas concerns about a possible economic recession are associated with greater

support for gender equality (most likely because the salary cutbacks during a recession increase the pressure to earn a double income, which requires female access to the labor market).

Table 3

Pandemic experience and support for emancipative values (multilevel linear regression with random intercepts for individuals)

	Choice		Equality	
Predictors	*Estimates*	*SE*	*Estimates*	*SE*
Intercept	.26 **	.03	.50 **	.03
Gender (female)	.12 **	.02	.16 **	.01
Age (scaled)	-.02 **	.01	-.00	.01
Age (scaled)^2	.02 *	.01	-.00	.01
Tertiary education	.02	.01	-.01	.01
Income level	.01 *	.00	.01	.00
Subjective well-being	-.00	.00	.00 *	.00
Area of residence (urban)	.07 **	.02	-.03	.02
Religiosity (not religious)	.04 **	.01	.01	.01
Religiosity (atheist)	.07 **	.01	.00	.01
COVID-19 (yes)	.00	.01	-.00	.01
Job loss (yes)	-.00	.01	-.02	.01
Concerns about health	-.00	.00	-.00	.00
Concerns about recession	.00	.00	.01 *	.00
Wave 2	.01 *	.01	-.01	.01
Wave 3	.02 **	.01	-.02 *	.01
Random Effects				
σ^2		.01		.02
$\tau_{00:respondent}$		.04		.03
ICC		.72		.59
N		737		737
Observations		2182		2170
Marginal R^2 / Conditional R^2		.115 / .751		.129 / .642

* p<.05 ** p<.01

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As for the changes over time, the results indicate a small but steady increase in the support for choice values in the 2nd and 3rd waves of the surveys. At the same time, they also show a significant decline in equality values by wave 3. However, the estimated changes are relatively small (|0.02| between waves 1 and 3 on a 0-1 scale, which generally mirrors the descriptive trends presented above).

Latent class mixed modelling of individual value change trajectories

Next, we use multivariate latent class mixed modelling (henceforth, LCMM: Proust-Lima, Amieva, & Jacqmin-Gadda, 2013, Nguena Nguefack, 2020; van der Nest et al., 2020) to identify groups of the respondents with similar trajectories of value change over time. We estimate two sets of models (with varying numbers of latent classes within each set), one for choice values and one for equality values. In all models, we specify random intercepts, as well as random slopes for the time variable (i.e., wave number) and the quadratic term for time, to account for varying starting levels of support for emancipative values of the panel respondents and possible non-linearities in value change trajectories. Each model estimates the trajectories of the responses to all relevant items simultaneously.[12]

Table 4 contains the fit measures for these models.[13] The results indicate that for choice values, the 5-class model is the best-fitting one, as it has the lowest AIC, BIC, and SABIC scores, as well as the highest entropy.

Table 4

Model fit for choice and equality values survey items

	N class	N prm	Log.Lik.	AIC	BIC	SABIC	Entropy
Choice	2	23	-5546.74	11139.48	11245.34	11172.31	0.69
	3	27	-5501.63	11057.25	11181.52	11095.79	0.86
	4	31	-5478.90	11019.80	11162.48	11064.05	0.88
	5	35	-5454.53	10979.06	11140.15	11029.01	0.90
Equality	2	23	-5362.32	10770.64	10876.50	10803.47	0.97
	3	27	-5334.53	10723.07	10847.34	10761.60	0.88
	4	31	-5192.68	10447.36	10590.04	10491.61	0.74

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[12] Models are estimated with R programming language version 4.2.3, using *multlcmm( )* function from the {*lcmm*} R-package (Proust-Lima, Amieva, & Jacqmin-Gadda, 2013) with 100 random start values and 10 iterations.
[13] For choice values we estimated models with 2 to 5 latent classes. We stopped at 5 classes since new latent groups in models with higher numbers of classes were identified based on the between-class differences in the intercepts, not the trajectories of value change.

For equality values we choose a model with 3 classes[14] for further analysis. Although fit measures show that the model with 4 classes is better, we also have to take into account the (relative) size of the identified groups. Table 5 presents the estimated proportions of respondents in each latent class and in each model specification. The 4-class model for equality values yielded one class with no observations, thus, we decide to opt for the model with 3 classes, as a more substantively meaningful one.

Table 5

Estimated proportions of observations in classes (%)

|	Class 1	Class 2	Class 3	Class 4	Class 5
Choice	34.74	65.26			
	51.7	27.27	21.03		
	2.04	25.51	51.29	21.17	
	2.04	22.25	18.18	39.76	17.77
Equality	2.04	97.96			
	1.90	88.06	10.04		
	0.00	19.95	50.47	29.58	

Figure 2 show the estimated class-specific mean trends for the choice items. In all classes, respondents' tolerance to homosexuality remains low across all waves, whereas the acceptance of divorce remains relatively high. The main difference among the classes occurs due to the changes in the acceptance of abortion. In class 1 (*increase* in choice values) acceptance of abortion improves considerably during the pandemic. The scores on the other two items increase as well; yet these changes are much less pronounced. This class is estimated to be the least prevalent and contains only about 2% of the respondents. In class 2 *(stable low* support for choice values), toleration of abortion remains low in all waves, whereas in class 3 (*stable high* support for choice values) it is at the highest level among all classes and still slightly growing. These classes comprise 22% and 18% of the respondents, respectively. Classes 4 (*stable moderate* endorsement of choice values) and 5 (*moderate* endorsement of choice values with slight *increase*) start with a moderate toleration of abortion; after that, toleration

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[14] Model with 5 latent groups failed to converge.

in class 4 remains stable, while class 5 shows a slight increase in toleration. Class 4 is the most populous and includes approximately 40% of the respondents, whereas class 5 contains about 18% of the sample.

Figure 2

Estimated class-specific trajectories for choice values across ViC waves
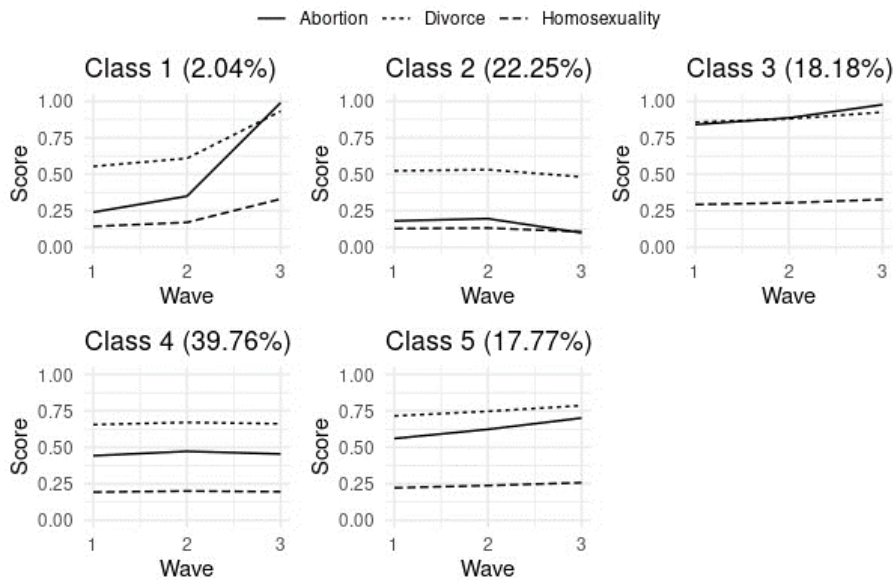
Estimated item-specific trends for equality values are presented in Figure 3. Class 1 (*decrease* in equality values) demonstrates a rapid decline for each item. However, this class contains only 2% of the respondents. By contrast, class 2 (*stable moderate* to high support for equality values) is the most sizable class with about 88% of the respondents; in this group support for equality values is higher and remains stable during the pandemic. At the same time, in class 3 (*non-linear low* support for equality values) the scores for all 3 items are low in all three waves of the surveys, although the trend is non-linear: support for gender equality increases slightly in wave 2; however, after that a downtrend can be observed. This class contains about 10% of the respondents.

Figure 3

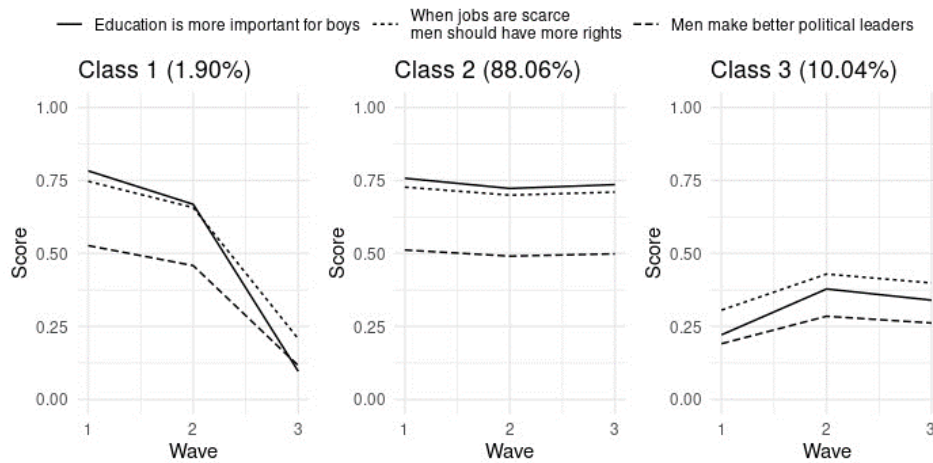*Predicted class-specific trajectories for equality values across ViC waves*

Table 6 presents the "average" socio-demographic profiles (for wave 1) of the respondents by latent classes for choice values, as well as the class-specific means for the pandemic experience indicators and individual value indicators. Compared to the full balanced panel, class 1 (*increase*) contains fewer women and people with tertiary education, while having more people who live in urban areas and people with lower incomes. These differences are statistically non-significant (one-sample[15] binomial test p-value >0.05 in all cases), due to a small number of observations in this class. However, this class has a significantly smaller fraction of those who had the direct disease experience (40% vs 71.4%, p <0.01).

Table 6

Pandemic experience and social profiles across the classes for choice values among respondents participated in all three waves.

	Class 1 (Increase 2.04%)	Class 2 (Stable low 22.25%)	Class 3 (Stable high 18.18)	Class 4 (Stable moderate 39.76%)	Class 5 (Moderate increase 17.77%)	Balanced panel
Women (%)	33.3	**37.8***	**59.0****	42.3	52.7	46.0
	(11.8-61.6)	**(30.4-45.7)**	**(50.1-67.4)**	(36.6-48.2)	(43.4-61.5)	(42.4-49.7)
Tertiary education (%)	40.0	**36.6***	44.0	49.1	48.1	45.0
	(16.3-67.7)	**(29.2-44.5)**	(35.5-52.9)	(43.3-55.0)	(39.3-57.0)	(41.4-48.7)
Mean age	49.6	48.3	47.3	**51.0***	49.4	49.4

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[15] Since we compare class-specific proportions and means to sample proportions and means, which appear in this regard as observed features of the sample, not estimates of unknown population parameters, we use one-sample tests for all such comparisons reported in this section.

	(42.3-56.9)	(46.4-50.2)	(44.9-49.8)	**(49.5-52.4)**	(47.0-51.7)	(48-5-50.3)
Urban area (%)	93.3	84.1	91	86.7	**94.7***	88.5
	(68.1-99.8)	(77.6-89.4)	(84.9-95.3)	(82.3-90.4)	**(89.3-97.8)**	(85.9-90.7)
Income quartile 1 (%)	6.7	20.9	12.8	16.4	9.9	15.4
	(0.2-31.9)	(14.9-27.9)	(7.6-19.7)	(12.3-21.1)	(5.4-16.4)	(21.3-27.6)
Income quartile 2 (%)	46.7	26.4	29.3	22.9	22.1	25.2
	(21.3-73.4)	(19.8-33.8)	(21.8-37.8)	(18.2-28.1)	(15.4-30.2)	(22.1-28.5)
Income quartile 3 (%)	20.0	25.2	21.8	23.9	27.5	24.4
	(4.7-50.8)	(18.7-32.5)	(15.1-29.8)	(19.1-29.2)	(20.0-36.0)	(21.3-27.6)
Income quartile 4 (%)	26.7	**27.8***	36.1	36.9	40.5	35.1
	(7.8-55.1)	**(20.9-35.1)**	(27.9-44.9)	(31.3-42.7)	(32.0-49.4)	(31.6-38.7)
COVID-19[1] (%)	**40.0****	71.3	73.9	70.1	73.3	71.4
	(16.3-67.7)	(63.8-78.1)	(65.6-81.1)	(65.4-76.1)	(64.8-80.6)	(68.0-74.6)
Job loss (%)	33.3	39.0	35.8	26.6	29.8	31.8
	(11.8-61.6)	(31.5-46.9)	(27.7-44.6)	(21.6-32.1)	(22.1-38.4)	(28.4-35.2)
Concerns about health (mean)[2]	3.8	3.8	3.7	3.8	3.8	3.8
	(3.3-4.3)	(3.6-3.9)	(3.5-3.9)	(3.7-3.9)	(3.6-4.0)	(3.7-3.9)
Concerns about economic recession (mean)	3.9	4.0	4.0	3.9	4.0	4.0
	(3.3-4.5)	(3.8-4.1)	(3.8-4.1)	(3.8-4.0)	(3.9-4.2)	(3.9-4.0)
Choice values (mean)[3]	**0.32***	**0.27****	**0.73****	**0.41****	**0.52****	0.46
	(0.21-0.44)	**(0.25-0.30)**	**(0.69-0.76)**	**(0.39-0.43)**	**(0.49-0.55)**	(0.44-0.47)
Homosexuality (mean)	0.27	**0.10****	**0.42****	**0.16***	0.24	0.21
	(0.08-0.47)	**(0.07-0.14)**	**(0.35-0.49)**	**(0.13-0.19)**	(0.19-0.29)	(0.19-0.23)
Abortion (mean)	**0.21****	**0.18****	**0.85****	**0.44***	**0.57****	0.48
	(0.10-0.32)	**(0.15-0.21)**	**(0.81-0.88)**	**(0.41-0.47)**	**(0.53-0.60)**	(0.45-0.50)
Divorce (mean)	**0.49***	**0.54****	**0.91****	**0.63****	**0.76****	0.68
	(0.31-0.67)	**(0.49-0.58)**	**(0.88-0.94)**	**(0.60-0.66)**	**(0.72-0.81)**	(0.66-0.70)

Note: [1] Respondents considered to experience COVID-19 or job market troubles if they reported respective issues at least in one wave of the survey.
[2] Health and economic concerns were computed as average scores across all three waves.
Socio-demographic proportions were estimated using data from W1.
[3] Mean values for choice values and the respective survey items in W1.
* $p<0.05$, ** $p<0.01$. Values significantly different from sample proportions are in bold (based on one-sample t-tests). Values in parentheses are 95% CIs for the respective measures.

Class 2 (*stable low*) exhibits a similar pattern in terms of gender proportions, education, and income ($p<0.05$ in all cases). At the same time, this class contains slightly more people who experienced job loss during the pandemic ($p = 0.053$). Class 3 (*stable high*) contains significantly more women, and slightly more respondents who experienced COVID-19 and/or job loss. The socio-demographic profile of class 4 (*stable moderate*) is similar to that of the balanced panel, except for a slightly greater mean age. This class includes slightly fewer respondents who experienced a job loss during the pandemic. Finally, class 5 (*moderate increase*) contains a significantly higher share of people from urban areas ($p<0.05$).

Table 7 shows the profiles of the respondents in latent classes for equality values. Class 1 (*decrease*) contains fewer women ($p<0.05$) and more respondents with tertiary education and higher income. Furthermore, this class contains fewer respondents who had a direct experience with COVID-

19 (50% vs 71.4%), although it also includes a greater share of those who experienced job loss (42.9% vs 31.8%). Moreover, these respondents are slightly less worried about the consequences of the pandemic.

Table 7

Pandemic experience and social profiles across the classes for equality values.

	Class 1 (Decrease 1.90%)	Class 2 (Stable moderate 88.06%)	Class 3 (non-linear low 10.04%)	Balanced panel
Women (%)	**14.3***	48.5	**29.7****	46.0
	(1.8-42.8)	(44.6-52.5)	**(19.7-41.4)**	(42.4-49.7)
Tertiary education (%)	57.1	44.2	50.0	45.0
	(28.9-82.3)	(40.4-48.1)	(38.1-61.9)	(41.4-48.7)
Mean age	48.5	51.0	52.5	49.4
	(41.8-54.2)	(48.3-50.3)	(47.1-53.8)	(48-5-50.3)
Urban area (%)	92.9	87.8	93.2	88.5
	(66.1-99.8)	(85.1-90.2)	(84.9-97.8)	(85.9-90.7)
Income quartile 1 (%)	14.3	14.5	23.3	15.4
	(1.8-42.8)	(11.9-17.5)	(14.2-34.6)	(12.8-18.2)
Income quartile 2 (%)	21.4	25.9	19.2	25.2
	(4.7-50.8)	(22.6-29.5)	(10.9-30.1)	(22.1-28.5)
Income quartile 3 (%)	14.3	24.4	26.0	24.4
	(1.8-42.8)	(21.1-27.9)	(16.5-37.6)	(21.3-27.6)
Income quartile 4 (%)	50.0	35.2	31.5	35.1
	(23.0-77.0)	(31.5-39.0)	(21.1-43.4)	(31.6-38.7)
COVID-19[1] (%)	50	72.7	63.5	71.4
	(23.0-77.0)	(69.1-76.1)	(51.5-74.4)	(68.0-74.6)
Job loss (%)	42.9	30.7	39.2	31.8
	(17.7-71.1)	(27.1-34.4)	(28.0-51.2)	(28.4-35.2)
Concerns about health (mean)[2]	3.6	3.8	3.8	3.8
	(2.9-4.4)	(3.7-3.9)	(3.6-4.1)	(3.7-3.9)
Concerns about economic recession (mean)	3.5	4.0	4.0	4.0
	(2.7-4.2)	(3.9-4.0)	(3.8-4.2)	(3.9-4.0)
Equality values (mean)[3]	0.65	**0.66****	**0.23****	0.62
	(0.49-0.81)	**(0.65-0.58)**	**(0.18-0.25)**	(0.60-0.63)
When jobs are scarce men should have more rights (rev)	0.67	**0.73****	**0.35****	0.69
	(0.47-0.87)	**(0.71-0.75)**	**(0.27-0.42)**	(0.67-0.71)
Men make better political leaders (rev)	0.48	**0.50****	**0.16****	0.47
	(0.24-0.71)	**(0.48-0.52)**	**(0.11-0.21)**	(0.45-0.49)
Education is more important for boys (rev)	0.81	**0.76****	**0.14****	0.70
	(0.69-0.93)	**(0.74-0.77)**	**(0.11-0.18)**	(0.68-0.72)

Note: [1] Respondents considered to experience COVID-19 or job market troubles if they reported respective issues at least in one wave of the survey.
[2] Health and economic concerns were computed as average scores across all three waves.
Socio-demographic proportions were estimated using data from W1.
[3] Mean values for equality values and the respective survey items in W1.
* $p<0.05$, ** $p<0.01$. Values significantly different from sample proportions are in bold (based on one-sample t-tests). Values in parentheses are 95% CIs for the respective measures.

Class 2 (*stable moderate*) is generally identical to the full balanced panel in terms of socio-demographic characteristics. By contrast, class 3 (*non-linear low*) contains fewer women ($p<0.01$) and

slightly more people with tertiary education. Similar to class 1, there are fewer respondents who experienced COVID-19 (63.5% vs 71.4%), and more of those who had economic difficulties during the pandemic (39.2% vs 31.8%).

Discussion

Data from the three waves of the *Values in Crisis* longitudinal survey show a large degree of stability in the value orientations of Russian respondents (at least, those with a regular access to Internet) — despite the severity of the Corona crisis in the country. Although evidence for value shifts does exist, the results indicate contrasting trends in support for the two dimensions of emancipative values: support for choice values has slightly increased, whereas support for equality values has slightly declined. These changes are mainly due to rising toleration of abortion in the choice domain and declining support for female employment in the equality domain. At the same time, negative health and job experiences during the pandemic are not related to either value domain, except for concerns about a forthcoming economic recession, which shows a weak positive association with support for equality values (as double family incomes and, thus, women's employment might be needed to weather through the salary cuts and inflation during a recession).

The analysis of individual trajectories in value shifts also supports the "baseline stability" theorem in value research. Respondents who significantly changed their values during the pandemic comprise only a small fraction of our sample (approximately 2% for each value construct). Furthermore, these respondents had rather distinct pandemic experiences (e.g. fewer personal experiences with COVID-19, more negative economic experiences) compared to the balanced panel sample.

From the perspective of modernization and emancipation theory, the findings are ambiguous. On one hand, the absence of noticeable overtime changes confirms the "baseline stability theorem" which expects temporary decline in emancipative values under external shocks to remain rather limited in magnitude because situational value adjustments remain anchored on people's socialization-induced value baseline — even in times of severe economic and health threats. On the other hand, the trends show the opposite dynamics of the two types of emancipative values. The positive association with

anxiety suggests that the prospective considerations may act as an emancipatory factor in uncertain environments.

Some features of the discovered attitudinal trends also raise questions about the mechanisms of value changes during the crisis. A slight increase in choice values derives exclusively from the raising toleration of abortion, with acceptance of homosexuality and divorce remaining stable throughout the pandemic. Similarly, the deterioration of the support for equality values is mostly manifested through the change in attitudes to equality in the labor market, whereas other spheres (i.e., politics and further education) remain relatively unaffected.

Such results may indicate that crisis situations change the attitudes to the immediately affected areas of life. Abortion (unlike other two concepts within the domain of choice values) or, on the contrary, continuation of the pregnancy is associated with one of the major life decisions that require the assessment of both health and economic external conditions. A decision to have a child is less likely to be made amidst the largest crisis of the last thirty years in a country, which has undergone the second demographic transition a long time ago, so it is not surprising that the acceptance of abortion has slightly increased since the early stage of the pandemic[16].

Similar reasoning applies to the decrease in the support for equality in the labor market. Unlike representation in politics or education attainment, having a job is a more pressing concern for most of the population in any society. Furthermore, this is the aspect of life that has been directly and most drastically affected by the pandemic. As a result, overall existential insecurity pressure on individuals desperately struggling for finding a job in the time of growing unemployment have intensified a bit, thereby provoking a rollback in toleration of female employment. This interpretation is corroborated by the finding that the latent class where the support for gender equality rapidly dropped, as well as another class with stable low scores on the equality index, contain much greater fractions of male respondents (85.7% and 70,3% respectively vs. 54% in the full panel sample) and greater fractions of those experienced troubles at the job market (42.9% and 39.2% vs. 31.8%) at least once during the pandemic.

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[16] Noticeably, Class 1 (increase in choice values) also includes more males, urban dwellers, relatively low-educated and low-income respondents. These demographic groups simply can't afford a childbirth in harsh social conditions, so it is not surprising that they have gradually become more tolerant of abortion during the pandemic, especially given their initial low level of support for choice values.

Of course, our study has obvious limitation. First, we don't have pre-pandemic data on individual attitudes[17], but it is possible that some important changes might have occurred in the very beginning of the pandemic and therefore gone unnoticed. However, the estimates of the mean support for choice and equality values, both for the full sample and for specific demographic groups, from the first wave of the VIC are nearly indistinguishable from those yielded by another online survey, conducted in Russia using the same opt-in panel, but in 2018, almost two years before the start of the pandemic (the first officially confirmed COVID-19 case in Russia was reported on 31 January; first officially confirmed death on March 2020) (Korsunava & Sokolov 2023, Tables 3 and 7). This observation supports the expectation that no large value shift had occurred before the start of our study.

Second, our study covers only a year-and-half period. It is possible that such a time span is too short to detect any value shift that will last into the future. Hence, it remains unclear until newer data are collected whether even the minor value shifts that we did observe have been temporary or will last into the future. The fact, however, that the few shifts that we did observe are limited to just one item per domain and that the items in question were most directly related to the specificities of the pandemic, speaks in favor of a temporary period effect—in line with the "baseline stability" theorem.

Third, we use an online panel which by design excludes all people who do not use Internet actively. Moreover, even the initial W1 sample includes less rural, younger, and low-educated respondents compared to the census-based benchmarks. Respondent attrition further aggravated the problems with representativity of our sample and, therefore, generalizability of our results. At the same time, previous research shows that most groups insufficiently covered by our survey tend to possess more conservative attitudes, so at least a negative shift away from emancipative values is less likely to occur among those groups, due to the so-called "floor" effect (it's hard to fall if you are already on the floor). On the other hand, our panel contains less young and female respondents, among which we might

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[17] It is, in principle, possible to use data from the latest-to-date Russian round of the World Values Survey (conducted in 2017) as the pre-pandemic benchmark for the prevalence of choice and equality values in Russia (like Akaliyski et al. (2023) did for Japan). Yet, the WVS differs from the ViC both in terms of the target population and the sample frame so it may be not the best benchmark. In addition, there is evidence that online samples anyway yield systematically greater estimates of support for emancipative values in Russia (which is possibly due to a less pronounced social desirability effect in web surveys: Korsunava & Sokolov 2023) Thus, the online survey we are referring to below seems to be a better benchmark option.

expect a greater increase of acceptance of abortion (because childbirth, due to all associated social and financial costs, is a highly salient issue for these groups). Yet, our subgroup analysis, reported in the SM (Table A5.1), suggests that the trends in support for emancipative values are similar across most demographic groups, as well as between the full wave-specific samples and the panel sample. Thus, it seems that our conclusions can be, with some caution, generalized to the whole Russian population.

Whether our findings are generalizable beyond Russia is a different, and difficult, question. On one hand, Inglehart and Welzel consider the cultural modernization process as more or less universal: countries may differ in terms of where they start and how fast they move but all societies are assumed to go through the same stages during the modernization process. This implies that the process of individual value formation and life course evolution should also be relatively universal[18]. On the other hand, different nations vary in the degree of severity of the COVID-19 crisis and related adverse socio-economic effects, as well as in the average level of prevalence of emancipative orientations. The actual effect of the pandemic on attitudes may be conditional on both factors (in case of the latter, both floor and ceiling effects are possible). Anyway, it would be inherently interesting to compare our results for Russia with what has happened in other societies from different regions of the world.

References

Akaliyski, P., Taniguchi, N., Park, J., Gehrig, S., & Tormos, R. (2023). Values in Crisis: Societal Value Change under Existential Insecurity. *Social Indicators Research,* 1-21.

Aschauer, W., Prandner, D., & Glatz, C. (2022). Österreich in der ersten Phase der Covid-19-Pandemie: Einführung in die zentralen Themen des Buches. In *Die österreichische Gesellschaft während der Corona-Pandemie: Ergebnisse aus sozialwissenschaftlichen Umfragen* (pp. 1-27). Wiesbaden: Springer Fachmedien Wiesbaden. Aschauer W. et al. Values in Crisis International (SUF edition). 2021. doi: 10.11587/LIHK1L

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[18] Akaliyski et al. 2023 report (also using the ViC data) that in Japan the acceptance of abortion raised after the start of the pandemic, the support for gender equality in education decreased and the acceptance of homosexuality and divorces initially decreased but later recovered to the pre-pandemic levels. This largely agrees with our findings.

Aschauer, W., Seymer, A., Bodi-Fernandez, O., Herzog, M., Hadler, M., Höllinger, F., Bacher, J., Welzel, C., Boehnke, K., Delhey, J., Deutsch, F., Eichhorn, J., Kühnen, U., Moraes, D., Kemer, T., Gonzalez, R., Salvatierra, V., Fuentes, A., Chang, Y., … Stier, J. (2021). *Values in Crisis International* (SUF edition) [Data set]. AUSSDA. https://doi.org/10.11587/LIHK1L

Bluedorn, J., Caselli, F., Hansen, N. J., Shibata, I., & Tavares, M. M. (2023). Gender and employment in the COVID-19 recession: Cross-country evidence on "she-cessions". *Labour Economics, 81*, 102308.

Bojanowska, A., Kaczmarek, Ł. D., Koscielniak, M., & Urbańska, B. (2021). Changes in values and well-being amidst the COVID-19 pandemic in Poland. *PloS one*, *16*(9), e0255491.

Bonetto, E., Dezecache, G., Nugier, A., Inigo, M., Mathias, J. D., Huet, S., ... & Dambrun, M. (2021). Basic human values during the COVID-19 outbreak, perceived threat and their relationships with compliance with movement restrictions and social distancing. *PloS one*, *16*(6), e0253430.

Brunkert, L., Kruse, S., & Welzel, C. (2019). A tale of culture-bound regime evolution: the centennial democratic trend and its recent reversal. *Democratization, 26*(3), 422-443.

Choi, E. P. H., Hui, B. P. H., & Wan, E. Y. F. (2020). Depression and anxiety in Hong Kong during COVID-19. *International journal of environmental research and public health*, *17*(10), 3740.

Daniel, E., Bardi, A., Fischer, R., Benish-Weisman, M., & Lee, J. A. (2022). Changes in personal values in pandemic times. *Social Psychological and Personality Science*, *13*(2), 572-582.

Daniel, E., Fortuna, K., Thrun, S. K., Cioban, S., & Knafo, A. (2013). Brief report: Early adolescents' value development at war time. *Journal of adolescence*, *36*(4), 651-655.

Delhey, J., Hess, S., Boehnke, K., Deutsch, F., Eichhorn, J., Kühnen, U., & Welzel, C. (2023). Life Satisfaction During the COVID-19 Pandemic: The Role of Human, Economic, Social, and Psychological Capital. *Journal of Happiness Studies*, 1-22. https://doi.org/10.1007/s10902-023-00676-w

Delhey, J., Steckermeier, L. C., Boehnke, K., Deutsch, F., Eichhorn, J., Kühnen, U., & Welzel, C. (2023). Existential insecurity and trust during the COVID-19 pandemic: The case of Germany. *Journal of Trust Research*, 1-24. https://doi.org/10.1080/21515581.2023.2223184

Dobewall, H., & Rudnev, M. (2014). Common and unique features of Schwartz's and Inglehart's value theories at the country and individual levels. *Cross-Cultural Research, 48*(1), 45-77.

Druzhinin, P., Molchanova, E., & Podlevskih, Y. (2021). Impact of Covid-19 pandemic on mortality in Russian regions. *Munich Personal RePEc Archive*. URL: https://mpra.ub.uni-muenchen.de/109034/1/MPRA_paper_109034.pdf

Duch, R. M., & Taylor, M. A. (1993). Postmaterialism and the economic condition. *American Journal of Political Science, 37*(3), 747-779.

Edenborg, E. (2023). 'Traditional values' and the narrative of gay rights as modernity: Sexual politics beyond polarization. *Sexualities, 26*(1-2), 37-53.

Fazeli, S., Zeidi, I. M., Lin, C. Y., Namdar, P., Griffiths, M. D., Ahorsu, D. K., & Pakpour, A. H. (2020). Depression, anxiety, and stress mediate the associations between internet gaming disorder, insomnia, and quality of life during the COVID-19 outbreak. *Addictive Behaviors Reports*, *12*, 100307.

Foa, R. S., & Welzel, C. (2023). Existential insecurity and deference to authority: the pandemic as a natural experiment. *Frontiers in Political Science*, 5, 1117550. https://doi.org/10.3389/fpos.2023.1117550

Freije, S, Matytsin, M.S., & Popova, D.O. (2023). The distributional impacts of the COVID-19 crisis and policy response in Russia. *Voprosy Ekonomiki,* 2, 43-60.

Heo, S., Desai, M. U., Lowe, S. R., & Bell, M. L. (2021). Impact of changed use of greenspace during COVID-19 pandemic on depression and anxiety. *International journal of environmental research and public health*, *18*(11), 5842.

Inglehart, R. (1971). The silent revolution in Europe: Intergenerational change in post-industrial societies. *American political science review, 65*(4), 991-1017.

Inglehart, R. (2015). *The silent revolution: Changing values and political styles among Western publics*. Princeton University Press.

Inglehart, R. (2016). Inequality and modernization: Why equality is likely to make a comeback. *Foreign Affairs, 95*(1), 2–10.

Inglehart, R. F. (2018). *Cultural evolution: People's motivations are changing, and reshaping the world*. Cambridge University Press

Inglehart, R., & Baker, W. E. (2000). Modernization, cultural change, and the persistence of traditional values. *American sociological review, 65*(1), 19-51.

Inglehart, R., & Norris, P. (2017). Trump and the populist authoritarian parties: The silent revolution in reverse. *Perspectives on Politics*, *15*(2), 443-454.

Inglehart, R., & Welzel, C. (2010). Changing mass priorities: The link between modernization and democracy. *Perspectives on politics, 8*(2), 551-567.

Kaasa, A., & Welzel, C. (2023). Elements of Schwartz's Model in the WVS: How Do They Relate to Other Cultural Models? *Cross-Cultural Research*. https://doi.org/10.1177/10693971231179792

Kaasa A., Minkov M. (2022). Are Different Two-Dimensional Models of Culture Just a Matter of Different Rotations? Evidence from the Analysis Based on the WVS/EVS. *Journal of Cross-Cultural Psychology*, *53*(2), 27–156

Karlinsky, A., & Kobak, D. (2021). Tracking excess mortality across countries during the COVID-19 pandemic with the World Mortality Dataset. *Elife, 10*, e69336.

Kartseva, M. A., & Kuznetsova, P. O. (2022). Short-term effects of the COVID-19 pandemic on employment and income of the Russian population: which groups were affected the most?. *Population and Economics, 6*(4), 21-42.

Kazenin, K. I. (2022). COVID-19 and fertility intentions: a qualitative study in six regions of Russia. *Population and Economics, 6*(4), 107-122.

Kobak, D. (2021), Excess mortality reveals Covid's true toll in Russia. *Significance*, 18(1), 16-19. https://doi.org/10.1111/1740-9713.01486

Konstantinov, V., Gritsenko, V., Reznik, A., & Isralowitz, R. (2022). The impact of COVID-19 on health and well-Being: Foreign medical students in Eastern Europe. *Social Sciences, 11*(9), 393.

Koopmann, A., Georgiadou, E., Reinhard, I., Müller, A., Lemenager, T., Kiefer, F., & Hillemacher, T. (2021). The effects of the lockdown during the COVID-19 pandemic on alcohol and tobacco consumption behavior in Germany. *European Addiction Research*, *27*(4), 242-256.

Korsunava, V., & Sokolov, B. (2023). Are Online Surveys a Reliable Date Collection Tool in Non-Democratic Contexts? Evidence from Russia. *SocArXiv*. May 28. https://doi.org/10.31235/osf.io/s79ek

Lai, C. C., Shih, T. P., Ko, W. C., Tang, H. J., & Hsueh, P. R. (2020). Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease-2019 (COVID-19): The epidemic and the challenges. *International journal of antimicrobial agents*, *55*(3), 105924.

Mason, C. (2019). Opposing abortion to protect women: transnational strategy since the 1990s. *Signs: Journal of Women in Culture and Society, 44*(3), 665-692.

Nguena Nguefack, H. L., Pagé, M. G., Katz, J., Choinière, M., Vanasse, A., Dorais, M., ... & Lacasse, A. (2020). Trajectory modelling techniques useful to epidemiological research: a comparative narrative review of approaches. *Clinical epidemiology,12*, 1205-1222.

Nochaiwong, S., Ruengorn, C., Thavorn, K., Hutton, B., Awiphan, R., Phosuya, C., ... & Wongpakaran, T. (2021). Global prevalence of mental health issues among the general population during the coronavirus disease-2019 pandemic: a systematic review and meta-analysis. *Scientific reports*, *11*(1), 1-18.

Otrachshenko, V., Popova, O., Nikolova, M., & Tyurina, E. (2022). COVID-19 and entrepreneurship entry and exit: Opportunity amidst adversity. *Technology in Society, 71*, 102093.

Pisklakova-Parker, M., & Efanova, O. (2021). The Influence of Gender Stereotypes on the Growth of Gender Inequality and Domestic Violence in Russia in the Context of the COVID-19 Pandemic. *Journal of International Women's Studies, 22*(11), 31-41.

Ponarin, E.D., Klimova, A.M, & Sokolov, B.O. (2021a). *Values in Crisis International* (Russia, 2020) [Data set]. https://fips.ru/registers-doc-view/fips_servlet?DB=DB&DocNumber=2021622511&TypeFile=html

Ponarin, E.D., Sokolov, B.O., & Klimova, A.M. (2021b). *Values in Crisis International* (Russia, 2021) [Data set]. https://fips.ru/registers-doc-view/fips_servlet?DB=DB&DocNumber=2021622861&TypeFile=html

Ponarin, E.D., Sokolov, B.O., & Klimova, A.M. (2023). *Values in Crisis International* (Russia, Autumn 2021) [Data set]. https://fips.ru/registers-doc-view/fips_servlet?DB=DB&DocNumber=2023620890&TypeFile=html

Proust-Lima, C., Amieva, H., & Jacqmin-Gadda, H. (2013). Analysis of multivariate mixed longitudinal data: a flexible latent process approach. *British Journal of Mathematical and Statistical Psychology, 66*(3), 470-487.

Proust-Lima, C., Philipps, V., & Liquet, B. (2017). Estimation of Extended Mixed Models Using Latent Classes and Latent Processes: The R Package lcmm. *Journal of Statistical Software, 78*(2). DOI: 10.18637/jss.v078.i02.

Reeskens, T., Muis, Q., Sieben, I., Vandecasteele, L., Luijkx, R., & Halman, L. (2021). Stability or change of public opinion and values during the coronavirus crisis? Exploring Dutch longitudinal panel data. *European Societies, 23*(Issue sup1), S153-S171.

Reshetnikov, A.V., Prisyazhnaya, N.V., Pavlov, S.V., & Vyatkina, N.Y. (2020). Perception of the COVID-19 pandemic by Moscow residents. *Sociological Research*, 7, 138-143.

Scherbov, S., Gietel-Basten, S., Ediev, D., Shulgin, S., & Sanderson, W. (2022). COVID-19 and excess mortality in Russia: Regional estimates of life expectancy losses in 2020 and excess deaths in 2021. *Plos one, 17*(11), e0275967.

Schwartz, S. H. (2012). An overview of the Schwartz theory of basic values. *Online readings in Psychology and Culture, 2*(1). http://dx.doi.org/10.9707/2307-0919.1116

Shereen, M. A., Khan, S., Kazmi, A., Bashir, N., & Siddique, R. (2020). COVID-19 infection: Emergence, transmission, and characteristics of human coronaviruses. *Journal of advanced research*, *24*, 91-98.

Sobotka, T., Zeman, K., Jasilioniene, A., Winkler-Dworak, M., Brzozowska, Z., Alustiza-Galarza, A., ... & Jdanov, D. (2023). Pandemic Roller-Coaster? Birth Trends in Higher-Income Countries During the COVID-19 Pandemic. *Population and Development Review.* DOI: https://doi.org/10.1111/padr.12544

Sokolov, B. (2018). The index of emancipative values: Measurement model misspecifications. *American Political Science Review, 112*(2), 395-408.

Sortheix, F. M., Parker, P. D., Lechner, C. M., & Schwartz, S. H. (2019). Changes in young Europeans' values during the global financial crisis. *Social Psychological and Personality Science*, *10*(1), 15-25.

van der Nest, G., Passos, V. L., Candel, M. J., & van Breukelen, G. J. (2020). An overview of mixture modelling for latent evolutions in longitudinal data: Modelling approaches, fit statistics and software. Advances in Life *Course Research, 43*, 100323.

van Deth, J. W. (1983). The persistence of materialist and post-materialist value orientations. *European Journal of Political Research, 11*(1), 63-79.

Vecchione, M. (2022). Basic personal values in the midst of the COVID-19 pandemic in Italy: A two-wave longitudinal study. *Plos one, 17*(9), e0274111.

Welzel, C. (2013). *Freedom rising*. Cambridge University Press.

Welzel, C., & Inglehart, R. (2005). Liberalism, postmaterialism, and the growth of freedom. *International Review of Sociology, 15*(1), 81-108.

Zemtsov, S., Barinova, V., Semenova, R., & Mikhailov, A. (2022). Entrepreneurship policy and SME development during pandemic crisis in Russia. *Regional Research of Russia, 12*(3), 321-334.

Zhao, H., He, X., Fan, G., Li, L., Huang, Q., Qiu, Q., Kang, Z., Du, T., Han, L., Ding, L., & Xu, H. (2020). COVID-19 infection outbreak increases anxiety level of general public in China: involved mechanisms and influencing factors. *Journal of affective disorders*, *276*, 446-452.