

Engagement, Community, Activity, and Helpfulness as Predictors of Social Solidarity during the COVID-19 Pandemic in Poland

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Abstract

In light of the COVID-19 epidemic, this paper aimed to scientifically validate Randall Collins' eclectic interaction ritual theory. It was anticipated that a crisis scenario would result in the discharge of emotional energy, which would be conveyed through contacts in the form of participation, community, action for the benefit of others, and helpfulness. Accordingly, it was hypothesized that this energy influences the perception of social cohesion, but its potency may be contingent on pandemic waves. Based on data acquired in Poland during the first and third pandemic waves, April-May 2020 (T1) and April 2021 (T2), respectively, the accepted analytic framework was developed. Through social networking sites, the sample was collected in a non-random fashion. It included 116 respondents between the ages of 17 and 77 ($M = 40.10$, $SD = 15.05$) from various parts of the country. Principal analyses were performed using multiple linear regression with the MLR (Robust Maximum Likelihood) estimator. As a result of our analyses, we discovered, firstly, that the sense of solidarity in a world destabilized by the COVID-19 pandemic was influenced by various predictors of varying strengths, depending on the wave of the pandemic, and, secondly, that the civic sector in Poland is crucial for the formation of civic attitudes involving independent management in social life.

Keywords: ritual chain theory; solidarity; multiple predictors; COVID-19; Europe

Introduction

Since virtually the beginning of 2020, the pandemic caused by the SARS-CoV-2 virus has become one of the most significant influences influencing social life and its expressions. As a result of lockdowns, fear of contracting the disease, and a real threat to life, social capital, including interpersonal relationships, has changed substantially, influencing the formation or reduction of social ties (Bian et al., 2020; Borkowska & Laurence, 2021; Božić, 2021; Carlsen, Toubøl, & Brincker, 2020; Krajewski et al., 2021; Voicu et al., 2021). It is crucial to emphasize that public reactions were not necessarily proportional to the actual threat to health and life but instead were influenced by media coverage (Rigal & Joseph-Goteiner, 2021; Tasnim, Hossain, & Mazumder, 2020; White & Lo, 2020).

Researchers at Oxford University's Our World in Data portal reveal that the pandemic situation has varied not only on a worldwide scale but also among European nations.

The timing of subsequent pandemic waves is due to the uneven spread of COVID-19 around the world and the global rush to implement lockdowns contrasted with the varying epidemiological situation in individual countries, which resulted in some countries locking down too late and others likely too early (Ritchie et al., 2020).

Poland has recorded five pandemic waves of SARS-CoV-2 to date: The first Wave: March 2020 to June 2020; the Second Wave: October 2020 to January 2021; the Third Wave: February 2021 to June 2021; Fourth Wave: October 2021 to January 2022; and Fifth Wave: February 2022 to April 2022. On the one hand, Poland's first wave of the pandemic was distinguished by a relatively limited number of COVID-19 victims, and on the other, by the imposition of unprecedented restrictions in the form of social isolation. The third wave of the epidemic claimed many victims, but it was also a time when the populace had become accustomed to the condition (Suligowski & Ciupa, 2023).

On March 4, 2020, the first SARS-CoV-2 infection was recorded in Poland, and on March 11, the first fatality due to COVID-19 was announced. On March 12, 2020, a declaration of an outbreak and quarantine were made (Wanat, 2020). The first total lockdown (restriction of movement except for subsistence, health, and work purposes; closing of schools and universities; restriction of the number of seats on public transportation; closing of restaurants, swimming pools, fitness centers, cinemas,

theatres, museums, and galleries; a total ban on assembly) was implemented in Poland on March 23, 2020, and individual restrictions began to be lifted in late April 2020 due to the COVID-19 pandemic ([Związek Przedsiębiorców i Pracodawców, 2021](#)). This time corresponds to the duration of the first wave of the SARS-CoV-2 outbreak in Poland, during which 23,784 persons were infected, and 1,064 died ([Rogalski, 2020](#)). Compared to other countries, the number of COVID-19 victims in Poland's 38 million-person population is not alarming. Still, it should be remembered that the period was marked by extremely high public concern due to the novelty of the threat and the lack of reliable data on the disease and its treatment.

Between February and June of 2021, the third wave of the COVID-19 epidemic spread. During its duration, SARS-CoV-2 infected 1,277,536 persons and caused 30,280 deaths ([Rogalski, 2020](#)). Even though the number of infections and deaths caused by the pandemic was far more significant than in the previous two waves, the Polish government chose not to impose a nationwide lockdown, instead basing limitations on the epidemiological situation in each part of the country. According to the number of infections, the limits were tightened or loosened. In the regions hardest hit by the pandemic, malls and retail centers, art galleries, museums, theatres, theaters, swimming pools, and sports facilities were closed. In less vulnerable areas, capacity limits were set. The nationwide necessity was to cover mouths and noses in public settings, the implementation of remote instruction for all grade levels, and the closure of all restaurants were needed. Despite the inappropriate number of COVID-19 fatalities, the public sentiment surrounding the introduction of SARS-CoV-2 vaccines was hopeful at the time.

From the perspective of the alteration of social ties and the resulting sense of community and solidarity in the face of common peril, each of the eras mentioned above is intriguing ([Carlsen et al., 2020](#); [Federico, de Zavala, & Baran, 2021](#); [Igwe et al., 2020](#); [Mishra & Rath, 2020](#)). The initial period of interest was marked by a pervasive sense of insecurity and the resulting need for social cohesion to survive ([Shanahan et al., 2020](#)). The second stage posed a genuine threat to the health and lives of a significant portion of the people, but in a manner to which the public had gotten used.

Literature Review

There are numerous social theories about group formation and member influence. Rituals, as sequences of carefully planned communal activities that are the topic of significant research, can be viewed as a means of integrating and fostering social cohesion (Durkheim, 2016; Olaveson, 2001; Turner, Abrahams, & Harris, 1969). Collins' Interaction Ritual Chains (IRC) theory is an attempt to combine the theories of Durkheim (2016) and Goffman (1967) to explain the significance of rituals for comprehending the stability of the social organization. Traditional sociological theories imply that rituals are the foundation of society. Therefore, the assembly is the means through which we realize the concept of community by feeling the profound emotions that link society's members (Durkheim, 2016). Similarly, Turner (1968) contends that society communicates its beliefs and norms through rituals.

In contrast to Durkheim, Collins does not regard rituals as distinctive social events, but rather, about Goffman, views them as something "normal" and even "every day" that, to a greater or lesser extent, characterizes every contact. In addition to recognizing interaction rituals as successful or unsuccessful, he considers the consequences of this perspective for different macro-sociological phenomena, including collective behavior and group formation in local communities.

Collins asserts that social existence is comprised of interaction routines (IR). These are situations in which: 1) at least two individuals participate, interacting with one another; 2) there are spatial or symbolic boundaries separating ritual participants from nonparticipants; 3) ritual participants focus on a particular symbol or activity and are mutually aware of it; 4) they share their emotional experience or mood; and 5) there are spatial or symbolic boundaries separating ritual participants from nonparticipants (Collins, 2011). If an interaction satisfies these four conditions, an interaction ritual is formed. According to Collins, people are consequently moved from one encounter circumstance to another, forming a chain of interactions. The ritual components described here influence one another. As a result of participant involvement, a "collective effervescence" and a particular type of connection emerge, and the activity acquires a unique significance. In addition, there is motivation to repeat the behavior (Collins, 2011).

It is a hallmark of the model that participants share an emotional state. What important is the transmission of that emotion among those present through focusing attention on the same object/situation, regardless of the emotion? An appearance of solidarity is the result of skillfully coordinating emotions. This is significant given that emotions are fleeting, resulting in long-lasting feelings of attachment to a group that gathers at specific times (Collins, 2004).

Examining the many components of the interaction ritual model is worthwhile. Collins highlights barriers to outsiders, the community's emphasis on action, and mood. The author recognizes the variability of ceremonial components. The stronger they are, the simpler it is to perceive the ritual's outcomes: emotional energy (EE), group solidarity (feeling of belonging), social relationship symbols, and moral norms.

An effective interaction ritual might result in four different results. The first is collective solidarity, the second is emotional energy, and the third is representative items or symbols. Fourth is a sense of morality in behavior and group membership. For a ritual to be successful, intense concentration and emotional arousal are necessary (Collins, 2011).

Emotions are a fundamental component and effect of interpersonal relations (IR). According to Collins' theory, one can observe how emotions are processed throughout interaction: emotional components initiate a ritual; they amplify emotions to the level of shared excitement, which Durkheim refers to as "collective effervescence"; and they result in other types of emotions, including moral solidarity. Emotionally charged Symbols move emotional energy from one scenario to another. This energy possesses a particular social direction. The ceremonies are diverse and full of vitality. Emotional vitality is "A powerful, even emotion that persists throughout time (...) Emotional energy generally enables one to behave with initiative and decisiveness, to steer the course of social events, and to avoid being dominated by others in micro-level interactions " (Collins, 2011). If a person has a high degree of energy, they believe they can act on their intentions and accomplish the desired outcome.

Moreover, high emotional energy fosters a sense of self-assurance, power, and desire for social contact. Individuals, therefore, strive to boost their emotional energy. Participation in interaction rituals can heighten a person's sense of group membership and boost self-esteem. Emotional dynamics are crucial to the relationship's success, as

participation in rituals and the attribution of significance to the community are ultimately based on these pleasant emotions (Collins, 2004).

People who have undergone an IR experience that fostered a sense of group togetherness desire to repeat the ritual, particularly if they perceive that the solidarity is eroding (Collins, 2011). Given that solidarity is varied, it is believed that some contacts are more likely to produce solidarity than others, resulting in "a diverse range of social encounters that occur in real life" (Collins, 2011). This is affected by the fact that a larger sense of communal solidarity exists in areas where the crowd transitions from passive viewers to active participants. Nevertheless, there are rituals in which participation does not result in solidarity. These include, but are not limited to, rituals of power in which participants are subjected to the dominating behavior of issuing and receiving instructions and thus experience alienation from collective symbols.

In conclusion, Collins highlights an emotive approach to social action in which emotion's energy (dynamics) becomes a primary determinant of action decision-making. Based on social reason, he transfers the emphasis from subjective/collective to emotive.

The interaction ritual chain theory is widely cited and reflected in numerous studies, the majority of which deal with religious interaction rituals (Baker, 2010; Barone, 2007; Draper, 2014; Heider & Warner, 2010; Robbins, 2009; Wellman Jr, Corcoran, & Stockly-Meyerdirk, 2014; Wollschleger, 2012), as well as other areas of social life where the dynamics of interpersonal processes at the micro level is significant (Brown, 2011; Clarke & Waring, 2018; Cottingham, 2012; Husu, 2021; Maloney, 2013; Milne & Otieno, 2007; Sallach, 2008; Summers-Effler, 2002). The ritual theory has also been applied to studying the atmosphere of experiencing a place to explain how shared atmosphere experiences emerge among groups of individuals (Hill, Canniford, & Eckhardt, 2022). Collins' idea often appears in the context of the effect of interaction chains on general solidarity, demonstrating that in some cases, it has been increased, whilst, in others, it has been significantly weakened (Božić, 2021; Cottingham, 2012; Rigal & Joseph-Goteiner, 2021; Vallee, 2022).

In crisis research, the micro-sociological idea of ritual has received relatively little consideration. Lewis (2013) study is one example of applying it as a theoretical framework to examine interactions during a state of emergency or a natural disaster.

Additionally, interaction ritual chains have been explored in Covid-19 (Vallee, 2022; Xiang et al., 2022). This text intends to address this knowledge gap.

Aim of The Study

This study attempts to empirically validate Collins' eclectic Interaction Rituals Theory (IRT), which was employed to assess the social condition precipitated by the COVID-19 epidemic.

The purpose of the study was to understand the conduct of individuals in a pandemic condition characterized by maintaining distance and social isolation, which served as the impetus for the ritual. Based on Collins's concept, it was supposed that the initiating event was the COVID-19 pandemic. It initiated rites involving the release of emotional energy (EE). In other words, the effect of the COVID-19 pandemic emergency-activated ritual was the release of emotional energy, conveyed through a connection in the form of participation, community, activity for the benefit of others, and helpfulness, thereby ordering the existing reality. Consequently, the thesis was that this energy altered the sense of social cohesion. At the same time, it was believed that the effect of solidarity-conditioning EE could be contingent on the pandemic wave. The anticipated substantial increase in EE in the first wave and its reduction in the third wave likely contributed to the decline in solidarity.

The thesis was validated using the quantitative survey research methodology, and three fundamental research questions specified the scope of the investigation:

- Q1. What level of engagement, community, activity for the benefit of others, helpfulness, and sense of solidarity characterized the respondents during the first and third waves of the COVID-19 pandemic?
- Q2. What are the relationships between engagement, community, activity for the benefit of others, helpfulness, and sense of solidarity depending on the wave of the COVID-19 pandemic?
- Q3. To what extent are engagement, community, activity for the benefit of others, and helpfulness predictors of a sense of solidarity in the situation caused by the COVID-19 pandemic, and does the predictive power of these variables change depending on the wave of the pandemic?

The following figure presents the research model from the questions posed graphically in the figure (Figure 1).

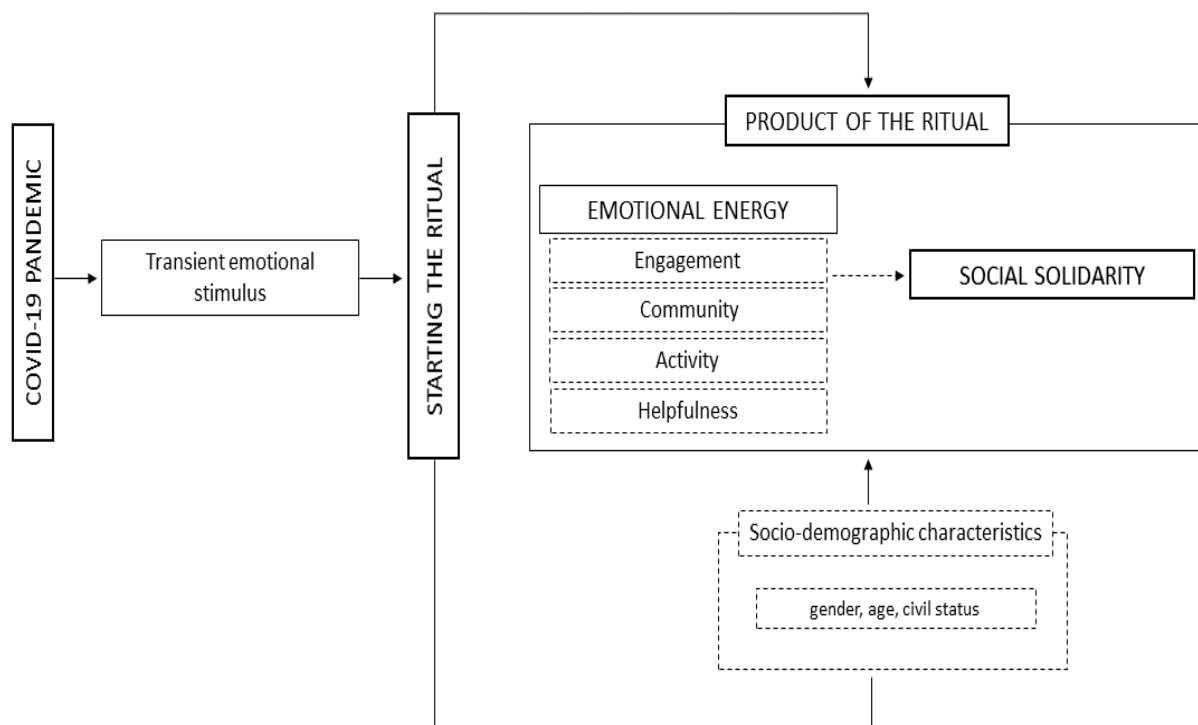


Figure 1. The theoretical model of the research

Methodology

Research procedure

A research team from the Institute of Pedagogy at Jagiellonian University conducted the present investigation. The study utilized a quantitative research technique and a diagnostic-verification research paradigm.

The adopted analysis strategy relied on dependent data acquired from two measurements (T1 and T2). T1 was undertaken during the first wave of the COVID-19 pandemic, whereas T2 was conducted during the third wave. The research was carried out in Poland between April and May 2020 (T1) and April 2021. (T2).

CAWI (Computer-Assisted Web Interview) was utilized during the data collection phase. For possible respondents, a link to the questionnaire utilized in this study was posted on Facebook and other public social networking sites (e.g. student groups or Third Age University groups). Thus, the research sample selection depended not on chance but on convenience and accessibility.

The survey was accompanied by a thorough explanation of its goal and guiding ideas. Participation in the poll was anonymous, and respondents were not compensated monetarily for their time. The study did not require the approval of Jagiellonian University's Ethics and Research Committee because participation posed no risk of suffering, discomfort, or loss of confidence in science. However, all ethical requirements for research involving human subjects were followed throughout the study.

Participants

After excluding individuals that only participated in the initial stage of the investigation (T1), the sample comprised 116 Polish residents from various regions of the nation. The respondents' ages ranged from 19 to 77 years, with a mean of 40.10 (SD=15.05). Nearly 76% of them were female. Moreover, greater than 41% of the respondents were married. See Table 1 for a more thorough description of the sample.

Table 1. Descriptive characteristics of the sample

SOCIO-DEMOGRAPHIC	n	%
Male	28	24.1
Female	88	75.9
Mean age in years (SD)	40.10	(15.05)
19-35	50	43,1
36-59	48	41,4
60-77	18	15,5
Place of residence		
City > 500,000 inhabitants	70	60.3
Civil status		
Single	37	31.9
With a partner	28	24.1
Married	48	41.4
Widower / widow	3	2.6
Completed higher studies	89	76.7
EMPLOYMENT STATUS		
Unemployed	37	31.9
Remote work mode	44	37.9

Measurement

A proprietary research instrument was employed to measure the variables established by the accepted research model, i.e. involvement, community, activity for the benefit of others, helpfulness, and sense of social solidarity. Engagement measuring was limited to self-reporting participation frequencies in various social activities. A purpose of integration with significant persons with similar aims, interests, and beliefs was termed community (Bauman, 2001; Helgeson, 2003; Wojciszke, 2010). Weber (1956), Schütz (2004), Luckmann (1979), Barrera Jr (1986) and Haslam, Reicher, and Levine (2012) defined activity for the benefit of others as an active attitude associated with a willingness to act socially within a society. Being a giver and receiver of support, which involves the capacity to receive and provide assistance to others, was termed as helpfulness (House, Umberson, & Landis, 1988; Pearson, 1986). Thus, engagement for the benefit of others and helpfulness were viewed as defining components of social support, a transactional process involving an individual's active contact with their environment (Vaux, 1988). A sense of social solidarity was conceptualized as cohesion between individuals in a society that provides social order and stability (Durkheim, 2016), involves concern for the welfare of others (Davies & Savulescu, 2019), and is associated with a responsibility for others (Hechter, 2015; Juul, 2010; Stjerno, 2004; Tönnies, 1988; Wilde, 2007).

Considering the adopted definitions, twenty-first items were developed. There were eight questions used to assess the community. This concept was measured using a dichotomous scale, with "0" representing a negative response and "1" representing a positive response. The variable activity for the benefit of others consisted of two questions with a three-point response scale ("1" - no, "2" - I do not know, and "3" - yes). The sense of social solidarity was judged by seven statements, whereas two statements measured helpfulness. In all instances, respondents were asked to indicate how truthful each statement was about themselves on a 5-point scale, where "1" corresponded to "I strongly disagree" and "5" corresponded to "I strongly agree."

In the subsequent step, the content validity (the extent to which individual items represent the measured trait) was confirmed and judged as

excellent by five expert assessors. Therefore, the instrument consisting of all 20 items initially designed was utilized in the first and second waves of the investigation (T1 and T2). The author's Polish version of the prepared questionnaire is available upon request.

For all variables (except engagement), the total raw score was computed by summing the scores for all the questions indicated as indications for measuring a particular theoretical construct. The acquired score should be understood in terms of the trait is intensity: the higher the score, the greater the trait is intensity.

Data analysis

Before conducting analyses, descriptive statistics were calculated for all variables. We then computed Pearson's correlation coefficient between all variables under study. Additionally, we did Paired sample t-tests to see whether there were statistically significant mean differences between T1 and T2 data. Cohen's d statistic denoted the magnitude of the effect. According to Cohen's (1988) standards, effect sizes of 0.2 were deemed moderate, 0.5 as a medium, and 0.8 as substantial.

Lastly, using the MLR (Robust Maximum Likelihood) estimator, we did a multiple linear regression. The regression analysis results were validated by evaluating the degree to which their assumptions were met. The absence of collinearity between the independent variables included in the model was validated by the variance inflation factor (VIF) values ($VIF < 2.5$). The normality of the residual distribution was discovered (QQ Plot). The Durbin-Watson test (~ 2) proved no autocorrelation of residuals. The Breusch-Pagan statistic demonstrated that the variance of residuals was constant for each value of the independent variables (homoscedasticity). During the Cook distance value investigation, no potentially influential observations were detected. For all analyses requiring probability value, the significance level was considered to be 0.05.

The analyses were conducted using RStudio 1.2.5 with the lavaan package, Mplus version 8.2 (Muthén & Muthén, 2019), and the statistical program Jasp (2020. JASP Version 0.12.2).

Results

Initial analyses were centered on comparing the distributions of responses for each highlighted factor between T1 and T2 measurements (answer to Q1). The violin plot, a graphical representation of data, was utilized for this purpose.

Due to the use of kernel density estimation (KDE) in the development of the violin plot, in comparison to the box plot, the violin plot also includes a density curve symmetrically reflected down the vertical axis, allowing for the verification of multimodality in the data. The box plot in the violin plot offers information about the item's median and standard deviation. The whisker and box at the bottom of the graph reflect 75% of the sample results, while the thicker horizontal line within the box represents the median value. The location of the median outside of the box's center implies a skewed score distribution. The box's height (vertical edge of the rectangle) represents the interquartile range (IQR), representing the middle 50% of observation values.

Figure 2's graphs reveal that the scores acquired at T1 for involvement, community, activity for the benefit of others, and helpfulness span the entire range from the lowest to the highest possible total score. Only for a sense of solidarity did no responder receive the lowest possible total score in T1. In other words, the minimum score for T1 is more significant than for T2.

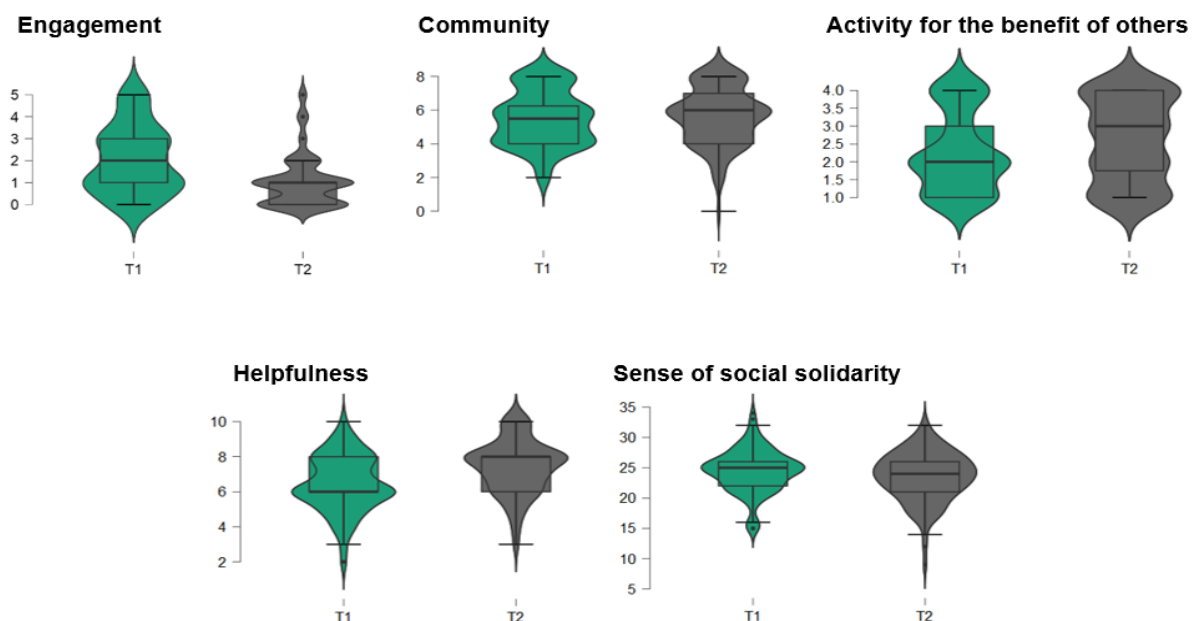


Figure 2. Violin plot for variables: comparative perspective T1 to T2

Also notable is that the distribution of scores for the helpfulness variable changes between T1 and T2. In T1, the median is at the floor of the box, indicating a right-skewed distribution, but in T2, the median is at the ceiling, showing a left-skewed distribution. The variations in the score distribution between T1 and T2 for the engagement and activity factors are less obvious but noticeable. In the case of the activity variable, it can also be observed that the median value increased from T1 to T2 and that the interquartile range changed significantly. Complementing the data stated previously are comparisons of the mean and standard deviation for T1 and T2 scores and the results of the Paired sample t-test shown in Table 2. (answer to Q1).

Table 2. Paired sample t-test results for measures in T1 to T2

Outcome	T1		T2		<i>t</i>	df	sig	Cohen's <i>d</i>
	M	SD	M	SD				
Engagement	2.19	1.35	1.29	1.01	5.95	115	.001	0.36
Community	5.49	1.63	5.62	1.68	-0.86	115	.391	0.08
Activity for the benefit of others	2.27	1.12	2.58	1.17	-2.60	115	.011	0.24
Helpfulness	6.44	1.61	7.40	1.54	5.37	115	<.001	0.50
Sense of social solidarity	24.47	3.58	23.51	4.06	2.44	115	.017	0.23

Note. Values in square brackets indicate the 95% confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation (Cumming, 2014).

* indicates $p < .05$. ** indicates $p < .01$.

Referring to the differences in the obtained mean values at T1 and T2 based on the results of the Paired sample t-test, it can be noted that only in the case of community was a result indicating the absence of statistically significant differences ($p > 0.05$) obtained. In contrast, the engagement variable decreases its intensity between T1 ($M = 2.19$, $SD = 1.35$) and T2 ($M = 1.29$, $SD = 1.01$). This difference is statistically significant $t(115) = 5.95$, $p < 0.01$; $d = 0.27$. A similar pattern can be observed concerning a sense of solidarity. It also underwent a decrease in intensity in T2 ($M = 23.51$, $SD = 4.06$) compared to T1 ($M = 24.47$, $SD = 3.58$), $t(115) = 2.44$, $p < 0.05$, $d = 0.23$. On the other hand, we see the opposite tendency in the case of activity for the benefit of others and helpfulness variables. They show an increase in intensity in T2 compared to T1. Additionally, in the case of helpfulness, it is worth noting that Cohen's *d* is the highest of all effect sizes achieved ($d = 0.50$).

In the next step, the correlations were calculated between all variables at time T1, at time T2, and between the two (Tables 3, 4, and 5). At time T1, the sense of solidarity was significantly and positively related only to activity for the benefit of others ($r = 0.29$, $p < 0.01$) (answer to Q2). In addition, a strong positive correlation between activity and engagement can be observed ($r = 0.78$, $p < 0.01$). A significant association was also found between helpfulness and engagement ($r = 0.19$, $p < 0.05$) (Table 3).

Table 3. Correlations among variables at T1

Variable	1	2	3	4
1. Engagement	–			
2. Community	0.05 [-.14, .23]			
3. Activity for the benefit of others	0.78** [.70, .84]	0.03 [-.15, .22]		
4. Helpfulness	0.08 [-.10, .26]	0.19* [.01, .36]	0.11 [-.07, .29]	
5. Sense of social solidarity	0.18 [-.00, .35]	0.03 [-.16, .21]	0.29** [.11, .45]	0.16 [-.03, .33]

Note. Values in square brackets indicate the 95% confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation (Cumming, 2014).

* indicates $p < .05$. ** indicates $p < .01$.

Table 4. Correlations among variables at T2

Variable	1	2	3	4
1. Engagement	–			
2. Community	-0.02 [-.20, .17]			
3. Activity for the benefit of others	0.55** [.41, .67]	0.07 [-.11, .25]		
4. Helpfulness	0.17 [-.01, .34]	0.26** [.08, .42]	0.24** [.06, .40]	
5. Sense of social solidarity	0.30** [.13, .46]	0.31** [.13, .46]	0.36** [.19, .51]	0.37** [.20, .51]

Note. Values in square brackets indicate the 95% confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation (Cumming, 2014).

* indicates $p < .05$. ** indicates $p < .01$.

A different correlation pattern between the tabulated variables occurred at time T2 (Table 4). In particular, it is essential to note that, in this case, the sense of solidarity was significantly and positively related to each variable (answer to Q2). The resulting r-Pearson value with these combinations was ≥ 0.30 ($p < 0.01$) each time. In addition, the correlation between activity for the benefit of others and engagement was significant although weaker ($r = 0.55$, $p < 0.01$). Moreover, helpfulness was significantly associated not only with the community ($r = 0.26$, $p < 0.01$) but also with activity for the benefit of others ($r = 0.24$, $p < 0.01$).

Finally, the associations between T1 and T2 variables were compared (Table 5) (answer to Q2). Sense of solidarity in T1 was significantly and positively correlated with activity for the benefit of others ($r = 0.22$, $p < 0.05$) and helpfulness ($r = 0.35$, $p < 0.01$) in T2. It seems interesting to note that, as in the first wave of the pandemic, a sense of solidarity at T2 was associated with activity for the benefit of others ($r = 0.28$, $p < 0.01$). In contrast, the correlation between the sense of solidarity at T2 and helpfulness at T1 was not statistically significant ($p > 0.05$). There was a significant association with engagement at T1 ($r = 0.27$, $p < 0.01$), while the sense of solidarity at T1 showed no association with engagement at T2 ($p > 0.05$). Additionally, it is essential to emphasize the moderate correlation between the sense of solidarity at T1 and at T2 (0.39 , $p < 0.01$), which can also be observed in the case of the community ($r = 0.52$, $p < 0.01$).

Table 5. Correlations between variables from T1 to T2

Variable	1 (T2)	2 (T2)	3 (T2)	4 (T2)	5 (T2)
1. Engagement (T1)	0.27** [.10, .43]	0.15 [-.04, .32]	0.24** [.06, .41]	0.09 [-.10, .26]	0.27** [.09, .43]
2. Community (T1)	-0.05 [-.23, .14]	0.52** [.37, .64]	-0.04 [-.22, .15]	0.21* [.02, .37]	0.27** [.09, .43]
3. Activity for the benefit of others (T1)	0.32** [.15, .48]	0.18 [-.00, .35]	0.33** [.16, .48]	0.17 [-.02, .34]	0.28** [.11, .44]
4. Helpfulness (T1)	0.11 [-.07, .29]	0.10 [-.08, .28]	-0.01 [-.19, .18]	0.26** [.08, .42]	0.05 [-.13, .23]
5. Sense of social solidarity (T1)	0.14 [-.05, .31]	0.08 [-.11, .25]	0.22* [.04, .39]	0.35** [.17, .50]	0.39** [.22, .53]

Note. Values in square brackets indicate the 95% confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation (Cumming, 2014).

* indicates $p < .05$. ** indicates $p < .01$.

Specific analyses directly connected to study problem Q3 utilized a multivariate linear regression model classified by pandemic wave (T1 and T2). In the calculated models, social solidarity was the dependent variable, while the independent variables were gender, age, marital status, involvement, community, activities for the benefit of others, and helpfulness.

In assessing the results reported in Table 6, it is crucial to note that only four significant independent variables have regulatory influence. In the constructed models, gender, age, and marital status at both T1 and T2 were not considered, showing that they lack explanatory power for the difference in the sense of solidarity. Using the generated R² values for the T1 and T2 models, it is feasible to discern differences in the understanding of solidarity variability explained by the selected collection of independent variables (answer to Q3). The obtained value of the multiple determination coefficient in T1 suggests that two predictors can explain 39% of the variance in the dependent variable: engagement and activity (while controlling for the other factors entered into the model). In T2, however, the obtained model explains 26% of the variation of the dependent variable, and variables including community, activity, and helpfulness positively influence the received value.

Table 6. Results of regression analysis for predictors of the sense of social solidarity with the differentiation of two COVID-19 pandemic waves (T1 across T2)

	T1		T2	
	Beta	SE	Beta	SE
Engagement	0.931***	0.236	0.131	0.082
Community	0.037	0.071	0.208**	0.077
Activity for the benefit of others	0.620***	0.136	0.195*	0.093
Helpfulness	0.120	0.123	0.254**	0.095
R²	39.3%		26.0 %	

* indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$

Comparing the regression coefficient values of the T1 and T2 models reveals considerable differences. Engagement is the most positively and significantly corresponding element with a sense of solidarity in the T1 model, followed by an activity

for the benefit of others. In contrast, in the T2 model, the association between a sense of solidarity and involvement becomes unimportant, with activity having the least significant effect of all relevant variables. In model T2, helpfulness and community are most strongly connected with a sense of solidarity, but in model T1, this association is negligible. In other words, whereas in the first wave of the pandemic, engagement and activity significantly increased the sense of social solidarity, in the third wave of the pandemic, the influence of these variables on engagement disappeared entirely. In the case of activity for the benefit of others, it declined significantly, with community and helpfulness taking precedence over activity for the use of others. Thus, it can be argued that the growth in helpfulness and community predominantly impacted the increase in the sense of solidarity during the third wave.

Discussion

The reported results of the conducted analyses lead us to conclude that the conducted research was a successful attempt to empirically validate Collins' eclectic interaction rituals theory (IRT) in the context of the COVID-19 pandemic-induced social crisis. The investigation of ritual as a connector of social life permits us to draw several conclusions regarding Polish society concerning the research questions posed.

Q1.

The interpretation of data on the level of the investigated variables in comparison terms between the first and third pandemic waves reveals different directions of change in the strength of the features that define the influence of the EE release in a crisis. This intriguing conclusion about Collins's hypotheses demonstrates that rituals are interconnected. Thus, feedback processes exist between interactions (Collins, 2020).

Looking for an explanation for the decline in engagement between the first and third waves of the pandemic, it can be assumed that it was related to the dynamics of social change, from initial mobilization, a sense of interdependence, discipline, and enthusiasm that built a strong EE, involvement in social activities as a way to cope with the pandemic and/or adapt to the situation more quickly, to partial indifference and apathy, a decline in the sense of interdependence, and a loss of Alternately, the observed disparities in degrees of engagement may have been due to an increase in

tension over time, followed by a period of tiredness (Selye, 1977). The close relationship between participation and these mechanisms also helps explain the decrease in solidarity between the contrasted waves (Spicker, 2000). In addition, according to Collins' ideas (Collins, 2011), the decline in the sense of solidarity may result from continuing social distancing, an increase in the physical distance between group members as a natural consequence of growing social isolation. This is consistent with the concept that the physical presence of individuals in the same location is required for solidarity to occur (Bawidamann, Peter, & Walthert, 2021). The ceremony was disturbed by social isolation and the requirement to wear masks. Concurrently, the transition of engagement to ICT-enabled contact has led to the decline of many physical encounters (Brooks et al., 2020; Collins, 2020).

Referring to the observed increase in activity for the benefit of others and helpfulness in the third wave compared to the first wave, it can be assumed that, despite the decrease in engagement among the respondents, willingness to help and a sense of empowerment about the possibility of receiving and providing assistance remained. Consequently, the mechanism of inertia was probably at work in both instances, thereby strengthening the habit of activity for the benefit of others and helpfulness. Simultaneously, grassroots initiatives lost their impact in favor of systemic (governmental) remedies, which had not been developed at the start of the first pandemic wave. In addition, the lack of systemic remedies in the early phases of the pandemic explains the increased degree of engagement during the first wave.

Also of importance in the setting addressed is the absence of changes in community feelings due to the social change dynamics occurring in the comparable pandemic waves. This can be explained by the fact that the triggered EE did not shift the sense of integration with significant others because the strength of these relationships was already substantial before the pandemic, and the pandemic circumstance enhanced them.

Q2.

Through ritual participation and ritual symbolism, it is also possible to reach cognitively relevant findings by referring to the linear correlations between the variables included in the chosen study model.

The findings from the first pandemic wave indicate that a sense of solidarity is tied to actions performed for the benefit of others. According to Collins' theory, the successful development of emotional coordination was tied to a sense of belonging throughout this period. This association is further supported by the fact that intensely adverse events bring individuals together and transform the ensuing emotions into a sense of solidarity (Collins, 2004). This is also supported by another theory which asserts that people act rationally while operating collectively (Spicker, 2000). and that self-interest does not exclude acting in cooperation with others, which increases the efficiency of activities conducted. In addition, collective action improves the potential of each individual, bolstering both the sense of solidarity and the efficacy of the activities.

The significant association between action for the benefit of others and engagement in the early phase of a pandemic may result from responsibility for projects carried out for the use of loved ones (parents, children, siblings, and friends) and a clear desire to behave morally. Therefore, individuals with a strong sense of agency, characterized by self-confidence and responsibility for their actions, rather than relying on government interventions and support (Biesta, 2011), engaged in activities closely related to moral consciousness and the development of subjectivity in the existing social reality.

When interpreting the acquired results, it is essential to consider the relationships discovered during the third pandemic wave. During this period, a sense of solidarity was related favorably to the community, activity for the benefit of others, and helpfulness. The shared attention to the pandemic for a lengthy period and the long-term emotions linked may have strengthened the ritual participants' sense of belonging to a group. As a result, they became willing and able to assist others. During this portion of the ritual, there was a substantial correlation between helpfulness and a sense of community. Similarly, as explained above, this may be related to the reciprocal concentration of attention, which plays a central part in the ritual and encourages a deeper awareness of each other's consciousness, resulting in a more robust sense of shared emotions (Collins, 2011).

The links between the experience of solidarity in the third wave and involvement and action in the first wave are also of cognitive relevance. When

searching for a rationale for these interdependencies, one can also turn to the mechanism of inertia discussed previously. The greater the willingness and actual action, the more likely community and solidarity will develop. This assertion is reinforced by Collins' thesis, according to which communal activities connected with emotions foster and sustain a sense of social solidarity. Rituals, therefore, include social actors interacting with one another in a shared context where participants have a sense of a common goal and an emotional experience. This is significant, considering that solidarity is essential for lowering losses and may endure due to the release of emotional energy (Mishra & Rath, 2020).

Q3.

Further interpretation of the gathered data reveals that the sense of unity that is the foundation of any society's survival in a world disrupted by the COVID-19 epidemic was the consequence of many predictors whose power of effect shifted. Consequently, the results obtained during the first wave of the pandemic indicate a clear association between solidarity and engagement and activity for the benefit of others. In contrast, during the third wave, a sense of solidarity was associated with community, helpfulness, and activity for the benefit of others, although these associations were visibly weaker. This condition may be due to the unequal distribution of emotional energy during the first wave, which was more significant than during the third wave. This relates to the broad premise that emotional energy permits one to act with initiative and decisiveness, steer social circumstances, and avoid being dominated by others on micro-levels of interaction (Collins, 2011). Thus, the great emotional energy characteristic of the first wave transferred into engagement and action characterized by a sense of motivation to act on one's objectives to achieve a specific purpose.

In contrast, during the third wave of the pandemic, as a result of fatigue and frustration with the duration of the pandemic, the overall strength of emotional energy may have decreased to the point where people lost faith in the effectiveness of their engagement or came to believe that it was unnecessary. At that time, however, the necessity of maintaining social ties became clear, indicating the continuance of a community of significant shared experiences. This appears to be consistent with the thesis (Brint, 2001; Tönnies, 1988) that establishing a community (Gemeinschaft) is

based on familial or neighbourhood ties and that the emerging social links are built on mutual trust and solidarity. Nonetheless, it is essential to note that this group has an enclave-like character, as it is confined to a small space of daily life, surrounded by contrasts originating from the diversity of Polish society. However, if a person already belongs to a group, they have the right to expect support in challenging circumstances. This is directly related to the increase in the importance of helpfulness observed in the third wave and associated with a sense of empowerment in the giving and receiving of assistance, which may be the result of highlighting specific areas of support and methods of providing it (neighbourhood shopping for the elderly, sewing protective masks, fundraising, support for the isolated, hospitals, NGO activities).

In this light, a collective focus exhibited through community, activity, and helpfulness became a crucial feature of a successful ritual during the third wave of the epidemic. These aspects are essential components of pro-social conduct and a vital portion of causation. Thus, according to Collins's thesis, the interaction ritual generated collective effervescence, influencing a strong sense of social unity (Collins, 2004). In other words, the powerful emotional experience shared by ritual participants established a shared reality in which the tendency for social involvement grew strong.

Conclusion

In conclusion, the validation of Collins' eclectic interaction ritual theory (IRT) in the context of the social crisis produced by the COVID-19 epidemic enables us to draw certain conclusions regarding the structure of the Polish civic sector. In the research framework, creating a civic attitude incorporating self-management in communal life is vital. Consequently, the emerging image of Polish society during the pandemic permits us to conclude that citizens lack faith in the reliable functioning of the public sphere, which results in a precise release of engagement and activity for the benefit of others in crises requiring a specific social uprising. Engagement in voluntary work for the benefit of others, characteristic of Polish society in these times, enables one to find value in collective efforts, identify as a community member, and establish solidarity. During the pandemic, participation in the public domain was essential to self-development and self-improvement. Even more critically, the community that

evolved during the first wave and continued until the third wave of the pandemic can be viewed as the social links that contributed to deeper relationships and the willingness to sacrifice one's resources for the sake of another individual. It helped to the emergence of social concern and pro-social emotions and became an undeniable resource for citizens in times of distress. This supports the widely held belief that participation in local activities fosters group membership awareness, a sense of community and group solidarity, forms links within the community, and results in community action (Gierszewski, 2017).

Crises compel us to seek methods to join and fight for shared aims and principles, thereby fostering a feeling of social responsibility. The breadth and scope of the spontaneous assistance supplied by people and social groupings revealed the presence of a vast reservoir of social solidarity and a willingness to take constructive action. Regardless of the nature of the problem, socially responsible behavior is essential. The essay lays the groundwork for additional investigation of community experiences during a crisis.

Limitations and Future Research

The authors are conscious that their work has limitations, which should be taken into account by readers and future researchers. The research was conducted using a proprietary instrument that was not evaluated for its psychometric qualities, despite its design according to generally accepted norms for creating measuring scales. In addition, although longitudinal data were collected, the limitation to two repeated measurements precluded the use of analytical methods to observe curvilinear relationships, which would have provided a complete picture of the impact of social changes occurring at various stages of the pandemic.

Non-random sampling, presumably not representative of the total population, is also a deficiency in the conducted research. In addition, the low response rate for both assessments affects the ultimate sample size. Nevertheless, despite these constraints, the study has yielded cognitively relevant results and will establish the authors' area of focus for future research.

References

- Baker, J. O. (2010). Social sources of the spirit: Connecting rational choice and interactive ritual theories in the study of religion. *Sociology of Religion*, 71(4), 432-456. <https://doi.org/10.1093/socrel/srq050>
- Barone, C. (2007). A Neo-Durkheimian analysis of a new religious movement: The case of Soka Gakkai in Italy. *Theory and Society*, 36(2), 117-140. <https://doi.org/10.1007/s11186-007-9023-3>
- Barrera Jr, M. (1986). Distinctions between social support concepts, measures, and models. *American journal of community psychology*, 14(4), 413-445. <https://doi.org/10.1007/BF00922627>
- Bauman, Z. (2001). *Community: Seeking Safety in an Insecure World*. Wiley. <https://philpapers.org/rec/BAUCSS>
- Bawidamann, L., Peter, L., & Walthert, R. (2021). Restricted religion. Compliance, vicariousness, and authority during the Corona pandemic in Switzerland. *European Societies*, 23(sup1), S637-S657. <https://doi.org/10.1080/14616696.2020.1833068>
- Bian, Y., Miao, X., Lu, X., Ma, X., & Guo, X. (2020). The emergence of a COVID-19 related social capital: the case of China. *International Journal of Sociology*, 50(5), 419-433. <https://doi.org/10.1080/00207659.2020.1802141>
- Biesta, G. J. (2011). Learning Democracy in School and Society. In *Learning Democracy in School and Society* (pp. 1-4). Brill. <https://brill.com/view/book/9789460915123/BP000002.xml>
- Borkowska, M., & Laurence, J. (2021). Coming together or coming apart? Changes in social cohesion during the Covid-19 pandemic in England. *European Societies*, 23(sup1), S618-S636. <https://doi.org/10.1080/14616696.2020.1833067>
- Božić, S. (2021). Interaction Ritual Chains and Sustainability of Lockdowns, Quarantines, "Social Distancing" and Isolation during the COVID-19 Pandemic. *Sociologija i prostor: časopis za istraživanje prostornoga i sociokulturnog razvoja*, 59(219), 13-34. <http://dx.doi.org/10.5673/sip.59.0.1>
- Brint, S. (2001). Gemeinschaft revisited: A critique and reconstruction of the community concept. *Sociological theory*, 19(1), 1-23. <https://doi.org/10.1111/0735-2751.00125>

- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *The lancet*, 395(10227), 912-920. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)
- Brown, K. R. (2011). Interaction ritual chains and the mobilization of conscientious consumers. *Qualitative sociology*, 34, 121-141. <https://doi.org/10.1007/s11133-010-9188-3>
- Carlsen, H. B., Toubøl, J., & Brincker, B. (2020). On solidarity and volunteering during the COVID-19 crisis in Denmark: the impact of social networks and social media groups on the distribution of support. *European Societies*, S122-S140. <https://doi.org/10.1080/14616696.2020.1818270>
- Clarke, J. M., & Waring, J. (2018). The transformative role of interaction rituals within therapeutic communities. *Sociology of Health & Illness*, 40(8), 1277-1293. <https://doi.org/10.1111/1467-9566.12773>
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*. New York, NY: Routledge Academic. <https://doi.org/10.4324/9780203771587>
- Collins, R. (2004). *Interaction Ritual Chains*. Princeton University Press. <https://doi.org/10.1515/9781400851744>
- Collins, R. (2011). *Interaction Ritual Chains*. NOMOS, Warszawa.
- Collins, R. (2020). Social distancing as a critical test of the micro-sociology of solidarity. *American journal of cultural sociology*, 8, 477-497. <https://doi.org/10.1057/s41290-020-00120-z>
- Cottingham, M. D. (2012). Interaction ritual theory and sports fans: Emotion, symbols, and solidarity. *Sociology of Sport Journal*, 29(2), 168-185. <https://doi.org/10.1123/ssj.29.2.168>
- Cumming, G. (2014). The new statistics: Why and how. *Psychological science*, 25(1), 7-29. <https://doi.org/10.1177/0956797613504966>
- Davies, B., & Savulescu, J. (2019). Solidarity and responsibility in health care. *Public Health Ethics*, 12(2), 133-144. <https://doi.org/10.1093/phe/phz008>
- Draper, S. (2014). Effervescence and solidarity in religious organizations. *Journal for the Scientific Study of Religion*, 53(2), 229-248. <https://doi.org/10.1111/jssr.12109>

- Durkheim, E. (2016). The elementary forms of religious life. In *Social Theory Re-Wired* (pp. 52-67). Routledge. <https://www.taylorfrancis.com/chapters/edit/10.4324/9781315775357-6>
- Federico, C. M., de Zavala, A. G., & Baran, T. (2021). Collective narcissism, in-group satisfaction, and solidarity in the face of COVID-19. *Social Psychological and Personality Science*, 12(6), 1071-1081. <https://doi.org/10.1177/1948550620963655>
- Gierszewski, D. (2017). *Edukacja obywatelska w przestrzeni lokalnej*. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego. <https://ruj.uj.edu.pl/xmlui/handle/item/44747>
- Goffman, E. (1967). *Interaction Ritual: Essays on face-to-face behaviour*. Routledge. <https://doi.org/10.4324/9780203788387>
- Haslam, S. A., Reicher, S. D., & Levine, M. (2012). When other people are heaven when other people are hell: How social identity determines the nature and impact of social support. In *The social cure* (pp. 157-174). Psychology Press. <https://www.taylorfrancis.com/chapters/edit/10.4324/9780203813195-12>
- Hechter, M. (2015). Solidarity, sociology of. In *International Encyclopedia of the Social & Behavioral Sciences: Second Edition* (pp. 6-9). Elsevier Inc. <https://doi.org/10.1016/B978-0-08-097086-8.32147-X>
- Heider, A., & Warner, R. S. (2010). Bodies in sync: Interaction ritual theory applied to sacred harp singing. *Sociology of Religion*, 71(1), 76-97. <https://doi.org/10.1093/socrel/srq001>
- Helgeson, V. S. (2003). Gender-Related Traits and Health. *Social Psychological Foundations of Health and Illness*, 367-394. <https://doi.org/10.1002/9780470753552.ch14>
- Hill, T., Canniford, R., & Eckhardt, G. M. (2022). The roar of the crowd: how interaction ritual chains create social atmospheres. *Journal of Marketing*, 86(3), 121-139. <https://doi.org/10.1177/00222429211023355>
- House, J. S., Umberson, D., & Landis, K. R. (1988). Structures and processes of social support. *Annual review of sociology*, 14(1), 293-318. <https://doi.org/10.1146/annurev.so.14.080188.001453>
- Husu, H.-M. (2021). Loneliness and interaction ritual theory: failed interaction chains among Finnish university students. *Emotions and Society*, 3(2), 227-244. <https://doi.org/10.1332/263169020X16065613191228>

- Igwe, P. A., Ochinanwata, C., Ochinanwata, N., Adeyeye, J. O., Ikpor, I. M., Nwakpu, S. E., Egbo, O. P., Onyishi, I. E., Vincent, O., & Nwekpa, K. C. (2020). Solidarity and social behaviour: how did this help communities to manage COVID-19 pandemic? *International Journal of Sociology and Social Policy*, 40(9/10), 1183-1200. <https://doi.org/10.1108/IJSSP-07-2020-0276>
- Juul, S. (2010). Solidarity and social cohesion in late modernity: A question of recognition, justice and judgement in situation. *European journal of social theory*, 13(2), 253-269. <https://doi.org/10.1177/1368431010362296>
- Krajewski, M., Frąckowiak, M., Kubacka, M., & Rogowski, Ł. (2021). The bright side of the crisis. The positive aspects of the COVID-19 pandemic according to the Poles. *European Societies*, 23(sup1), S777-S790. <https://doi.org/10.1080/14616696.2020.1836387>
- Lewis, K. V. (2013). The power of interaction rituals: The Student Volunteer Army and the Christchurch earthquakes. *International Small Business Journal*, 31(7), 811-831. <https://doi.org/10.1177/0266242613478438>
- Luckmann, T. (1979). Phänomenologie und Soziologie. In W. M. Sprondel & R. Grathoff (Eds.), *Alfred Schütz und die Idee des Alltags in den Sozialwissenschaften* (pp. 196-206). Stuttgart: Enke. <https://ixtheo.de/Record/160845682X>
- Maloney, P. (2013). Online networks and emotional energy: How pro-anorexic websites use interaction ritual chains to (re) form identity. *Information, Communication & Society*, 16(1), 105-124. <https://doi.org/10.1080/1369118X.2012.659197>
- Milne, C., & Otieno, T. (2007). Understanding engagement: Science demonstrations and emotional energy. *Science Education*, 91(4), 523-553. <https://doi.org/10.1002/sce.20203>
- Mishra, C., & Rath, N. (2020). Social solidarity during a pandemic: Through and beyond Durkheimian Lens. *Social Sciences & Humanities Open*, 2(1), 100079. <https://doi.org/10.1016/j.ssaho.2020.100079>
- Muthén, L. K., & Muthén, B. O. (2019). *Mplus. Statistical analysis with latent variables. User's guide* (8th ed.). Los Angeles: Muthén & Muthén.
- Olaveson, T. (2001). Collective effervescence and communitas: Processual models of ritual and society in Emile Durkheim and Victor Turner. *Dialectical Anthropology*, 26, 89-124. <https://doi.org/10.1023/A:1020447706406>

- Pearson, J. E. (1986). The definition and measurement of social support. *Journal of Counseling & Development*, 64(6), 390-395. <https://doi.org/10.1002/j.1556-6676.1986.tb01144.x>
- Rigal, A., & Joseph-Goteiner, D. (2021). The globalization of an interaction ritual chain: "Clapping for carers" during the conflict against COVID-19. *Sociology of Religion*, 82(4), 471-493. <https://doi.org/10.1093/socrel/srab044>
- Ritchie, H., Mathieu, E., Rodés-Guirao, L., Appel, C., Giattino, C., Ortiz-Ospina, E., Hasell, J., Macdonald, B., Beltekian, D., & Roser, M. (2020). Coronavirus pandemic (COVID-19). *Our world in data*. <https://ourworldindata.org/coronavirus-testing?country=~SVN>
- Robbins, J. (2009). Pentecostal networks and the spirit of globalization: On the social productivity of ritual forms. *Social Analysis*, 53(1), 55-66. <https://doi.org/10.3167/sa.2009.530104>
- Rogalski, M. (2020). COVID-19 w Polsce. <https://docs.google.com/spreadsheets/u/1/d/1ierEhD6gcq51HAm433knjvWwey4ZE5DCnu1bW7PRG3E/htmlview#>
- Sallach, D. L. (2008). Modeling emotional dynamics: Currency versus field. *Rationality and Society*, 20(3), 343-365. <https://doi.org/10.1177/1043463108092532>
- Schütz, A. (2004). *Der sinnhafte Aufbau der sozialen Welt: Eine Einleitung in die verstehende Soziologie*. Herbert von Halem Verlag. <https://elibrary.utb.de/doi/abs/10.1453/9783744517591>
- Selye, H. (1977). *Unbridled Stress*. Warszawa, PIW.
- Shanahan, L., Steinhoff, A., Bechtiger, L., Murray, A., Nivette, A., Hepp, U., Ribeaud, D., & Eisner, M. (2020). Emotional distress in young adults during the COVID-19 pandemic: evidence of risk and resilience from a longitudinal cohort study. *Psychological Medicine*, 1-10. <https://doi.org/10.1017/s003329172000241x>
- Spicker, P. (2000). *The Welfare State: a general theory*. SAGE Publications Ltd. <https://dx.doi.org/10.4135/9781446219959>
- Stjerno, S. (2004). *Solidarity in Europe: The history of an idea*. Cambridge University Press, Cambridge. <https://doi.org/10.1017/CBO9780511490378>
- Suligowski, R., & Ciupa, T. (2023). Five waves of the COVID-19 pandemic and green-blue spaces in urban and rural areas in Poland. *Environmental Research*, 216, 114662. <https://doi.org/10.1016/j.envres.2022.114662>

- Summers-Effler, E. (2002). The micro potential for social change: Emotion, consciousness, and social movement formation. *Sociological theory*, 20(1), 41-60. <https://doi.org/10.1111/1467-9558.00150>
- Tasnim, S., Hossain, M. M., & Mazumder, H. (2020). Impact of rumors and misinformation on COVID-19 in social media. *Journal of preventive medicine and public health*, 53(3), 171-174. <https://doi.org/10.3961/jpmph.20.094>
- Tönnies, F. (1988). *Community and Society*. Warszawa.
- Turner, V. (1968). *The Ritual Process: Structure and Anti-Structure*. Harmondsworth: Penguin Books.
- Turner, V., Abrahams, R., & Harris, A. (1969). *The ritual process: Structure and anti-structure*. Aldine Publishing Co. <https://doi.org/10.4324/9781315134666>
- Vallee, M. (2022). Do we need a posthumanist sociology? Notes from the COVID-19 pandemic. *Current Sociology*, 00113921221090253. <https://doi.org/10.1177/00113921221090253>
- Vaux, A. (1988). *Social support: Theory, research, and intervention*. Praeger publishers. <https://psycnet.apa.org/record/1988-98509-000>
- Voicu, B., Bartolome Peral, E., Rusu, H., Rosta, G., Comşa, M., Vasile, O.-M., Coromina, L., & Tufis, C. (2021). COVID-19 and orientations towards solidarity: the cases of Spain, Hungary, and Romania. *European Societies*, 23(sup1), S887-S904. <https://doi.org/10.1080/14616696.2020.1852439>
- Wanat, Z. (2020). *Poland declares coronavirus 'epidemic'*. POLITICO. <https://www.politico.eu/article/poland-declares-coronavirus-epidemic/>
- Weber, M. (1956). *Wirtschaft und Gesellschaft* (4th ed.). Aufl. Tübingen. https://www.mohrsiebeck.com/uploads/tx_sgpublisher/produkte/leseproben/9783161502927.pdf
- Wellman Jr, J. K., Corcoran, K. E., & Stockly-Meyerdirk, K. (2014). "God is like a drug...": Explaining interaction ritual chains in American megachurches. *Sociological Forum*, 29(3), 650-672. <https://doi.org/10.1111/socf.12108>
- White, D. B., & Lo, B. (2020). A framework for rationing ventilators and critical care beds during the COVID-19 pandemic. *Jama*, 323(18), 1773-1774. <https://doi.org/10.1001/jama.2020.5046>

- Wilde, L. (2007). The concept of solidarity: Emerging from the theoretical shadows? *The British Journal of Politics and International Relations*, 9(1), 171-181. <https://doi.org/10.1111/j.1467-856x.2007.00275.x>
- Wojciszke, B. (2010). *Agency and community. Basic dimensions of social perception*. GWP, Gdańsk. <https://www.gandalf.com.pl/b/sprawczosc-i-wspolnotowosc/>
- Wollschleger, J. (2012). Interaction Ritual Chains and Religious Participation. *Sociological Forum*, 27(4), 896-912. <https://doi.org/10.1111/j.1573-7861.2012.01361.x>
- Xiang, K., Huang, W.-J., Gao, F., & Lai, Q. (2022). COVID-19 prevention in hotels: Ritualized host-guest interactions. *Annals of Tourism Research*, 93, 103376. <https://doi.org/10.1016/j.annals.2022.103376>
- Związek Przedsiębiorców i Pracodawców. (2021). *Podsumowanie Lockdownu w Polsce*. Związek Przedsiębiorców i Pracodawców. <https://zpp.net.pl/wp-content/uploads/2021/01/25.01.2021-Business-Paper-Podsumowanie-lockdownu-w-Polsce.pdf>