

EXPLORING THE NEED FOR CHAOS: AN EXAMINATION OF POLITICAL
PREFERENCES IN THE UNITED STATES AND POLAND

by

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ABSTRACT

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Adviser: Todd K. Shackelford, Ph.D.

This dissertation examines the relationship between the Need for Chaos (NFC) and political preferences in the United States and Poland. Across four studies, it investigates NFC in relation to ideological orientation and party support, and compares its expression across two contrasting political systems. Study 1 ($n = 400$) found no significant association between NFC and political orientation or party preference in the US. Study 2 ($n = 474$) translated and validated the NFC_{Chaos-R} scale for use in Polish. Study 3 ($n = 472$) replicated the analyses in Poland, again finding no consistent link between NFC and ideological or party affiliation. Study 4 ($n = 872$) offered a cross-national comparison, showing higher NFC levels among Polish participants regardless of political alignment. Across all studies, NFC was more closely related to psychological traits such as status-driven risk-taking and social disconnection than to ideological content. The findings suggest that NFC reflects a generalized disposition toward system disruption, shaped more by context and psychological factors than by political ideology.

Keywords: *Need for Chaos, NFC, political preferences, cross-cultural comparison, United States, Poland*

TABLE OF CONTENTS

ABSTRACT	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	ix
LIST OF FIGURES	xii
LIST OF ABBREVIATIONS	xvi
LITERATURE	1
Introduction to Political Preferences	1
The Need for Chaos	5
Sex differences in the Need for Chaos	9
Concepts related to the NFC	10
Right-Wing and Left-Wing Authoritarianism	11
Social Dominance Orientation	12
Cross-cultural examination	12
The objective of the dissertation	15
The rationale for country selection	17
Significance of the current research	19
STUDY 1	23
Participants	23
Procedure	25
Managing data quality	25
Materials	26

TABLE OF CONTENTS – Continued

NFC _{Chaos-R}	29
Status Dispositions and Social Marginalization	30
Additional measures	31
Right-Wing and Left-Wing Authoritarianism	31
Social Dominance Orientation	33
Informal predictions	34
Results	36
Descriptive statistics	36
Correlations between the scales	41
Differences among US American Democratic and Republican supporters	43
Right-Wing Authoritarianism	53
Left-Wing Authoritarianism	54
Social Dominance Orientation	55
Differences among US American Left-Wing and Right-Wing supporters	56
Sex differences in the US American sample	62
Discussion	63
STUDY 2	70
Translation and adaptation of the Need for Chaos Scale-Revised	70
The translators	72
Final version of the scale	73
Participants	74

TABLE OF CONTENTS – Continued

Procedure	74
Materials	75
Results	76
Psychometric validation of scales	76
Descriptive statistics for the Need for Chaos Scale	82
Discussion	88
STUDY 3	90
Participants	90
Procedure	91
Materials	91
Status Dispositions and Social Marginalization	95
Additional measures	95
Right-Wing and Left-Wing Authoritarianism	95
Social Dominance Orientation	96
Informal predictions	96
Results	98
Descriptive statistics	98
Correlations between the scales	104
Differences among Polish party supporters	106
Right-Wing Authoritarianism	110
Left-Wing Authoritarianism	111

TABLE OF CONTENTS – Continued

Social Dominance Orientation	112
Differences between Lean, Moderate, and Strong supporters of parties in Poland	113
Differences among Polish Left-Wing and Right-Wing supporters	118
Sex differences in the Polish sample	124
Discussion	125
STUDY 4	131
Participants, procedure, materials	131
Cross-cultural comparison	131
Informal predictions	132
Results	134
Differences between the US and Poland	134
Sex differences between the US Americans and Poles	142
Discussion	143
LIMITATIONS	151
GENERAL DISCUSSION	152
Synthesizing the Findings	152
Cross-national and systemic contexts	154
Interpreting NFC beyond ideology	155
The role of psychological dispositions	155
RESEARCH IMPLICATIONS	157

TABLE OF CONTENTS – Continued

Reframing NFC as a systemic orientation	157
Clarifying NFC's relationship to extremism	158
Measurement and cross-cultural considerations	158
Toward a motivational-contextual model of disruption	159
KEY FUTURE DIRECTIONS	160
Include more politically extreme individuals	160
Study NFC in other countries	160
Study the role of party rhetoric	160
Explore offline and online behavior	161
Examine interventions	161
CONCLUSIONS	162
APPENDICES	163
Appendix A Survey used in Study 1	164
Appendix B Survey used in Study 2	171
Appendix C Survey used in Study 3	172
Appendix D The Institutional Review Board's decision letter	179
REFERENCES	180

LIST OF TABLES

Table 1	Political party preferences in the US Americans.	28
Table 2	Left-wing and right-wing preferences in the US Americans.	29
Table 3	Basic descriptive statistics for the US Americans.	37
Table 4	Correlations between the scales for the US Americans	41
Table 5	Results of quadratic regression analysis in the US American sample	42
Table 6	Differences between Democratic and Republican voters in the US American sample	44
Table 7	Kruskal-Wallis ANOVA results for differences in scale scores among supporters of political parties in the US American sample	49
Table 8	Spearman's rank-order correlations between the Left-wing and Right-wing supporters and scale scores in the US American sample	57
Table 9	Sex differences in psychological scale scores in the US American sample: Student's t-test results	62
Table 10	Factor loadings for the Polish sample	77
Table 11	Factor loadings for the US American sample	80
Table 12	Descriptive statistics and discriminatory power of individual items in the final version of the questionnaire	81
Table 13	Basic descriptive statistics of the Need for Chaos scale	82
Table 14	Differences in the Need for Chaos scale in Polish and US American samples	83
Table 15	Differences in the Need for Chaos scale in the Polish sample	86
Table 16	Differences in the Need for Chaos scale in the US American sample	87
Table 17	Correlations between the Need for Chaos scale and participants' age in Polish and US American samples	88

LIST OF TABLES – Continued

Table 18	Political party preferences in Poland.	94
Table 19	Left-wing and Right-wing preferences in Poland.	95
Table 20	Basic descriptive statistics for Poles.	99
Table 21	Correlations between the scales for Poles	104
Table 22	Results of quadratic regression analysis in the Polish sample	105
Table 23	Kruskal-Wallis ANOVA results for differences in scale scores among supporters of political parties in the Polish sample	107
Table 24	Spearman's rank-order correlations between the strength of affiliation with Lewica and scale scores in the Polish sample	113
Table 25	Spearman's rank-order correlations between the strength of affiliation with KO and scale scores in the Polish sample	114
Table 26	Spearman's rank-order correlations between the strength of affiliation with PL2050 and scale scores in the Polish sample	115
Table 27	Spearman's rank-order correlations between the strength of affiliation with PiS and scale scores in the Polish sample	116
Table 28	Spearman's rank-order correlations between the strength of affiliation with Konfederacja and scale scores in the Polish sample	117
Table 29	Spearman's rank-order correlations between left-wing and right-wing political orientation and psychological scale scores in the Polish sample	119
Table 30	Sex differences in psychological scale scores in the Polish sample: Student's t-test results	124
Table 31	Comparison of the scale scores between US Democratic supporters and Polish Left-Wing parties' supporters	134
Table 32	Comparison of the scale scores between US Republican supporters and Polish Right-Wing parties' supporters	135

LIST OF TABLES – Continued

Table 33	Comparison of the scale scores among Strong Left-Wing supporters in the US and Poland	136
Table 34	Comparison of the scale scores among Moderate Left-Wing supporters in the US and Poland	137
Table 35	Comparison of the scale scores among Lean Left-Wing supporters in the US and Poland	138
Table 36	Comparison of the scale scores among Lean Right-Wing supporters in the US and Poland	139
Table 37	Comparison of the scale scores among Moderate Right-Wing supporters in the US and Poland	140
Table 38	Comparison of the scale scores among Strong Right-Wing supporters in the US and Poland	141

LIST OF FIGURES

Figure 1	Causes and consequences of Need for Chaos – theoretical model by Arceneaux et al., 2021	6
Figure 2	The classification of Polish political parties along the left-right spectrum	18
Figure 3	Conceptual plan of the dissertation	20
Figure 4	Histogram of Need for Chaos scores among US Americans	37
Figure 5	Histogram of Right-Wing Authoritarianism scores among US Americans	38
Figure 6	Histogram of Left-Wing Authoritarianism scores among US Americans	38
Figure 7	Histogram of Social Dominance Orientation scores among US Americans	39
Figure 8	Histogram of Status-Driven Risk-Taking scores among US Americans	39
Figure 9	Histogram of Loneliness scores among US Americans	40
Figure 10	Histogram of 10-Step Ladder for Societal Position scores among US Americans	40
Figure 11	Differences in Need for Chaos scores among supporters of Democrats and Republicans in the US American sample	45
Figure 12	Differences in Right-Wing Authoritarianism scores among supporters of Democrats and Republicans in the US American sample	45
Figure 13	Differences in Left-Wing Authoritarianism scores among supporters of Democrats and Republicans in the US American sample	46
Figure 14	Differences in Social Dominance Orientation scores among supporters of Democrats and Republicans in the US American sample	46
Figure 15	Differences in Status-Driven Risk-Taking scores among supporters of Democrats and Republicans in the US American sample	47
Figure 16	Differences in Short-Form Measure of Loneliness scores among supporters of Democrats and Republicans in the US American sample	47
Figure 17	Differences in the 10-Step Ladder for Societal Position scores among supporters of Democrats and Republicans in the US American sample	48

LIST OF FIGURES – Continued

Figure 18	Differences in Need for Chaos scores among supporters of Democrats and Republicans in the US American sample: Details	50
Figure 19	Differences in Status-Driven Risk-Taking scores among supporters of Democrats and Republicans in the US American sample: Details	51
Figure 20	Differences in Short-Form Measure of Loneliness scores among supporters of Democrats and Republicans in the US American sample: Details	51
Figure 21	Differences in 10-Step Ladder for Societal Position scores among supporters of Democrats and Republicans in the US American sample: Details	52
Figure 22	Differences in Right-Wing Authoritarianism scores among supporters of Democrats and Republicans in the US American sample: Details	53
Figure 23	Differences in Left-Wing Authoritarianism scores among supporters of Democrats and Republicans in the US American sample: Details	54
Figure 24	Differences in Social Dominance Orientation scores among supporters of Democrats and Republicans in the US American sample: Details	55
Figure 25	Differences in Need for Chaos scores among Left-Wing and Right-Wing supporters in the US American sample	58
Figure 26	Differences in Right-Wing Authoritarianism scores among Left-Wing and Right-Wing supporters in the US American sample	58
Figure 27	Differences in Left-Wing Authoritarianism scores among Left-Wing and Right-Wing supporters in the US American sample	59
Figure 28	Differences in Social Dominance Orientation scores among Left-Wing and Right-Wing supporters in the US American sample	59
Figure 29	Differences in Status-Driven Risk-Taking scores among Left-Wing and Right-Wing supporters in the US American sample	60
Figure 30	Differences in Short-Form Measure of Loneliness scores among Left-Wing and Right-Wing supporters in the US American sample	60
Figure 31	Differences in the 10-Step Ladder for Societal Position scores among Left-Wing and Right-Wing supporters in the US American sample	61
Figure 32	Scree plot for the Polish sample	77

LIST OF FIGURES – Continued

Figure 33	Scree plot for the US American sample	79
Figure 34	Distribution of the Need for Chaos scale in the Polish sample	84
Figure 35	Distribution of the Need for Chaos scale in the US American sample	84
Figure 36	Mean value and 95% CI of the Need for Chaos results in Polish and US American samples	85
Figure 37	Histogram of Need for Chaos scores in the Polish sample	100
Figure 38	Histogram of Right-Wing Authoritarianism scores in the Polish sample	100
Figure 39	Histogram of Left-Wing Authoritarianism scores in the Polish sample	101
Figure 40	Histogram of Social Dominance Orientation scores in the Polish sample	101
Figure 41	Histogram of Status-Driven Risk-Taking scores in the Polish sample	102
Figure 42	Histogram of Loneliness scores in the Polish sample	102
Figure 43	Histogram of 10-Step Ladder for Societal Position scores in the Polish sample	103
Figure 44	Differences in Need for Chaos scores among supporters of different political parties in Poland	108
Figure 45	Differences in Status-Driven Risk-Taking scores among supporters of different political parties in Poland	108
Figure 46	Differences in Short-Form Measure of Loneliness scores among supporters of different political parties in Poland	109
Figure 47	Differences in the 10-Step Ladder for Societal Position scores among supporters of different political parties in Poland	109
Figure 48	Differences in Right-Wing Authoritarianism scores among supporters of different political parties in Poland	110
Figure 49	Differences in Left-Wing Authoritarianism scores among supporters of different political parties in Poland	111

LIST OF FIGURES – Continued

Figure 50	Differences in Social Dominance Orientation scores among supporters of different political parties in Poland	112
Figure 51	Differences in Need for Chaos scores among Left-Wing and Right-Wing supporters in the Polish sample	120
Figure 52	Differences in Right-Wing Authoritarianism scores among Left-Wing and Right-Wing supporters in the Polish sample	120
Figure 53	Differences in Left-Wing Authoritarianism scores among Left-Wing and Right-Wing supporters in the Polish sample	121
Figure 54	Differences in Social Dominance Orientation scores among Left-Wing and Right-Wing supporters in the Polish sample	121
Figure 55	Differences in Status-Driven Risk-Taking scores among Left-Wing and Right-Wing supporters in the Polish sample	122
Figure 56	Differences in Short-Form Measure of Loneliness scores among Left-Wing and Right-Wing supporters in the Polish sample	122
Figure 57	Differences in the 10-Step Ladder for Societal Position scores among Left-Wing and Right-Wing supporters in the Polish sample	123
Figure 58	10-Step Ladder for Societal Position	170
Figure 59	10-Step Ladder for Societal Position	178

LIST OF ABBREVIATIONS

NFC	Need for Chaos
NFC _{Chaos-R}	Need for Chaos-Revised scale
US	United States
UK	United Kingdom
RWA	Right-Wing Authoritarianism
LWA	Left-Wing Authoritarianism
SDO	Social Dominance Orientation
SDRT	Status-Driven Risk-Taking scale
SFML	Short-Form Measure of Loneliness
LFSP	10-Step Ladder for Societal Position
IRB	Institutional Review Board
KO	Koalicja Obywatelska
PL2050	Koalicja Polski 2050 Szymona Hołowni i PSL-Koalicji Polskiej
PiS	Prawo i Sprawiedliwość
Konfederacja	Konfederacja Wolność i Niepodległość

LITERATURE

Introduction to Political Preferences

Political preferences, shaped by historical events and societal changes, have undergone a continual evolution. In ancient civilizations, rulers often held authority based on hereditary principles and political preferences, which were largely shaped by dynastic considerations (e.g., Haviland, 1977). For instance, the Roman Empire witnessed a transition from the Roman Republic's emphasis on civic virtue and citizenship to the rule of emperors, altering the political preferences of the populace (Loewenstein, 1973). The Middle Ages saw the emergence of feudal systems, within which political preferences were closely tied to the feudal hierarchy (Dumolyn, 2007). Peasants, nobility, and clergy each had distinct roles and preferences, reflecting the stratified nature of society (Davis, 2006). The Renaissance period marked a shift toward individualism (Black, 2019) and the rise of city-states (Glassman, 2019). This era saw the flourishing of political philosophies, such as those of Machiavelli, exploring the dynamics of power and governance (Mansfield, 1977). Societies transitioned from feudalism to more centralized forms of governance, and political preferences evolved to reflect changing notions of authority and citizenship. The American (Sheps, 2018) and French (Fisch, 2015) Revolutions crystallized these ideas, ushering in an era in which popular sovereignty and representation became central to political preferences. In the 19th century, the Industrial Revolution and the rise of capitalism introduced new dynamics to political preferences focusing on the economy (Wallerstein, 1974). The 20th century witnessed the impact of global conflicts, ideological struggles, and decolonization on political preferences; the

Cold War rivalry between the United States (US) and the Soviet Union led to the polarization of political preferences along ideological lines (Thompson, 1981). Civil rights movements in the US (Andrews, 2013) and anti-colonial struggles (Sefa Dei & Asgharzadeh, 2021) across the globe further underscored the interconnectedness of political preferences with broader social movements. In recent decades, globalization and technological advancements have brought about a new dimension to political preferences (e.g., Milner, 2021), with issues such as climate change, human rights, and economic globalization influencing the preferences of a more interconnected and information-savvy global populace.

As we can observe in human recorded history, political preferences play a pivotal role in shaping policy decisions, influencing public opinion, and guiding individual behavior within the context of a society (Blom-Hansen et al., 2016; Leeper & Slothuus, 2014), and understanding this influence is important for comprehending the intricacies of political systems and their impact on governance. Policy decisions are reflective of prevailing political preferences (Colombo & Kriesi, 2017); governments, whether democratic or authoritarian, formulate and implement policies based on the preferences of the electorate or ruling elite, and public opinion, shaped by diverse political preferences, serves as a barometer for the success or failure of policies and government actions (Erikson, 1976). Political preferences influence individual behavior, informing decisions in various aspects of life such as consumption patterns, social interactions, and civic engagement (Elbanna et al., 2014; Vössing & Weber, 2019; Wojcieszak, 2014), and the influence of these preferences is complex and reciprocal. Thus, policies implemented

by governments can also shape and mold political preferences as people experience their consequences, and public opinion provides feedback on the efficacy of policies, influencing policymakers in a continuous feedback loop (Ashok & Huber, 2020; Campbell, 2012; Furth-Matzkin & Sunstein, 2016). In conclusion, political preferences are integral to the functioning of political systems, guiding policies, shaping public opinion, and impacting individual behavior. Recognizing the interconnectedness of these elements is crucial for a comprehensive understanding of how political landscapes evolve and adapt to the preferences of a society.

Individuals' political preferences in society have the potential to shape the direction of governance and impact various facets of social life. It is important to acknowledge that certain threats can arise when political preferences become extreme or rigid (e.g., Canetti et al., 2013; Jost, 2017; Jost et al., 2003, 2007; Zmigrod, 2020; Zmigrod & Goldenberg, 2020). One notable threat is the polarization of society, whereby individuals align themselves with extreme ideologies, creating deep divisions (Abramowitz & Saunders, 2008) and hindering constructive dialogue (Strickler, 2018), which can lead to corroding democracies (Arbatli & Rosenberg, 2021). For instance, the rise of extreme right-wing and left-wing political movements in various countries around the globe has led to increased polarization, making it challenging to find common ground on important issues (Bale, 2003; Bornschier, 2010; Castanho Silva, 2018; Safronov, 2018). Additionally, the entrenchment of political preferences can contribute to a lack of flexibility in policy discussions (Strickler, 2018), and when individuals adhere strictly to their political beliefs without openness to compromise, it can impede the formulation of

pragmatic and effective policies that address the diverse needs of the population.

Moreover, the mobilization of extreme political preferences can lead to social unrest (Passarelli & Tabellini, 2017) and conflicts (Kranton et al., 2012), as seen in historical examples in which radical political movements have sparked protests, demonstrations, or even violent uprisings (e.g., Cheng, 2020; Muis & Immerzeel, 2017). In conclusion, understanding the concrete threats associated with individuals' political preferences is essential for maintaining a balanced and functional society. The potential for polarization, policy rigidity, and social unrest underscores the need for an examination of how political preferences are shaped in individuals. Thus, by studying the factors influencing these preferences, such as specific personality traits or perceived social marginalization, policymakers and researchers can develop strategies to mitigate the negative consequences and foster a more informed, adaptable, and cohesive society.

Understanding these phenomena is particularly important in the context of the Need for Chaos – a desire for the destruction of order and established structures, with hope for a new beginning – as this individual difference variable sheds light on how these underlying factors contribute to chaos-seeking behaviors, with their potential implications for political landscapes.

The Need for Chaos

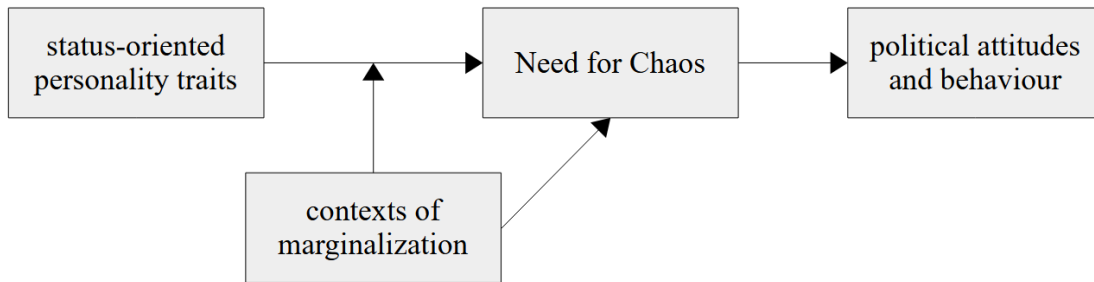
The Need for Chaos (NFC) is a psychological concept that explores the motivations behind the views of individuals who desire chaos, particularly when perceiving themselves as marginalized (Arceneaux et al., 2021). This framework postulates that political attitudes are shaped by psychological needs, specifically manifesting as an earnest yearning for chaos as a transformative agent. High NFC indicates a psychological disposition wherein certain individuals actively seek disorder within societal structures, thereby challenging established norms and power structures predicated on a perception of marginalization. This inclination is fundamentally rooted in a sense of alienation or disadvantage within the prevailing social order (see Figure 1). The NFC framework posits that chaos, rather than being inherently destructive, serves as a strategic tool for radical change, reflecting a belief in its indispensability for both personal and collective progress (Arceneaux et al., 2021; Petersen et al., 2023a, 2023b).

The guiding conceptual NFC framework was advanced by Michael Bang Petersen, Mathias Osmundsen, and Kevin Arceneaux (Arceneaux et al., 2021, then further explained in Petersen et al., 2023a, 2023b), who advance the argument that a segment of the American electorate, previously marginalized, gravitates toward "chaos incitement". This segment of the electorate has acquired influential leverage, particularly in the context of the ascendance of social media, which has empowered individuals to disseminate information portraying political candidates or groups negatively with a diminished evidential basis. This encompasses the transmission of information categorized as hostile political rumors, which has been implicated in consequential

political outcomes such as the 2016 US presidential election (Edsall, 2019). Chaos-seeking is a strategic recourse by marginalized status-seekers who are willing to adopt disruptive tactics. The Need for Chaos is defined as “a desire for a new beginning through the destruction of order and established structures” (Arceneaux et al., 2021). Those meeting the criteria for a "need for chaos" express this need by, for example, willingly disseminating disinformation. Their objective is not ideological advancement; rather, it is the undermining of political elites across the spectrum, coupled with the mobilization of individuals against politicians in general. The dissemination of hostile political rumors is not predicated on a belief in their veracity; rather, for the core group, these rumors serve as instruments for fomenting disruption (Arceneaux et al., 2021).

Figure 1

Causes and consequences of Need for Chaos – theoretical model by Arceneaux et al., 2021.



The Need for Chaos-Revised scale (NFC_{Chaos-R}) quantitatively operationalizes the NFC (for the scale, see Appendix A). Comprised of nine items assessing the desire for chaos, destruction, and the overthrow of established structures, the scale provides a systematic approach to gauging disruptive inclinations within populations. Participants indicate the extent to which they agree or disagree with statements such as “I think

society should be burned to the ground”. The scale enables researchers to measure the extent to which individuals resonate with chaos for societal transformation. The authors (Arceneaux et al., 2021) conducted surveys in several Anglo-Saxon countries (Australia, Canada, the UK, and the US), wherein they identified individuals drawn to chaos based on affirmative responses to statements reflecting a desire for societal upheaval. In the US near the 2016 presidential election, preliminary analysis indicated a positive correlation between $NFC_{Chaos-R}$ and sympathy for Trump, a less strongly positive correlation with sympathy for Sanders, and a negative correlation with sympathy for Clinton (Edsall, 2019; private correspondence, unpublished preliminary analysis). This study underscores that while the extreme discontent expressed in the $NFC_{Chaos-R}$ represents a minority view, it commands substantial support. Notably, percentages such as 24% agreeing that society should be burned to the ground, 40% concurring with the idea of letting political and social institutions burn, and 40% advocating for tearing down and starting over the existing social institutions were deemed “staggering” (Petersen et al., 2018). The scale offers insights into the thoughts and behaviors of individuals motivated to entertain chaotic ideas when alone and engaged with social media, and this behavior contributes to, for example, the propagation of hostile political rumors, conspiracy theories, and fake news (Arceneaux et al., 2021; Petersen et al., 2023a, 2023b).

The significance of the Need for Chaos lies in understanding the psychological underpinnings of individuals with high $NFC_{Chaos-R}$ scores. Although it remains an open question whether those with higher chaotic motivations translate these motivations into action, the proposed dissertation investigates the link between chaotic motivations and

supporting populist politicians. The escalating distrust among Republican voters of higher education and empirically-based science aligns with the intense hostility to political establishments among "chaos voters". The 2024 US presidential election, which resulted in the election of Donald Trump, has brought renewed relevance to this line of inquiry. The policies and rhetorical style of the Trump administration have reflected themes frequently associated with high NFC scores, including antagonism toward political institutions, skepticism of higher education, and the dismissal of empirically grounded science. This alignment suggests that the increasing distrust among Republican voters toward traditional institutions not only anticipated electoral support for the Republican candidate but also corresponded with subsequent governance practices. As social media continues to amplify anti-establishment narratives, understanding the distribution and political implications of NFC across the electorate may contribute to more precise analyses of contemporary political dynamics. Additionally, awareness of demographic and geographic variation in chaos-seeking tendencies can aid in crafting targeted approaches. Ultimately, the NFC concept may provide insights into a segment of the electorate that can influence political dynamics in the upcoming elections.

The $NFC_{\text{Chaos-R}}$ is currently available only in English. However, it holds relevance in non-English-speaking countries and cultures as well, for example, in the Polish political context, following the significant 2023 parliamentary election that resulted in a significant shift in political power (National Electoral Commission, 2023). As Poland concluded its 2025 presidential election, a nationalist conservative candidate secured victory, notably bolstered by voters of more fringe far-right candidates. This result aligns

with earlier projections that anticipated a shift in voter support due to rapidly changing political preferences (Scovil, 2024) and declining trust in mainstream politicians (Badora, 2024). This conceptual framework provides insights into the motivations and sentiments of Polish voters, particularly concerning anti-establishment attitudes, disruptive tendencies, and the desire for radical change within the electorate; this can offer valuable insights for political strategies to navigate or address prevailing chaos-seeking tendencies, potentially influencing the outcomes of the upcoming elections and further shaping the political landscape.

Sex differences in the Need for Chaos

As of now, there are no studies examining sex and the NFC. However, it may be expected that men exhibit a higher NFC due to social norms that associate masculinity with risk-taking, defiance, and rebellion (Giaccardi et al., 2017; Mahalik et al., 2003; Reardon & Govender, 2013), potentially leading to greater comfort with or inclination towards disorder as a form of expression, whereas women may be socialized to prioritize communal stability (Eagly & Steffen, 1984; Heilman & Okimoto, 2007), which could result in lower NFC scores if maintaining harmony is culturally emphasized for women. Men may express chaos-seeking more overtly, driven by tendencies for externalized aggression, which aligns with high NFC attitudes like societal disruption and rebellion, whereas women may express chaos-seeking through subtler or indirect methods, such as social media activism or critique of institutional norms, rather than direct chaos incitement (Kim et al., 2022; Mendez et al., 2021). Women tend to report higher scores on psychological measures of agreeableness and conscientiousness, which may contribute

to a lower inclination for NFC; a preference for order and social stability might lead women to channel grievances through structured reform efforts rather than chaos, whereas on the other hand, men tend to score higher on traits associated with openness to experience or nonconformity, possibly correlating with a higher NFC disposition if they view chaos as a route to self-expression or societal restructuring (Bates & Heaven, 2001; Vianello et al., 2013). Finally, men may be more likely to engage in direct and risky behaviors aligned with NFC, such as the dissemination of disruptive or hostile rumors, whereas women might express NFC through networked efforts (e.g., collective action on social media) rather than overtly disruptive behaviors, possibly due to lower tolerance for riskier chaotic expressions in many societies (L. M. Ashton et al., 2014). Though no studies have directly examined sex and NFC, existing literature suggests that men might score higher due to social norms that associate masculinity with risk-taking and defiance, yet this prediction is complex and context-dependent.

Concepts related to the NFC

Currently, there is limited research linking the NFC to other psychological concepts, but it is reasonable to anticipate connections with relevant constructs in political psychology. NFC suggests a psychological inclination towards disrupting societal norms and structures. This disposition could potentially intersect with various psychological frameworks that explore attitudes and behaviors related to political dynamics, and exploring these potential associations would be crucial for developing a more comprehensive understanding of the role NFC plays in shaping political orientations and behaviors.

Right-Wing and Left-Wing Authoritarianism. Although empirical studies directly linking NFC to authoritarianism are currently lacking, theoretical connections can be postulated. Individuals with a high NFC may gravitate towards authoritarian ideologies, such as right-wing authoritarianism (RWA) or left-wing authoritarianism (LWA), driven by a shared discontent with the status quo and a craving for radical change (see, e.g., Fasce & Avendaño, 2020). Those inclined towards RWA might favor strong, authoritarian leaders who promise to restore order amidst perceived chaos and uphold traditional values, whereas those leaning towards LWA might support authoritarian measures aimed at dismantling perceived oppressive structures in pursuit of social justice and equality. However, these hypothetical associations need empirical examination to assess the extent and nature of NFC's link with authoritarian tendencies across different ideological frameworks. Investigating such links could provide valuable insights into how psychological predispositions contribute to political attitudes and behaviors in contemporary societies.

Understanding the potential link between NFC and authoritarianism requires empirical investigation to validate and refine these hypotheses; research should focus on how NFC influences political attitudes and behaviors, examining whether individuals predisposed to chaos-seeking behaviors are more likely to endorse authoritarian solutions across ideological divides. By uncovering these dynamics, we can gain insights into the underlying motivations behind political preferences and actions, contributing to a better understanding of societal polarization and the dynamics of democratic governance.

Social Dominance Orientation. Although empirical studies directly linking NFC to Social Dominance Orientation (SDO) are currently absent, theoretical connections can be posited. SDO refers to a psychological orientation whereby individuals favor hierarchical social structures and endorse dominance by some groups over others. Individuals high in NFC who seek disruption and upheaval may exhibit tendencies that align with aspects of SDO. For example, Pratto et al. (1994) found that high SDO individuals tend to support group-based hierarchy and inequality. They might perceive societal chaos as an opportunity to assert dominance or to challenge existing hierarchies in unconventional ways, driven by a desire to reshape social orders to their advantage or preference.

Understanding the hypothetical link between NFC and SDO necessitates empirical investigation to substantiate these associations; research should explore whether individuals with a high NFC are more likely to exhibit higher levels of SDO, indicating a propensity toward endorsing hierarchical social structures and dominance. Examining how these psychological dispositions interact and influence one another could provide a valuable understanding of the motivations behind disruptive behaviors and attitudes toward social hierarchy, which would contribute to a deeper understanding of how individual psychological traits shape broader societal dynamics.

Cross-cultural examination

Cross-cultural studies in political science offer important insights into the manifestation of political phenomena across diverse socio-cultural contexts (Ross, 1988). Investigating political behavior (particularly the relationship between the NFC and

political preferences) contributes to a globally applicable knowledge base (Dalton, 2000). One fundamental realization is that political ideologies and preferences are not universally standardized. The interpretation of left-wing and right-wing ideologies, for example, may vary between the US and Poland (e.g., Aspelund et al., 2013; Thorisdottir et al., 2007). For example, there are clear differences in the understanding of "leftness" and "rightness" between Western Europe and Central and Eastern Europe (Hooghe et al., 2024). In Western Europe, the economic right-left spectrum correlates positively with cultural values, such that right-leaning economic views are typically associated with conservative cultural views. In contrast, in Central and Eastern Europe, there is a negative correlation, such that right-leaning economic views are typically associated with progressive cultural views (see data visualization by Medzihorsky, 2024). This recognition forms the basis for identifying variations in the interpretation and expression of political beliefs, fostering a more accurate portrayal of political dynamics.

Cultural nuances present a primary challenge in cross-cultural studies, as political preferences are deeply intertwined with cultural intricacies (e.g., Broesch et al., 2020; Levine et al., 2007). Directly comparing political landscapes becomes challenging due to variations in cultural values (White et al., 1982). For instance, the emphasis on individualism in the US may differ significantly from the importance placed on community values in Poland (Forbes et al., 2009; Kemmelmeier et al., 2003; Robert et al., 2000). These cultural distinctions influence how political preferences are formed and expressed. Semantic variations further complicate cross-cultural comparisons, as political terms may not have the same meanings across cultures (Arnulf & Larsen, 2020).

Successfully navigating these cross-cultural challenges is essential when analyzing and comparing political preferences.

The historical context adds another layer of complexity to cross-cultural studies. Historical experiences play a significant role in shaping political landscapes, and variations in historical trajectories can lead to diverse political ideologies and preferences (Phinney, 2000). For example, the historical struggle for independence in Poland may influence the perception of political activism differently than historical events in the US (Vecchione et al., 2015). Despite these challenges, cross-cultural studies offer opportunities for enriching our understanding of political psychology and behavior by uncovering factors that shape political preferences beyond the framework of a single country.

Investigating political preferences in both the US and Poland provides a unique opportunity to gain insights into the intersection of individual psychology, cultural dynamics, and political behavior. Cultural variability in the interpretation of political ideologies, such as the abovementioned concept of individualism in the US versus collective values in Poland (Forbes et al., 2009; Kemmelmeier et al., 2003; Robert et al., 2000), highlights how cultural nuances influence the framing of political ideologies, and semantic differences in political discourse, wherein terms like “liberalism” or “conservatism” may have distinct meanings (Azarbondy et al., 2017), require addressing to ensure accurate interpretations of political preferences across cultural contexts. Analyzing party affiliations and ideological alignments in these different countries allows for a nuanced understanding of how individuals align themselves within the political

spectrum. In conclusion, studying political preferences in both the US and Poland may yield insights into the interplay of culture, history, and individual psychology, thereby enriching our understanding of political psychology and behavior.

Prior cross-cultural studies examining political behavior have laid the groundwork for understanding patterns and variations in political ideologies, party systems, and voter behavior across different societies. Comparisons between Western (e.g., the US) and Eastern European (e.g., Poland) cultures reveal differences in individualism versus collectivism, influencing political values (Lomas et al., 2023), and research on party systems examines differences in party affiliations and ideological alignments between the US and Poland (Jelen & Wilcox, 1997; Karpov, 2002). Studies of the impact of historical experiences on political choices, particularly in post-communist societies (Havrylyshyn, 2020), contribute to understanding enduring influences on political preferences (Pierson, 2000). Cross-cultural studies exploring psychological factors, such as Kagitcibasi's (2017) work on authoritarianism, provide a lens for examining universal or culturally-specific aspects of chaos-seeking tendencies. In summary, existing cross-cultural research forms a foundation for the proposed dissertation research, which aims to focus specifically on the Need for Chaos and its implications for political preferences in the unique cultural and political contexts of the US and Poland.

The objective of the dissertation

The primary goal of this dissertation is to investigate the relationship between the NFC and political preferences, focusing on the US and Poland. This exploration is guided

by pragmatic research questions designed to uncover insights into the dynamics of chaos-seeking tendencies within different political landscapes.

The research includes a cross-cultural examination, comparing supporters of left-wing or right-wing ideologies in the US and Poland. This broader analysis enables a nuanced exploration of how chaos-seeking tendencies may align or diverge across different socio-political contexts. Furthering the cross-cultural exploration, the dissertation investigates whether supporters of specific political parties considered left-wing or right-wing in the US and Poland differ in their $NFC_{\text{Chaos-R}}$ scores. This question adds depth to the understanding of how chaos-seeking tendencies manifest within specific party affiliations across distinct political landscapes. Lastly, this research investigates potential distinctions in $NFC_{\text{Chaos-R}}$ scores between extreme left-wing and extreme right-wing voters in the US and Poland. This examination aims to uncover insights into how the most fervent supporters on both ends of the political spectrum may differ in their chaos-seeking tendencies.

In summary, this dissertation aims to contribute insights into the relationship between the Need for Chaos and political preferences, leveraging pragmatic research questions to unveil patterns and distinctions within the US and Polish contexts.

The rationale for country selection

The decision to focus on the US and Poland for this research is grounded in the recognition of their unique historical trajectories, party systems, and cultural contexts. The US has a history rooted in the fight for independence and the establishment of democratic principles. Its political culture has been shaped by events such as the American Revolution, resulting in a nation that places significant value on individual liberties and democratic governance (e.g., Keyssar, 2009). In contrast, Poland has navigated a complex historical narrative marked by periods of foreign rule, partitions, and the Solidarity movement, eventually leading to the end of communist rule. These historical experiences have not only influenced the country's political evolution but also contributed to a sense of resilience and national identity (Bifulco, 2018; Skórczewski & Polakowska, 2020).

The US operates within a well-established two-party system, with the Republican and Democratic parties dominating the political landscape. This system has historically shaped the discourse on a left-right ideological spectrum, influencing policy debates and electoral dynamics (e.g., Flanagan, 2021). Poland's political arena is characterized by a multi-party system (the recent election revealed five parties that received enough votes to form a government; National Electoral Commission, 2023), showcasing a diverse range of political perspectives. This diversity reflects the country's post-communist transition and the emergence of various parties, each contributing to the complexity of the political landscape (Deshchytsia, 1996; Kaminski, 2001; Pridham & Vanhanen, 1994).

Figure 2

The classification of Polish political parties along the left-right spectrum.

Far left	Left	Center	Right	Far right
PL-L	PL-KO	PL-TD	PL-PiS	PL-KONF
Komitet Wyborczy Nowa Lewica	Koalicyjny Komitet Wyborczy Koalicja Obywatelska PO .N IPL Zieloni	Koalicyjny Komitet Wyborczy Trzecia Droga Polska 2050 Szymona Hołowni – Polskie Stronnictwo Ludowe	Komitet Wyborczy Prawo i Sprawiedliwość	Komitet Wyborczy Konfederacja Wolność i Niepodległość

Note. The classification of Polish political parties along the left-right spectrum is challenging, given the fluid definitions of these ideologies and the dynamic nature of Poland's political and cultural landscape (for review, see Ideologia, 2017). However, based on the 2023 parliamentary election and an analysis of party stances and proposed policies (see especially National Electoral Commission, 2023; Nordsieck, 2023; Pacewicz, 2018), their positions as of Summer 2025 can be estimated with sufficient confidence, offering a reasonably clear snapshot of the current political landscape.

Cultural nuances in the US often emphasize values such as individualism, personal freedom, and civic responsibility. This individual-centric approach plays a significant role in shaping political attitudes, with a strong emphasis on the rights and agency of the individual citizen (e.g., Beyerlein & Vaisey, 2013; Kann, 1990; Zambon, 2008). Poland's cultural context is deeply influenced by a history of communal identities and shared struggles for sovereignty (e.g., Grochowina, 2014, 2020). This collective consciousness contributes to a sense of solidarity and a communal approach to societal challenges, impacting political preferences and priorities (Goodwin et al., 2009; Kostecki & Mrela, 1984; Meardi, 2005).

These differences offer a rich foundation for exploring the Need for Chaos in both countries. By considering the distinct historical, political, and cultural contexts, this

dissertation aims to uncover how the NFC manifests and influences political behavior within the US and Poland.

Significance of the current research

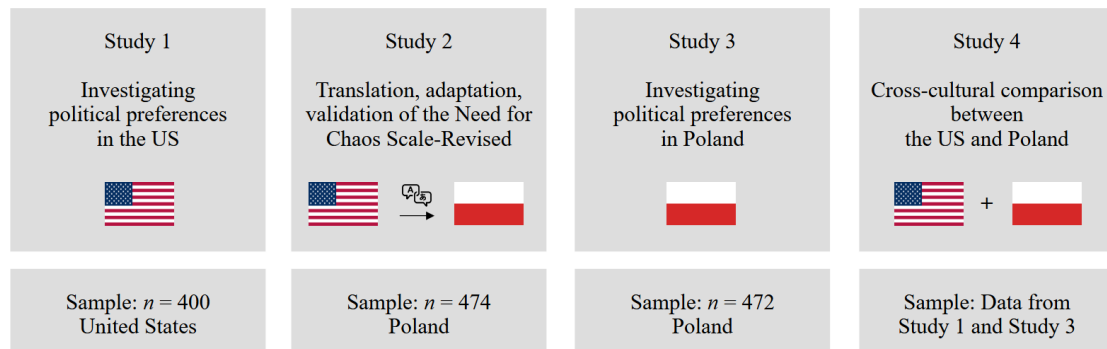
This research holds considerable promise, including providing insights into the potentially disruptive nature of the NFC in political contexts. Investigating the connection between the NFC and political preferences in the US and Poland offers insights into why people lean towards left or right political ideologies and which parties they support, and understanding these connections enhances our understanding of the psychological factors shaping political choices. The findings from this research may also allow us to better understand the potential dangers associated with chaos-seeking behavior. NFC, linked to disruptive activism, offers a lens to inform political strategies and policies, addressing and managing challenges posed by individuals driven by destruction for its own sake.

Beyond the specific focus on the US and Poland, this research may contribute to the broader field of global political science by shedding light on the motivations of chaos-seekers. Given the potential risks associated with chaos-seeking activism, understanding commonalities and differences across cultures becomes instrumental in developing strategies to navigate and mitigate these disruptive tendencies on a global scale. The outcomes of this dissertation, including the validated Polish NFC_{Chaos-R}, may have practical applications in addressing potentially dangerous chaos-seeking behavior in political contexts. The research may not only deepen our understanding of political behavior but also provide insights pertinent to managing and mitigating disruptive

activism on a broader, global scale, contributing to the advancement of international political science research.

This dissertation addresses several key objectives. First, it aims to produce a validated Polish translation of the $NFC_{Chaos-R}$. Second, it seeks to contribute to the understanding of the NFC by examining its association with either left-wing or right-wing political preferences and with the preference for specific political parties in both the US and Poland. Last, this dissertation endeavors to discern similarities between the US and Poland in terms of the NFC. By addressing these objectives, this dissertation aims to provide insights into the political landscape of both countries.

Figure 3
Conceptual plan of the dissertation.



This research aims to extend our understanding of the NFC across different cultural contexts, specifically comparing data from Poland to existing studies conducted in the United States. By translating and validating the Need for Chaos Scale-Revised ($NFC_{Chaos-R}$) into Polish (Study 2), this research facilitates cross-cultural comparisons,

explaining how motivations to disrupt societal order vary between these two distinct cultural settings.

In Study 1, focusing on a sample of US adults, the investigation into political preferences, both in terms of specific party affiliation and broader left-right ideological leanings, aims to extend our understanding of how these factors correlate with $NFC_{Chaos-R}$ scores. Drawing from established literature (Petersen et al., 2023b), it is expected to find that higher $NFC_{Chaos-R}$ scores are associated with a greater inclination toward political ideologies advocating radical change or disruptive actions. Study 3 extends this analysis to Poland, examining whether similar associations hold across different political and cultural landscapes. Given Poland's unique political dynamics and recent electoral outcomes (National Electoral Commission, 2023), I anticipate nuances in how $NFC_{Chaos-R}$ relates to political preferences compared to the US context. Specifically, I hypothesize that political party preferences linked to nationalist or populist agendas might show stronger associations with $NFC_{Chaos-R}$ scores in Poland, reflecting broader societal attitudes towards change and disruption.

In Study 4, a cross-cultural comparison will be conducted to determine the differences between the US and Poland regarding left-wing or right-wing support and specific political party support, as well as their $NFC_{Chaos-R}$ scores. Descriptive statistics will be provided for each group, and statistical tests will determine if significant differences exist.

Analytically, each study employs robust statistical methods to explore the relationships between $NFC_{Chaos-R}$ and political preferences. These analyses will not only

validate the NFC_{Chaos-R} in a different cultural context but also contribute to theoretical frameworks on political psychology and societal attitudes towards stability versus change; by comparing findings across Studies 1, 2, 3, and 4, this research will offer insights into the universal versus culturally specific dimensions of the NFC and its implications for political behavior and stability.

The Institutional Review Board (IRB) reviewed the proposed research described in this dissertation and determined that it met the criteria for exemption. The study was submitted under IRB-FY2025-181 as an initial application and received exempt status on December 3, 2024. Documentation of the IRB's decision is provided in Appendix D.

STUDY 1

The aim of Study 1 is to investigate the associations and differences observed in the literature regarding a) the left-wing or right-wing political preference and b) the preference for a specific political party using data from a sample of US adults.

NFC: the left- or right-wing political preference and the specific political party preference in the US:

1. Is there a link between the $NFC_{\text{Chaos-R}}$ score and the degree of political preference for either left-wing or right-wing policies among US Americans?
2. Are there differences in $NFC_{\text{Chaos-R}}$ scores among US Americans' supporters of different political parties?

Participants. Eligible participants at least 18 years of age who were residing in the US and were fluent in English were recruited via Prolific, a platform for online psychological research. Prolific is available to participants in many countries, including the US and Poland. It is suitable for recruiting participants for social and economic science research (Palan & Schitter, 2018). Although it is advised to be careful when making sweeping claims about the superiority of one platform over another (Litman et al., 2021), Prolific has shown superiority to other platforms in terms of comprehension, attention, and dishonesty, which are critical aspects of data quality (Peer et al., 2021). Overall, Prolific is a reliable and effective platform for psychological research.

A priori power analysis was conducted to determine the sample size necessary to detect a medium effect size (Cohen's $d = 0.30$) with a significance level of $\alpha = 0.05$ and a desired power of 0.95. In social sciences, an effect size of 0.30 indicates an effect that is

considered to be potentially powerful (Funder & Ozer, 2019). G*Power 3.1.9.7 software was used to run the calculations (Faul et al., 2007, 2009). Based on this analysis, a total sample size of $n = 290$ is required. This sample size ensures a robust detection threshold, with a noncentrality parameter of 3.61, a critical t -value of 1.96, and $df = 578$. The actual power achieved with this sample size is 0.95, exceeding the conventional power standard of 0.80. Furthermore, concerns raised in unpublished data by Miani and colleagues (2024), indicating that data quality from Prolific users may be inconsistent, informed the decision to significantly increase the sample size. This adjustment was made to mitigate potential data noise and ensure robust, reliable results. The target sample for Study 1 was $n = 500$ participants. By targeting this larger sample size, the study's sensitivity to detect meaningful effects was increased, which reduced the likelihood of both Type I and Type II errors and improved the precision of the effect size estimates, thereby enhancing the reliability and generalizability of the findings. $n = 500$, even when taking into consideration the cleaning of the dataset (i.e., removing low-quality or problematic data), was expected to result in a sample size similar to those in seminal studies examining the Need for Chaos (i.e., $M = 1215.6$, $SD = 222.9$, $N_{min} = 1004$, $N_{max} = 1533$, for the nine samples in Arceneaux et al., 2021). The participants were compensated financially for their time. Before data collection began, the study was approved by Oakland University's IRB (see Appendix D: the Institutional Review Board's decision letter).

A total of $n = 69$ unreliable responses were identified and excluded based on patterned responses in reverse-coded scales (NFC, RWA, LWA, SDO), such as selecting only the lowest response option (e.g., "1") across all items, indicating a lack of

engagement with item content. The final sample consisted of $n = 400$ US American participants. Of these, 206 were female (51.5%), 190 were male (47.5%), and four identified as another gender (1%). Participants ranged in age from 18 to 86 years ($M = 46.59$, $SD = 15.88$). Two participants (0.5%) had no high school education, 43 participants (10.8%) had completed high school, 79 participants (19.8%) had attended some college, 44 participants (11%) had completed a 2-year college degree, 146 participants (36.5%) had completed a 4-year college degree, and 86 participants (21.5%) had attained post-graduate education or higher.

Procedure. Eligible participants viewed the study advertisement on the Prolific dashboard. Those interested in participating provided informed consent and were directed to the survey. Those who did not provide consent were redirected out of the survey. Every participant who completed the survey received financial compensation of approximately US\$1.20, based on the US minimum hourly wage of \$7.25 and the estimated 10 minutes required to complete the study.

Managing data quality. Several methods were implemented to ensure data quality and prevent careless responses or automated survey completion. Participants were pre-screened to ensure they had a Prolific approval rating of at least 95%, confirming a record of conscientious participation (Peer et al., 2014). To further prevent automated responses, a reCAPTCHA was integrated into the survey, requiring users to verify their human identity. All survey fields were mandatory, reducing the likelihood of incomplete or rushed responses. In alignment with updated Prolific protocols (Gordon, 2022), three space-themed attention checks were embedded within the mid-sections of the RWA,

LWA, and SDO. These questions required strongly disagreeing responses; any other response resulted in the participant's data being excluded from the analysis. Participants who failed at least two embedded attention checks were automatically screened out during the survey process, and therefore, no n is available for that subset, as their data were not recorded beyond termination. Based on the pilot study, the expected time to complete the survey was approximately 10 minutes ($SD \approx 2$). Participants ($n = 60$) who completed the survey in less than 6 minutes (approximately two standard deviations below the mean) had their data flagged as suspicious and excluded from the final dataset.

Materials. All materials used in Study 1 are included in Appendix A. A set of three questions was presented to investigate demographics. The first asked for the participant's age (in years) as a numeric value. The second asked for their gender (male, female, other). The third asked for their level of education on a six-level scale (no high school to post-graduate or beyond). All three questions have been used in previous studies investigating the Need for Chaos (Arceneaux et al., 2021; Petersen et al., 2023b). To assess the Need for Chaos, the Need for Chaos Scale-Revised (NFC_{Chaos-R}) was presented (Arceneaux et al., 2021; Petersen et al., 2023b). NFC_{Chaos-R} is a nine-item measure assessing motivations to tear down society's political order. Participants were asked to report the extent to which they agreed or disagreed with the provided statements (1 = strongly disagree, 7 = strongly agree), for example, "We cannot fix the problems in our social institutions, we need to tear them down and start over."

The preference for specific political leanings was assessed using a two-question format. This decision was made to maintain the same question structure as in Study 3 for

Poland. First, participants were asked, "Generally speaking, do you usually think of yourself as..." with response options "Democrat" or "Republican." Then, in the next step, they rated their support as "Strong Democrat supporter," "Democrat supporter," "Lean Democrat," "Lean Republican," "Republican supporter," or "Strong Republican supporter." Additionally, participants were able to select "Other" and "Don't know" options. Participants selected the option that best reflected their self-identification. 233 participants (58.3%) declared themselves as Democrats, and 167 (41.8%) declared themselves as Republicans (see Table 1).

Table 1
Political party preferences in the US Americans.

	<i>N</i>	%
Strong Democrat supporter	101	25.3
Democrat supporter	90	22.5
Lean Democrat	42	10.5
Lean Republican	37	9.3
Republican supporter	86	21.5
Strong Republican supporter	44	11

The political preference for either left-wing or right-wing was designed based on the aforementioned measure of preference for a specific political party. The aim was to construct a similarly structured set of questions. Hence, it was possible to compare the preference for a particular political party and the political preference for either left-wing or right-wing. Participants were asked, “Generally speaking, do you usually think of yourself as...” with response options including “Strong Left-wing supporter,” “Moderate Left-wing supporter,” “Lean Left-wing,” followed by “Lean Right-wing,” “Moderate Right-wing supporter,” and “Strong Right-wing supporter.” Additionally, participants were able to mark “Other” and “Don't know” options. Participants selected the option that best reflected their self-identification. 226 participants (56.6%) declared themselves as Left-wing supporters, and 174 (43.6%) declared themselves as Right-wing supporters (see Table 2).

Table 2*Left-wing and right-wing preferences in the US Americans.*

	<i>N</i>	%
Strong Left-wing supporter	77	19.3
Moderate Left-wing supporter	100	25
Lean Left-wing	49	12.3
Lean Right-wing	32	8
Moderate Right-wing supporter	101	25.3
Strong Right-wing supporter	41	10.3

NFC_{Chaos-R}. Arceneaux et al. (2021) proposed a categorization approach for operationalizing the "need for chaos", creating four distinct groups: low chaos, rebuilders, medium chaos, and high chaos. In contrast to this, the authors of another study utilizing the scale (Landry et al., 2023) chose to operationalize the "need for chaos" concept by calculating the average across items rather than adopting the four-category approach suggested by Arceneaux and colleagues. Despite this departure from the categorization method, Landry et al. (2023) justified their decision by asserting that the results obtained through the average calculation remained consistent. This indicated that Landry et al.'s deviation from the recommended four-category approach did not compromise the substantive impact of the observed effects, and the chosen operationalization method yielded results in line with the anticipated direction. Therefore, this study also utilized an average across items.

Status Dispositions and Social Marginalization. To enhance the understanding of $NFC_{\text{Chaos-R}}$ scores within the sample, the following measures from Petersen and colleagues (2023a) were incorporated into the study. Status dispositions were assessed using the 14-item Status-Driven Risk-Taking scale (SDRT), which measures an orientation towards dominance-based status through the willingness to take risks for status acquisition, exhibiting a reported internal consistency of $\alpha = 0.92$. Participants indicated their agreement with statements such as “I would risk my life for a good chance of finding a huge amount of buried treasure” using a scale from 1 (Strongly Disagree) to 7 (Strongly Agree) (M. C. Ashton et al., 2010). Social marginalization was evaluated through two measures: first, a seven-item version of the Short-Form Measure of Loneliness (SFML) by Hays and DiMatteo (1987) was used to capture feelings of interpersonal isolation ($\alpha = 0.90$). Participants indicated their agreement with statements such as “I can find companionship when I want it,” using a scale from 1 (Never) to 4 (Always). The original scale had eight items, but Petersen et al. used 7 items only. Second, participants indicated their societal position using a 10-step ladder (i.e., the MacArthur Scale of Subjective Social Status), where Step 10 represented the most advantaged in society, and Step 1 indicated the least advantaged (Adler et al., 2000). These additions aimed to provide a comprehensive context for interpreting NFC scores in relation to status-oriented traits and perceived marginalization.

Additional measures. In addition to the primary measures, to further explain participants' $NFC_{\text{Chaos-R}}$ scores, three supplementary scales were incorporated into the study: the Right-Wing Authoritarianism Scale (RWA), the Left-Wing Authoritarianism Scale (LWA), and the Social Dominance Orientation Scale (SDO).

Right-Wing and Left-Wing Authoritarianism. RWA measures attitudes such as deference to authorities, aggression toward sanctioned out-groups, and adherence to traditional values (Altemeyer, 1981, 1988, 2006). Developed as an improvement over earlier measures by Adorno et al. (1950), RWA predicts prejudice and complements social dominance orientation, reliably forecasting nationalism, ethnocentrism, and political orientation (Bizumic & Duckitt, 2018). Updated by Altemeyer (2006), the scale consists of 20 substantive items (out of 22, with the first two unscored “warm-up” items, responses to which are typically omitted), rated on a nine-point Likert scale (from Strongly Disagree (-4) to Strongly Agree (+4)), with items such as “This country would work a lot better if certain groups of troublemakers would just shut up and accept their group’s traditional place in society”. The items demonstrate high internal consistency ($\alpha = 0.90$). The scale effectively assesses predisposition toward right-wing authoritarianism, utilizing a mix of authoritarian and liberal statements to mitigate bias (Altemeyer, 1988). Crucial for understanding contemporary American authoritarianism (Edsall, 2016), it contributes to Altemeyer's research on LWA (Benjamin, 2014).

Conway et al.'s (2018) research challenges the traditional view that authoritarianism is solely a right-wing phenomenon, suggesting that it also manifests in left-wing contexts. Based on Altemeyer's (2006) original scale, Conway designed the

Left-Wing Authoritarianism (LWA) scale, showing significant positive correlations with liberalism, prejudice, dogmatism, and attitude strength. The LWA measures attitudes such as dogmatism, punitive attitudes towards dissenters, and a desire for strong authority figures supporting left-wing values, potentially leading to authoritarian policies (Manson, 2020). The scale consists of 20 items, ranked on a seven-point Likert scale. The items showed high inter-item reliability ($\alpha = 0.84$). High LWA scores correlate with traits like threat sensitivity and support for restrictive political correctness norms (Conway et al., 2018, 2023). Manson's (2020) findings further support the idea that both LWA and RWA predict the endorsement of authoritarian policies. Conway's (2021) model suggests that LWA may be influenced by conflicting authoritarian norms, especially in Western political contexts. These studies collectively highlight the empirical validity and relevance of Conway's LWA scale. An alternative LWA scale exists (Costello et al., 2022); however, for this dissertation, Conway et al.'s (2018) is a better fit. Conway's LWA is a direct "mirror" of Altemeyer's (2006) RWA, allowing for straightforward comparison. Also, it focuses on "Christian Fundamentalists," which is relevant in both the US and Poland. Additionally, it avoids US-specific terms (Wall Street, Republicans, and Fox News). Conway's scale is also shorter (20 items instead of 39 items). Thus, Conway's scale offers greater relevance and practicality for this study.

RWA and LWA both measure authoritarian tendencies but focus on different ideological targets. RWA emphasizes obedience to traditional authority figures, such as government and religious leaders, and expresses hostility towards radicals, atheists, and non-conformists. It upholds traditional social norms and moral values, advocating for a

return to conservative principles and punitive measures against those who challenge them. Conversely, LWA centers on adherence to scientific authorities and progressive leaders, criticizing religious fundamentalists and traditionalists. It promotes progressive social values, supports punitive actions against those enforcing traditional moral codes, and calls for the rejection of conservative norms. Both scales reflect the respective authoritarian attitudes within their ideological contexts, demonstrating how authoritarianism can manifest across the political spectrum.

Social Dominance Orientation. SDO measures a person's support for social hierarchy and their desire for their in-group to be superior to out-groups. The 16-item SDO scale, with a balance of pro-trait and contra-trait statements, assesses individual levels of group-based prejudice and preference for hierarchy and dominance over lower-status groups (Pratto et al., 1994). Participants indicate their agreement with statements using a scale from 7 (strongly agree) to 1 (strongly disagree). For example, one item states, "If certain groups stayed in their place, we would have fewer problems." Studies have found the SDO scale to be a reliable and valid instrument (Cadamuro et al., 2022; Giger et al., 2015). High SDO is associated with conservative political beliefs and opposition to policies promoting equality, such as equal rights legislation for homosexuals. Although SDO correlates weakly with RWA (Pratto et al., 1994), it remains a distinct and important measure of attitudes toward social hierarchy and dominance.

Informal predictions. Predictions for this study anticipate that both political preference and party affiliation could influence NFC_{Chaos-R} scores among US adults, though the literature remains insufficient to form concrete hypotheses. Instead, the research questions aim to explore these potential links given existing data. First, NFC_{Chaos-R} scores are expected to positively correlate with strong political preferences, particularly for individuals with right-wing leanings. Although high NFC_{Chaos-R} may appear across the political spectrum, previous studies (e.g., Arceneaux et al., 2021; Petersen et al., 2023a) suggest that conservative or right-wing views may particularly align with NFC inclinations. Examples include a desire to disrupt perceived elite power structures, skepticism of established institutions, and support for radical societal overhaul: traits often linked to high NFC_{Chaos-R} (see Arceneaux et al., 2021; Edsall, 2019; Petersen et al., 2023a). Thus, although left-leaning individuals with a high NFC_{Chaos-R} may also seek radical change, right-leaning individuals may exhibit this trait more strongly, reflecting ideologies within the US political right that resonate with NFC traits. Second, NFC_{Chaos-R} scores are expected to be highest among Republican supporters. The Republican party's recent strategies have increasingly addressed voter segments drawn to anti-establishment rhetoric, institutional critique, and a desire for significant societal change, aligning well with an NFC mindset (Edsall, 2024). This appeal has been observed in campaigns that underscore distrust of "elite" political actors and a willingness to disrupt traditional norms. Finally, male participants are expected to report higher NFC_{Chaos-R} scores overall, as research indicates that men are more likely to embrace risk, disruption, and unconventional beliefs (e.g., Giaccardi et al., 2017; Mahalik

et al., 2003; Reardon & Govender, 2013). This might be reflected in their alignment with NFC attitudes, such as support for chaotic transformations as a means to personal or societal improvement, seen, for instance, in more frequent engagement with conspiracy theories or endorsement of anti-elite sentiments (e.g., Arceneaux et al., 2021; Petersen et al., 2023a).

Results

To investigate the research questions and hypotheses, all statistical analyses were conducted using IBM SPSS Statistics 25 (Arbuckle, 2014). The conventional significance level of $\alpha = .05$ was used.

Descriptive statistics

Basic descriptive statistics were calculated for all variables measured on a quantitative scale (see Table 3 and Figure 4 to 10). The Shapiro-Wilk test was conducted to assess the normality of the distributions. In most cases, the distributions differed significantly from normality. However, both skewness and kurtosis values were within ± 3 , which, according to George and Mallery (2020), supports the use of parametric tests when other assumptions are satisfied.

Table 3
Basic descriptive statistics for the US Americans.

	<i>M</i>	<i>Me</i>	<i>SD</i>	<i>Sk.</i>	<i>Kurt.</i>	<i>Min</i>	<i>Max</i>	<i>D</i>	<i>p</i>
Need for Chaos	1.54	1.44	0.50	1.18	1.16	1	3.44	.89	<.001
Right-Wing Authoritarianism	3.88	3.65	1.93	0.26	-1.09	1	8.80	.95	<.001
Left-Wing Authoritarianism	4.01	4	1.21	0.12	-0.67	1.45	7	.99	.001
Social Dominance Orientation	2.30	1.94	1.22	1.01	0.39	1	6.56	.89	<.001
Status-Driven Risk- Taking Scale	3.44	3.36	0.60	0.48	1.51	1.57	5.93	.97	<.001
Short-Form Measure of Loneliness	1.93	1.86	0.74	0.61	-0.51	1	4	.93	<.001
10-Step Ladder for Societal Position	5.35	5	1.65	-0.11	-0.53	1	10	.96	<.001

Figure 4
Histogram of Need for Chaos scores among US Americans.

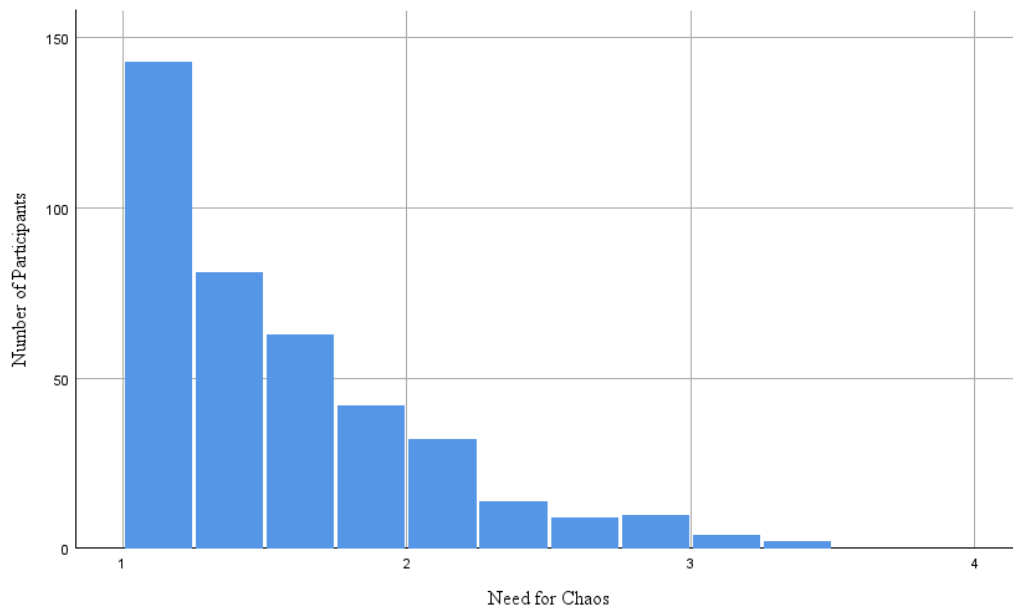


Figure 5

Histogram of Right-Wing Authoritarianism scores among US Americans.

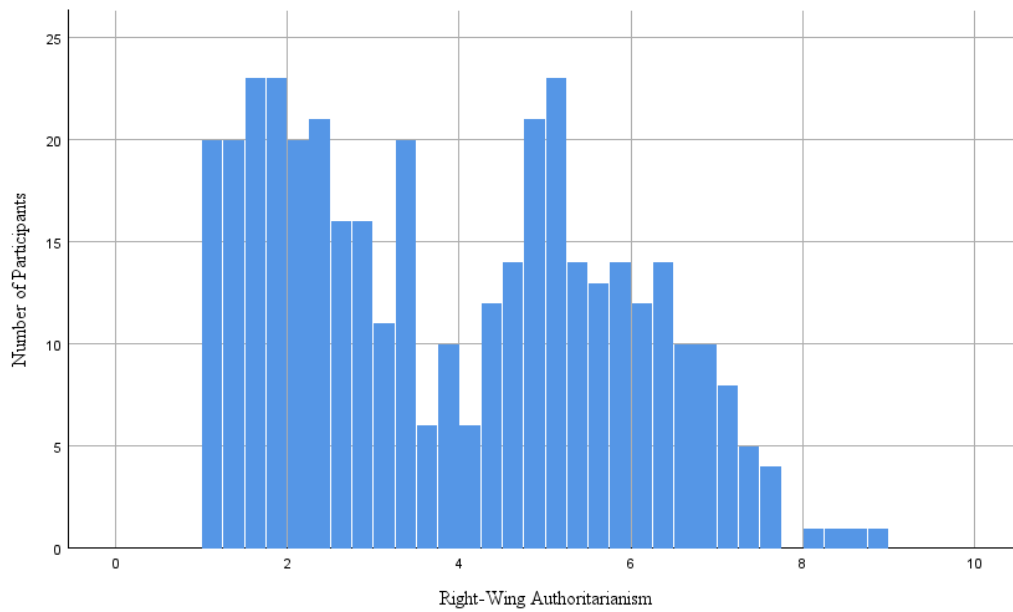


Figure 6

Histogram of Left-Wing Authoritarianism scores among US Americans.

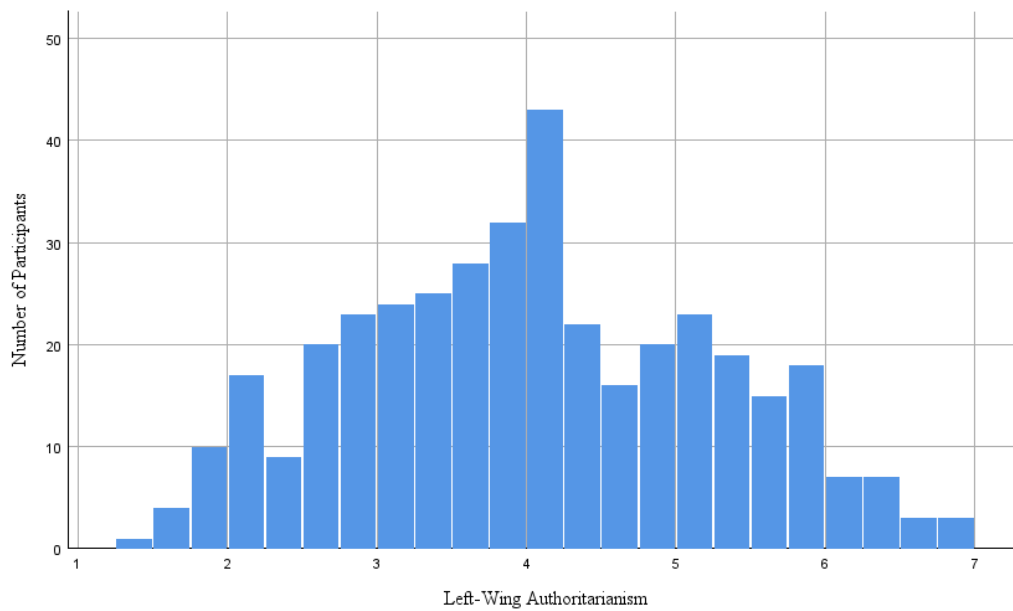


Figure 7

Histogram of Social Dominance Orientation scores among US Americans.

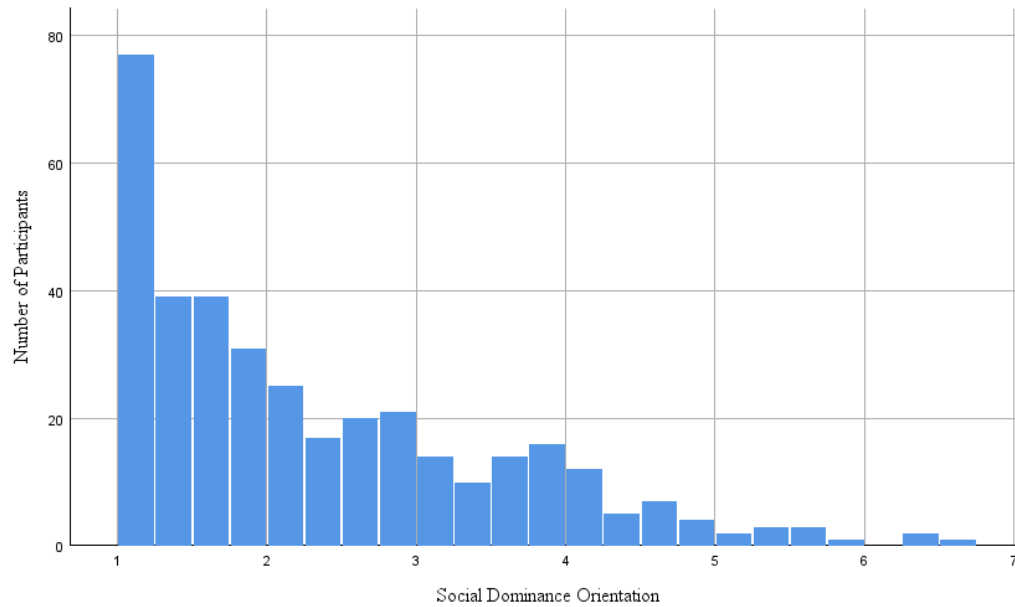


Figure 8

Histogram of Status-Driven Risk-Taking scores among US Americans.

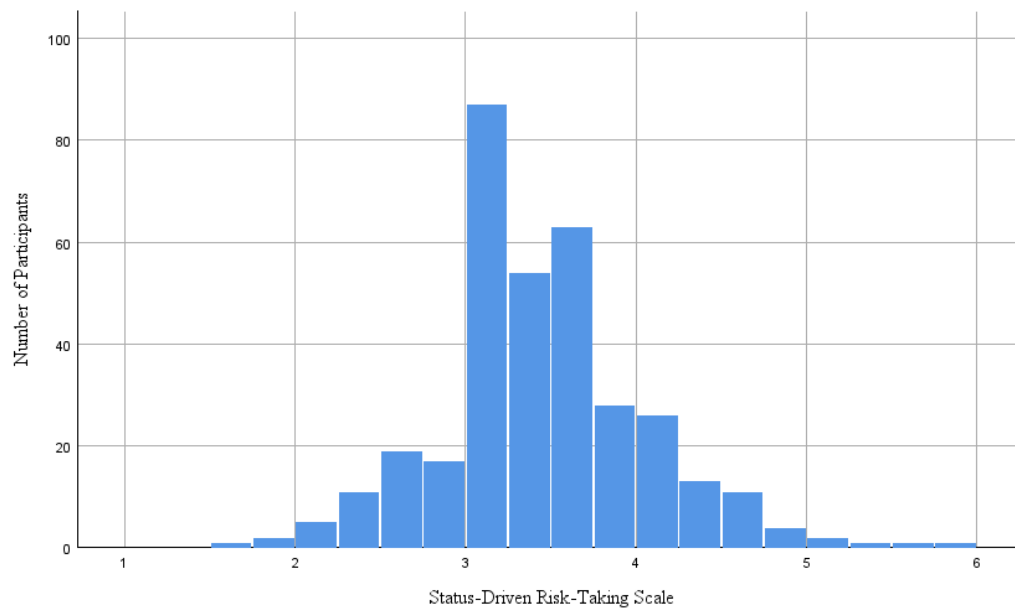


Figure 9

Histogram of Loneliness scores among US Americans.

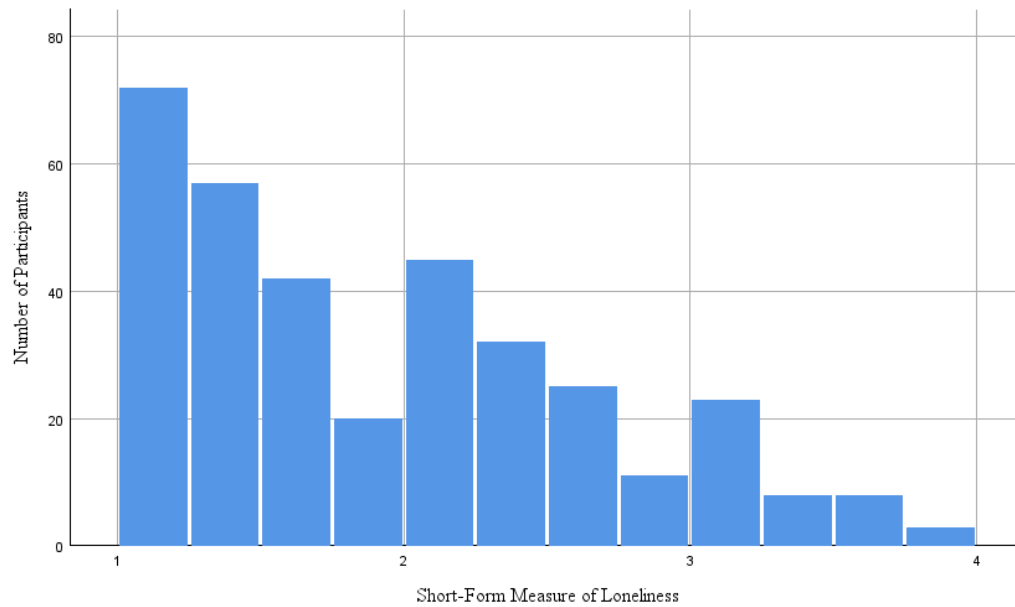
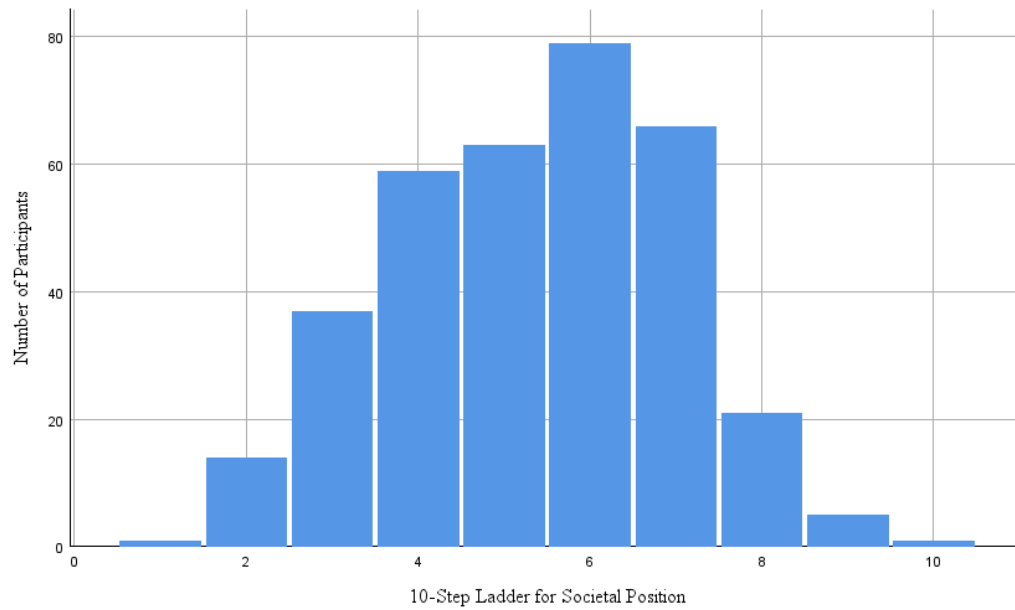


Figure 10

Histogram of 10-Step Ladder for Societal Position scores among US Americans.



Correlations between the scales

Pearson's r correlations were computed to examine the relationships among the seven measured scales. Ten statistically significant correlations were found (see Table 4).

Table 4
Correlations between the scales for the US Americans

	1.	2.	3.	4.	5.	6.	7.
Need for Chaos	X						
Right-Wing Authoritarianism	.03	X					
Left-Wing Authoritarianism	.15**	-.65***	X				
Social Dominance Orientation	.11*	.61***	-.46***	X			
Status-Driven Risk- Taking Scale	.22***	0	-.04	.10	X		
Short-Form Measure of Loneliness	.14**	-.08	.12*	-.06	.12*	X	
10-Step Ladder for Societal Position	-.05	0	-.05	.10	-.07	-.38***	X

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

1. - Need for Chaos; 2. - Right-Wing Authoritarianism; 3. - Left-Wing Authoritarianism;
4. - Social Dominance Orientation; 5. - Status-Driven Risk-Taking Scale; 6. - Short-Form
Measure of Loneliness; 7. - 10-Step Ladder for Societal Position

Additional quadratic regressions were conducted to test for possible non-linear associations between NFC and ideological variables. These models included both the linear and quadratic terms for NFC. The analyses revealed a significant quadratic association with Left-Wing Authoritarianism, $R^2 = .07$, $p < .01$, while results for RWA and SDO were non-significant (see Table 5).

Table 5

Results of quadratic regression analysis in the US American sample (Model Fit – R^2)

	Left-Wing	Right-Wing	Democrat	Republican
Right-Wing Authoritarianism	.02	0	.02	0
Left-Wing Authoritarianism	.02	.07**	.02	.07**
Social Dominance Orientation	.04*	.01	.04	.01

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; 1. Left-wing; 2. Right-Wing; 3. Democrat;

4. Republican

Differences among US American Democratic and Republican supporters

Due to substantial differences in group sizes, Mann-Whitney U tests were conducted to compare Democratic and Republican voters in the US American sample. Three statistically significant differences were identified. Participants identifying as Republicans scored significantly higher on RWA and SDO, and significantly lower on LWA, compared to Democrats. The effect sizes, measured using the r coefficient, were large. No other statistically significant differences were observed between the groups (see Table 5 and Figure 11 to 17).

Table 6*Differences between Democratic and Republican voters in the US American sample*

	Democrat (<i>n</i> = 233)		Republican (<i>n</i> = 167)		<i>U</i>	<i>Z</i>	<i>p</i>	<i>r</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Need for Chaos	1.56	0.50	1.53	0.49	18552.5	-0.80	.426	0.04
Right-Wing Authoritarianism	2.68	1.34	5.50	1.33	3058.0	-14.10	<.001	0.71
Left-Wing Authoritarianism	4.68	1.01	3.10	0.79	4205.5	-13.01	<.001	0.66
Social Dominance Orientation	1.71	0.80	3.12	1.22	5004.0	-11.19	<.001	0.59
Status-Driven Risk-Taking Scale	3.43	0.57	3.45	0.65	14234.5	-0.20	.839	0.01
Short-Form Measure of Loneliness	1.98	0.76	1.84	0.71	12879.0	-1.69	.091	0.09
10-Step Ladder for Societal Position	5.30	1.65	5.42	1.66	14061.0	-0.40	.690	0.02

*Note: M = Mean; SD = Standard Deviation; U = Mann–Whitney U Statistic;**Z = Standardized Test Statistic; p = Significance; r = Effect Size*

Figure 11

Differences in Need for Chaos scores among supporters of Democrats and Republicans in the US American sample

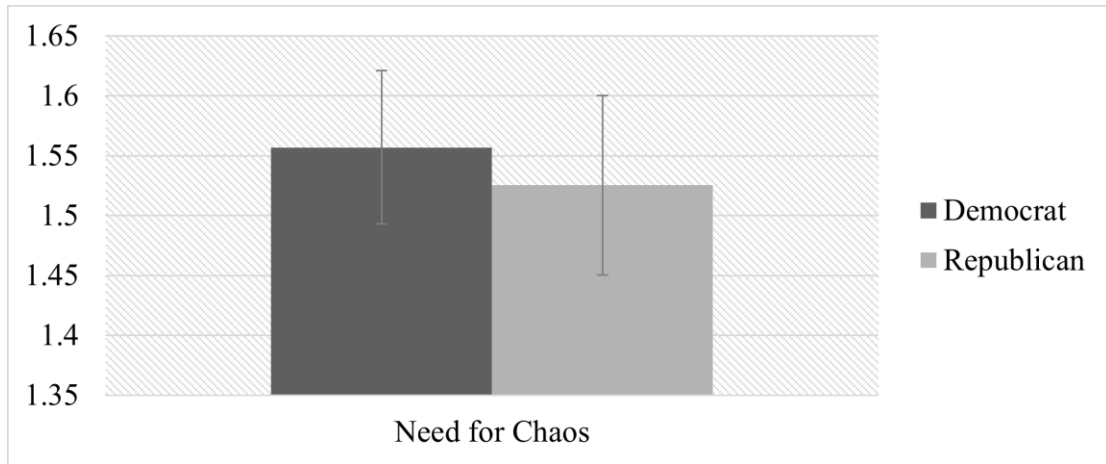


Figure 12

Differences in Right-Wing Authoritarianism scores among supporters of Democrats and Republicans in the US American sample

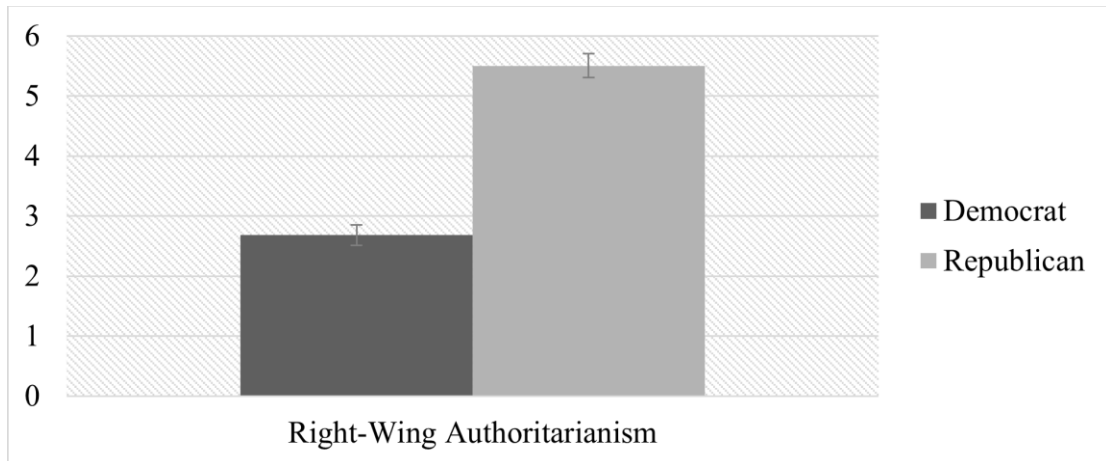


Figure 13

Differences in Left-Wing Authoritarianism scores among supporters of Democrats and Republicans in the US American sample

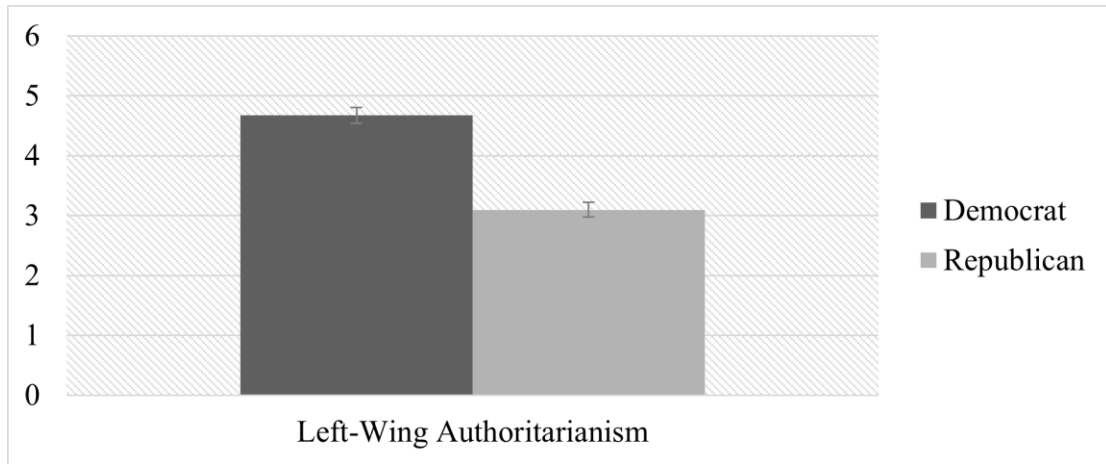


Figure 14

Differences in Social Dominance Orientation scores among supporters of Democrats and Republicans in the US American sample

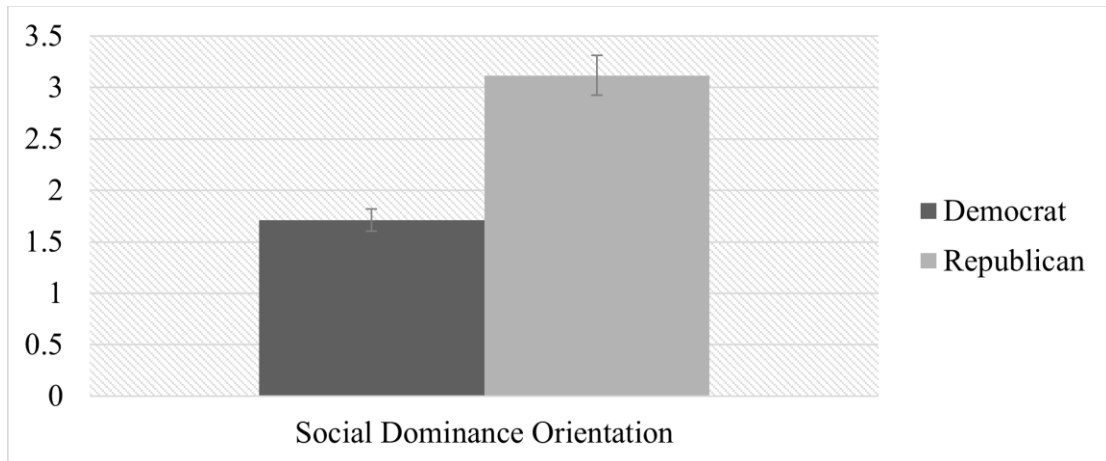


Figure 15

Differences in Status-Driven Risk-Taking scores among supporters of Democrats and Republicans in the US American sample

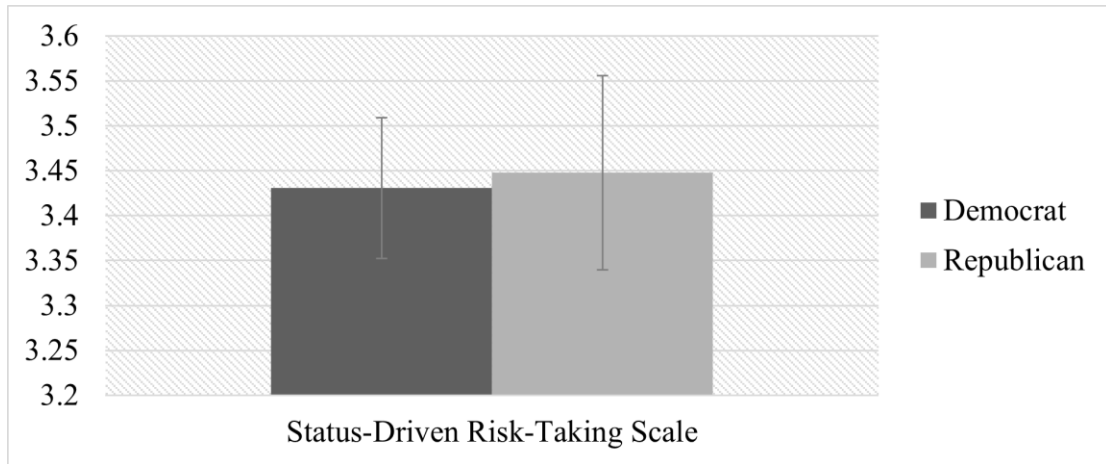


Figure 16

Differences in Short-Form Measure of Loneliness scores among supporters of Democrats and Republicans in the US American sample

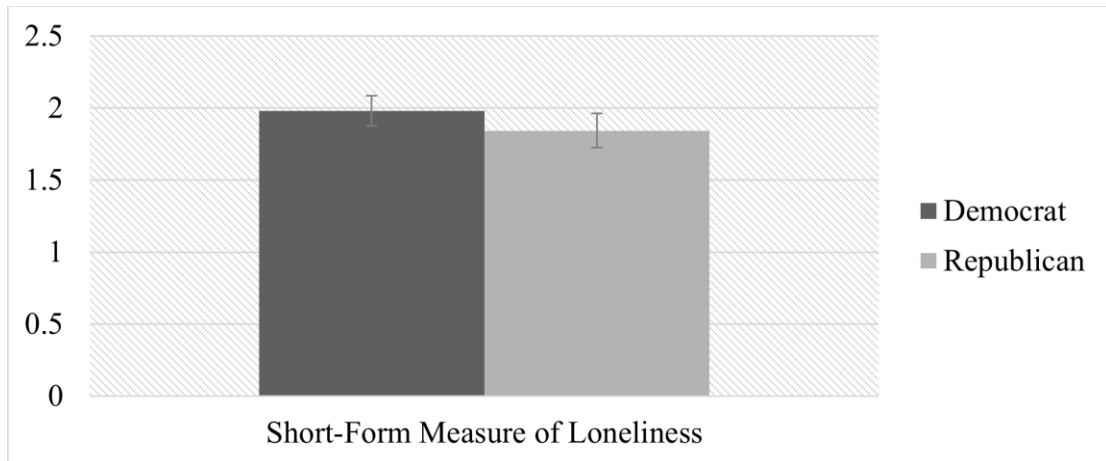


Figure 17

Differences in the 10-Step Ladder for Societal Position scores among supporters of Democrats and Republicans in the US American sample

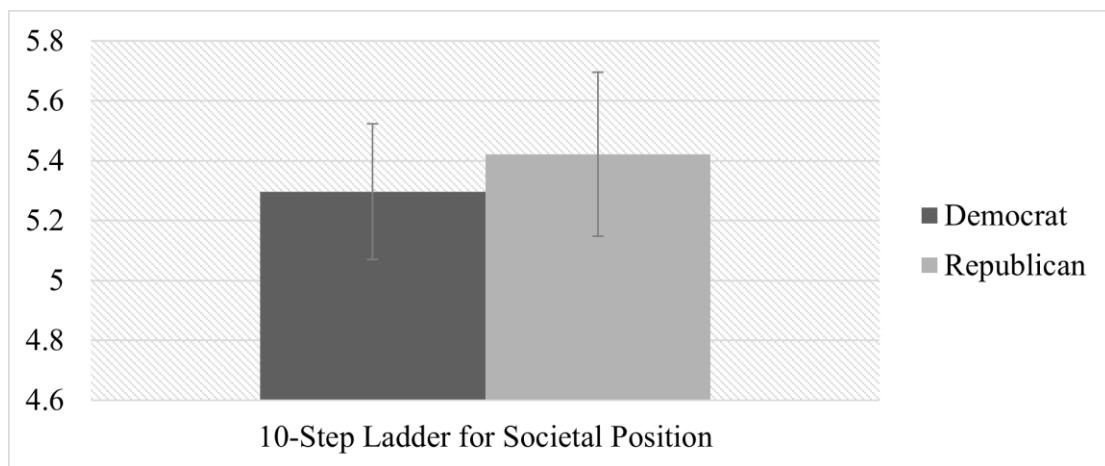


Table 7

Kruskal-Wallis ANOVA results for differences in scale scores among supporters of political parties in the US American sample

		<i>N</i>	<i>M</i>	<i>SD</i>	
Need for Chaos	Strong Democrat supporter	101	1.50	0.45	$H(5) = 9.53;$ $p = .090$
	Democrat supporter	90	1.64	0.56	
	Lean Democrat	42	1.52	0.45	
	Lean Republican	37	1.66	0.57	
	Republican supporter	86	1.52	0.43	
	Strong Republican supporter	44	1.42	0.52	
Right-Wing Authoritarianism	Strong Democrat supporter	97	2.25	1.03	$H(5) = 214.04;$ $p < .001$
	Democrat supporter	88	2.93	1.45	
	Lean Democrat	40	3.18	1.47	
	Lean Republican	36	4.87	1.32	
	Republican supporter	85	5.51	1.19	
	Strong Republican supporter	44	6.01	1.39	
Left-Wing Authoritarianism	Strong Democrat supporter	98	5.04	0.96	$H(5) = 195.88;$ $p < .001$
	Democrat supporter	87	4.58	0.96	
	Lean Democrat	40	3.98	0.87	
	Lean Republican	36	3.41	0.71	
	Republican supporter	84	3.15	0.70	
	Strong Republican supporter	44	2.74	0.88	
Social Dominance Orientation	Strong Democrat supporter	93	1.64	0.73	$H(5) = 128.17;$ $p < .001$
	Democrat supporter	81	1.73	0.80	
	Lean Democrat	37	1.84	0.97	
	Lean Republican	35	2.77	1.09	
	Republican supporter	74	3.22	1.21	
	Strong Republican supporter	43	3.23	1.31	
Status-Driven Risk- Taking Scale	Strong Democrat supporter	91	3.35	0.49	$H(5) = 4.03;$ $p = .545$
	Democrat supporter	78	3.51	0.67	
	Lean Democrat	37	3.46	0.53	
	Lean Republican	33	3.61	0.70	
	Republican supporter	67	3.39	0.63	
	Strong Republican supporter	40	3.42	0.64	
Short-Form Measure of Loneliness	Strong Democrat supporter	91	2.01	0.84	$H(5) = 9.22;$ $p = .101$
	Democrat supporter	78	1.94	0.67	
	Lean Democrat	37	2.00	0.75	
	Lean Republican	33	2.12	0.78	
	Republican supporter	67	1.80	0.70	
	Strong Republican supporter	40	1.69	0.64	
10-Step Ladder for Societal Position	Strong Democrat supporter	91	5.22	1.74	$H(5) = 5.32;$ $p = .378$
	Democrat supporter	78	5.29	1.61	
	Lean Democrat	37	5.49	1.56	
	Lean Republican	33	5.03	1.47	
	Republican supporter	67	5.73	1.58	
	Strong Republican supporter	40	5.23	1.86	

The Kruskal-Wallis ANOVA (

Table 7

Kruskal-Wallis ANOVA results for differences in scale scores among supporters of political parties in the US American sample) was used to assess differences across multiple political affiliation groups. No statistically significant differences were observed for the NFC, SDRT, SFML, or LFSP scales. These results are presented in Figure 18 to 21. For the remaining three variables, Kruskal-Wallis tests yielded statistically significant results; therefore, post hoc comparisons were conducted using Dunn-Šidák tests.

Figure 18

Differences in Need for Chaos scores among supporters of Democrats and Republicans in the US American sample: Details

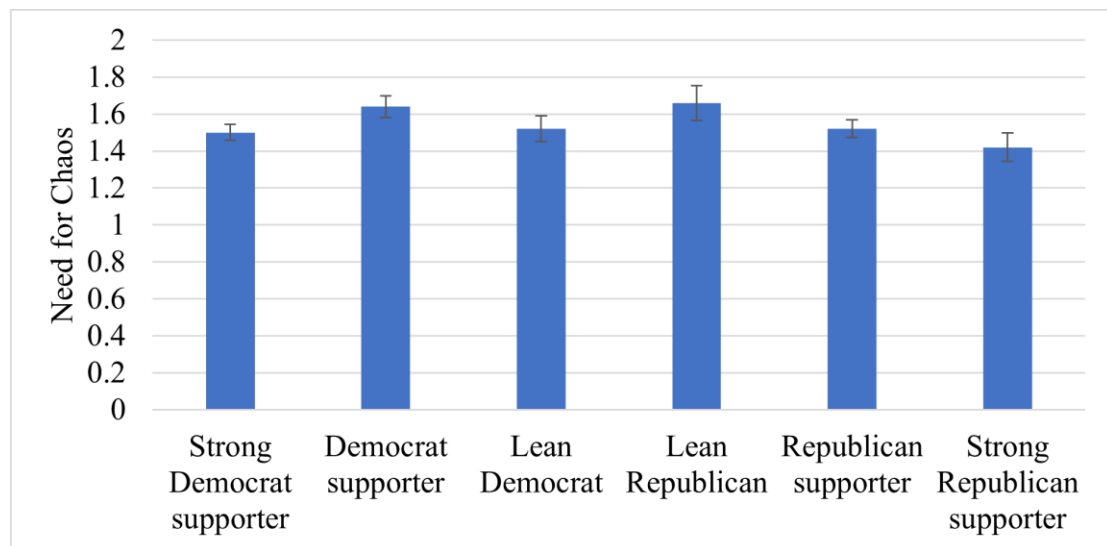


Figure 19

Differences in Status-Driven Risk-Taking scores among supporters of Democrats and Republicans in the US American sample: Details

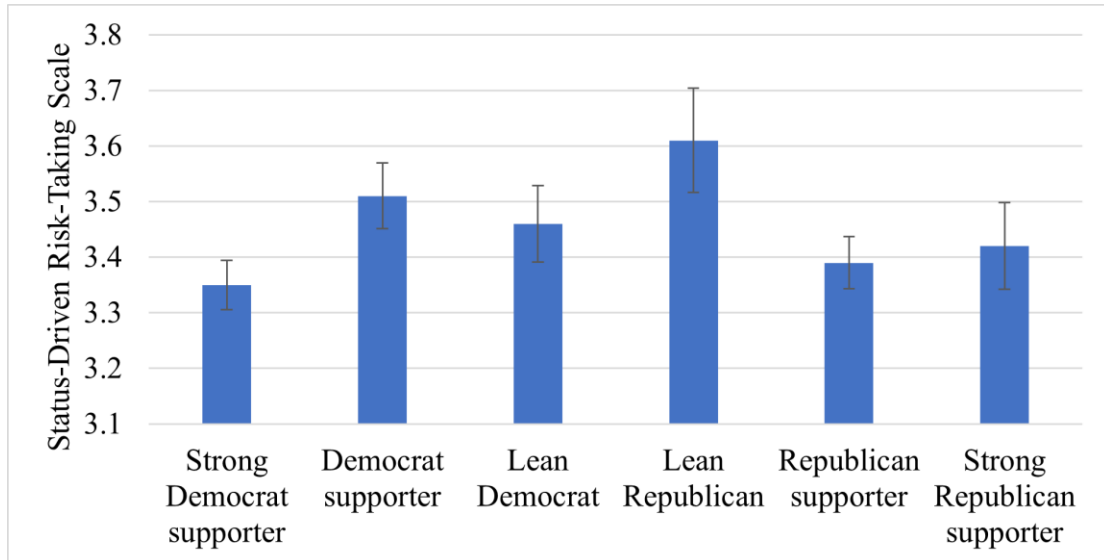


Figure 20

Differences in Short-Form Measure of Loneliness scores among supporters of Democrats and Republicans in the US American sample: Details

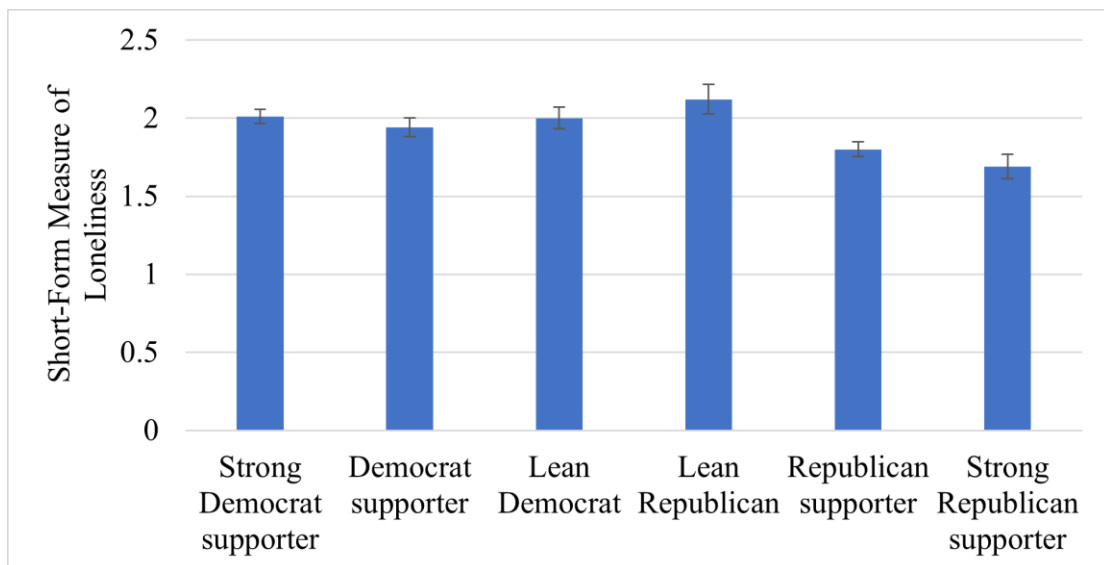
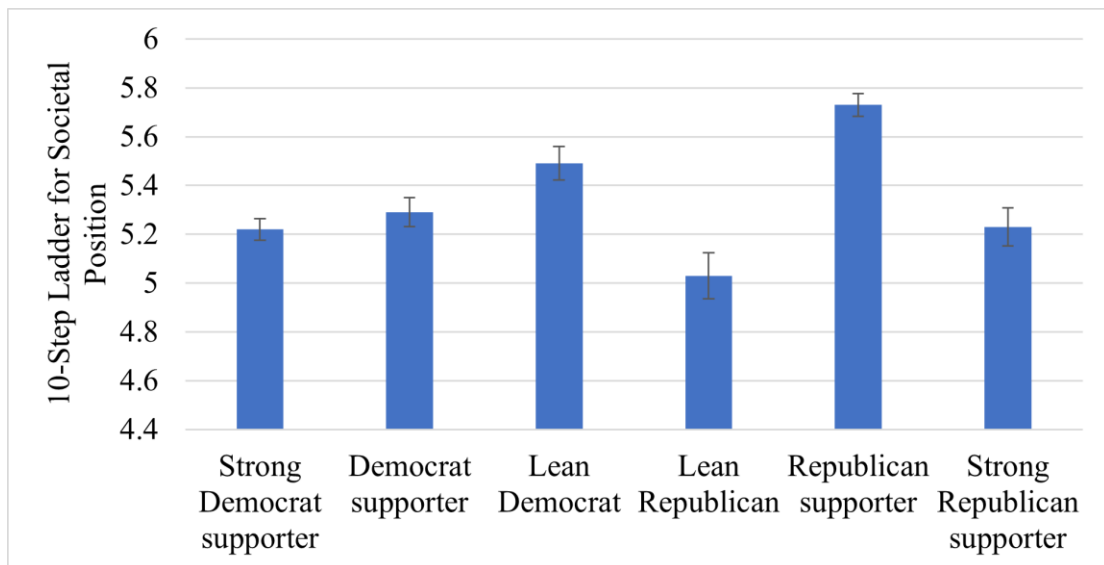


Figure 21

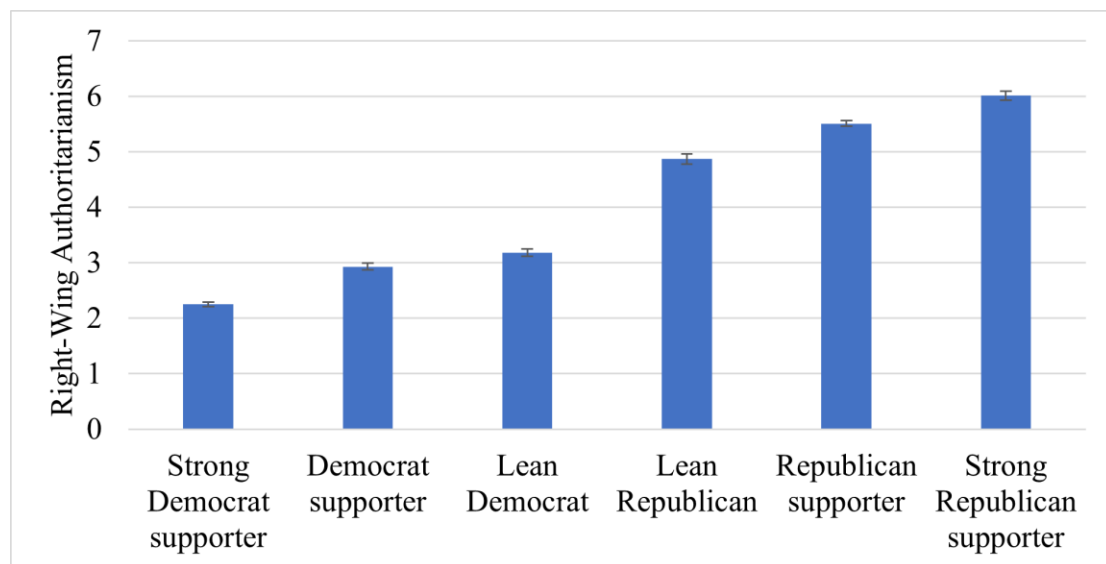
Differences in 10-Step Ladder for Societal Position scores among supporters of Democrats and Republicans in the US American sample: Details



Right-Wing Authoritarianism. Statistically significant differences in RWA scores were observed across political subgroups (see Figure 22). Strong Democratic supporters exhibited significantly lower RWA levels compared to lean Republican ($p < .001$), Republican ($p < .001$), and strong Republican supporters ($p < .001$). Democratic supporters also scored significantly lower than lean Republican ($p < .001$), Republican ($p < .001$), and strong Republican supporters ($p < .001$). Additionally, lean Democratic supporters showed significantly lower RWA levels than lean Republican ($p = .002$), Republican ($p < .001$), and strong Republican supporters ($p < .001$).

Figure 22

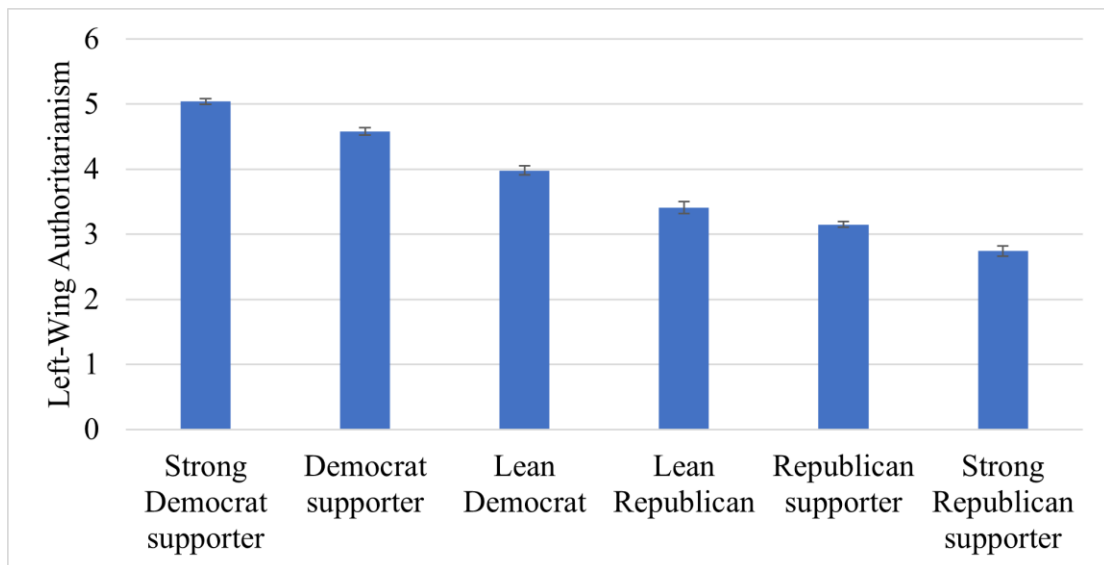
Differences in Right-Wing Authoritarianism scores among supporters of Democrats and Republicans in the US American sample: Details



Left-Wing Authoritarianism. Several statistically significant differences in LWA scores were found between political groups (see Figure 23). Strong Republican supporters had significantly lower LWA levels compared to lean Democratic ($p < .001$), Democratic ($p < .001$), and strong Democratic supporters ($p < .001$). Republican supporters also reported lower LWA scores than lean Democratic ($p = .002$), Democratic ($p < .001$), and strong Democratic supporters ($p < .001$). Lean Republican supporters scored significantly lower than Democratic ($p < .001$) and strong Democratic supporters ($p < .001$). Additionally, lean Democratic supporters had significantly lower LWA levels compared to strong Republican supporters ($p < .001$).

Figure 23

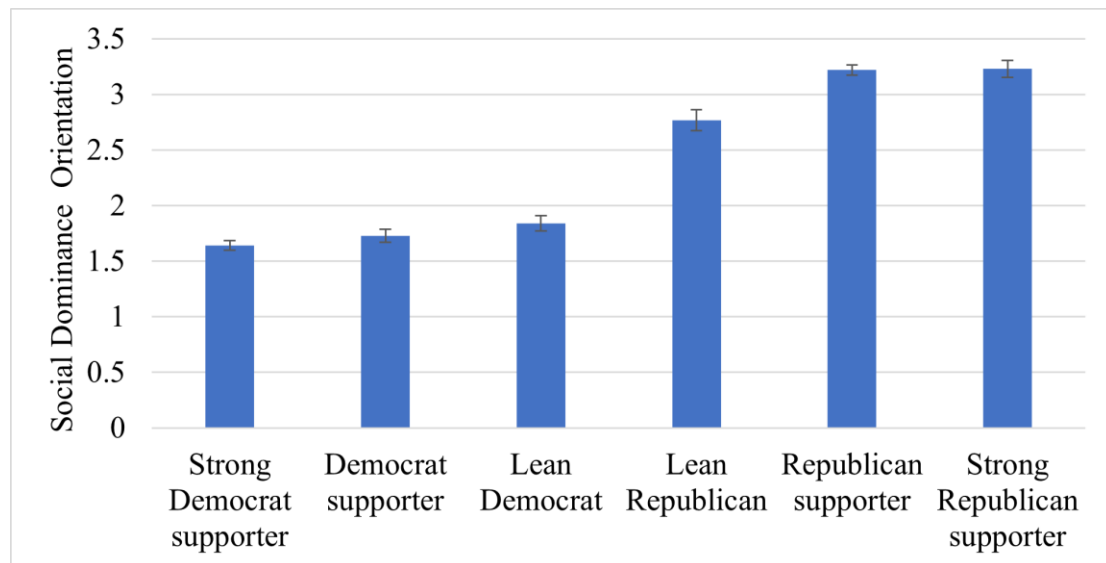
Differences in Left-Wing Authoritarianism scores among supporters of Democrats and Republicans in the US American sample: Details



Social Dominance Orientation. Statistically significant differences in SDO scores were identified (see Figure 24). Strong Democratic supporters reported significantly lower SDO levels than lean Republican ($p < .001$), Republican ($p < .001$), and strong Republican supporters ($p < .001$). Democratic supporters also showed lower SDO scores compared to lean Republican ($p < .001$), Republican ($p < .001$), and strong Republican supporters ($p < .001$). Lean Democratic supporters demonstrated significantly lower SDO levels than lean Republican ($p = .002$), Republican ($p < .001$), and strong Republican supporters ($p < .001$).

Figure 24

Differences in Social Dominance Orientation scores among supporters of Democrats and Republicans in the US American sample: Details



Differences among US American Left-Wing and Right-Wing supporters

To examine the relationship between the strength of left-right political preferences and the psychological variables, a series of Spearman's rank-order correlations was conducted (see Table 7 and Figure 25 to 31). Three statistically significant correlations were identified. A stronger right-wing orientation was associated with higher levels of RWA and SDO, and lower levels of LWA. The observed correlations were very strong for RWA and LWA, and strong for SDO. No other correlations reached statistical significance.

Kruskal-Wallis tests were also performed to explore between-group differences. However, the results were consistent with those obtained through rank-order correlations. In the Polish sample (Study 3), some subgroups were small; therefore, to ensure consistency and methodological soundness across both samples, rank-order correlations were preferred.

Table 8

Spearman's rank-order correlations between the Left-wing and Right-wing supporters and scale scores in the US American sample

		<i>N</i>	<i>M</i>	<i>SD</i>	
Need for Chaos	Strong Left-wing supporter	77	1.61	0.52	$r_s = -.06$ $p = .200$
	Moderate Left-wing supporter	100	1.54	0.53	
	Lean Left-wing	49	1.52	0.42	
	Lean Right-wing	32	1.60	0.66	
	Moderate Right-wing supporter	101	1.51	0.42	
	Strong Right-wing supporter	41	1.47	0.49	
Right-Wing Authoritarianism	Strong Left-wing supporter	76	2.09	0.87	$r_s = .74$ $p < .001$
	Moderate Left-wing supporter	94	2.73	1.35	
	Lean Left-wing	47	3.26	1.39	
	Lean Right-wing	32	5.02	1.29	
	Moderate Right-wing supporter	100	5.29	1.37	
	Strong Right-wing supporter	41	6.17	1.14	
Left-Wing Authoritarianism	Strong Left-wing supporter	75	5.37	0.77	$r_s = -.75$ $p < .001$
	Moderate Left-wing supporter	96	4.58	0.86	
	Lean Left-wing	46	3.97	0.92	
	Lean Right-wing	31	3.50	0.64	
	Moderate Right-wing supporter	100	3.09	0.76	
	Strong Right-wing supporter	41	2.86	0.87	
Social Dominance Orientation	Strong Left-wing supporter	69	1.50	0.61	$r_s = .56$ $p < .001$
	Moderate Left-wing supporter	89	1.75	0.83	
	Lean Left-wing	45	1.99	0.98	
	Lean Right-wing	28	2.71	1.40	
	Moderate Right-wing supporter	92	3.08	1.13	
	Strong Right-wing supporter	40	3.17	1.35	
Status-Driven Risk- Taking Scale	Strong Left-wing supporter	68	3.40	0.48	$r_s = -.01$ $p = .874$
	Moderate Left-wing supporter	85	3.47	0.65	
	Lean Left-wing	45	3.38	0.62	
	Lean Right-wing	26	3.43	0.77	
	Moderate Right-wing supporter	86	3.52	0.56	
	Strong Right-wing supporter	36	3.30	0.65	
Short-Form Measure of Loneliness	Strong Left-wing supporter	68	2.04	0.85	$r_s = -.07$ $p = .184$
	Moderate Left-wing supporter	85	1.91	0.71	
	Lean Left-wing	45	2.00	0.74	
	Lean Right-wing	26	1.78	0.67	
	Moderate Right-wing supporter	86	1.94	0.71	
	Strong Right-wing supporter	36	1.73	0.74	
10-Step Ladder for Societal Position	Strong Left-wing supporter	68	4.94	1.78	$r_s = .05$ $p = .368$
	Moderate Left-wing supporter	85	5.56	1.52	
	Lean Left-wing	45	5.38	1.70	
	Lean Right-wing	26	5.12	1.73	
	Moderate Right-wing supporter	86	5.56	1.54	
	Strong Right-wing supporter	36	5.22	1.82	

Figure 25

Differences in Need for Chaos scores among Left-Wing and Right-Wing supporters in the US American sample

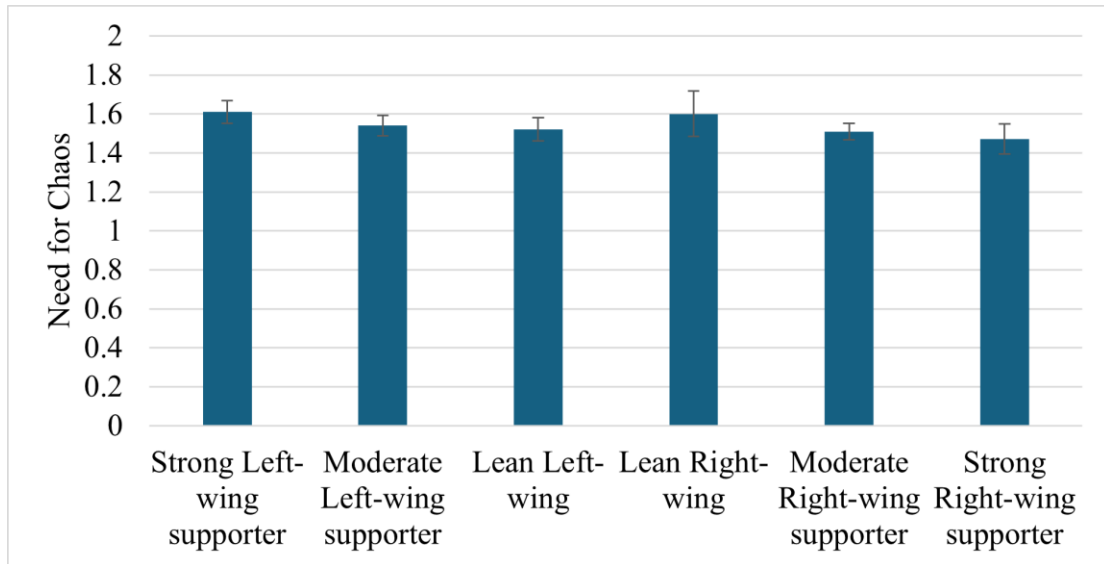


Figure 26

Differences in Right-Wing Authoritarianism scores among Left-Wing and Right-Wing supporters in the US American sample

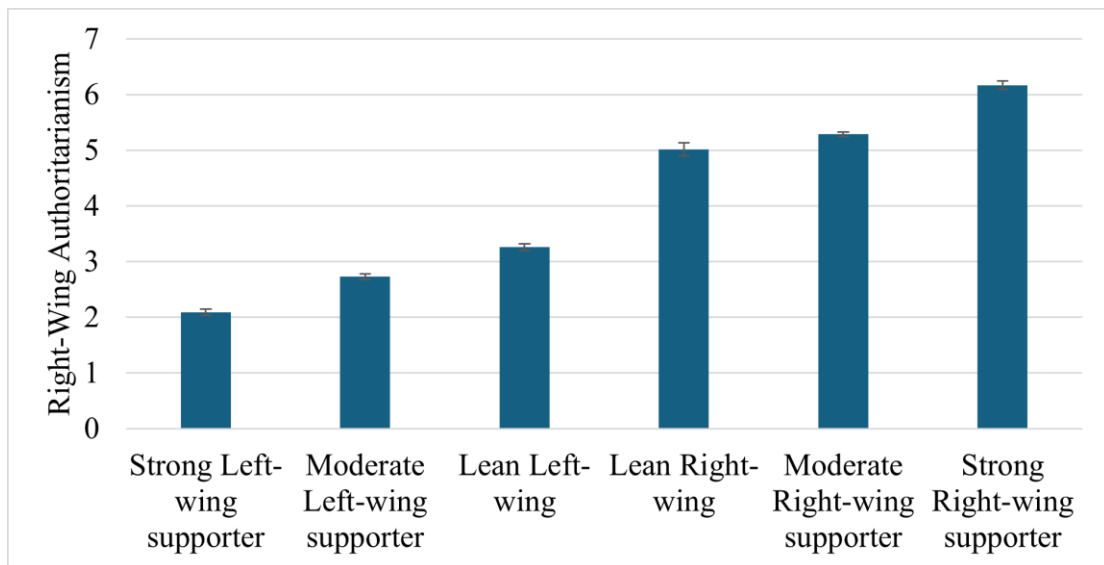


Figure 27

Differences in Left-Wing Authoritarianism scores among Left-Wing and Right-Wing supporters in the US American sample

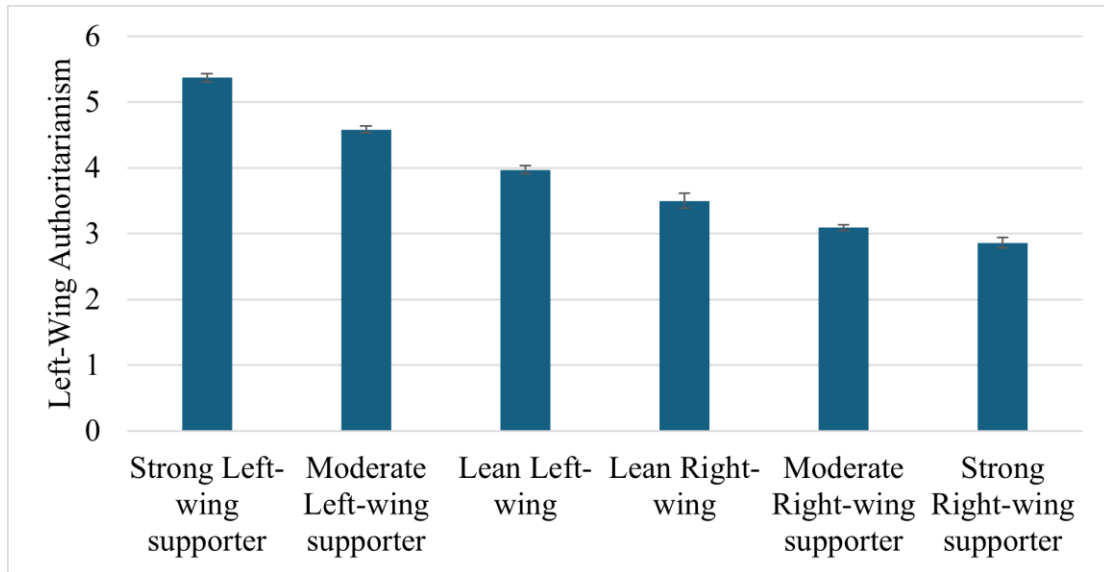


Figure 28

Differences in Social Dominance Orientation scores among Left-Wing and Right-Wing supporters in the US American sample

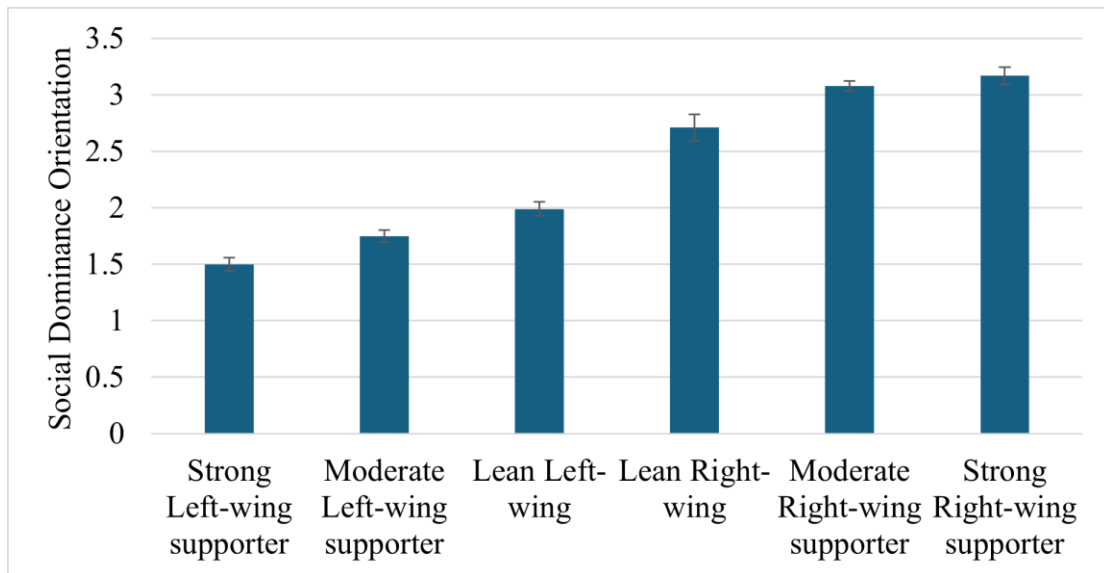


Figure 29

Differences in Status-Driven Risk-Taking scores among Left-Wing and Right-Wing supporters in the US American sample

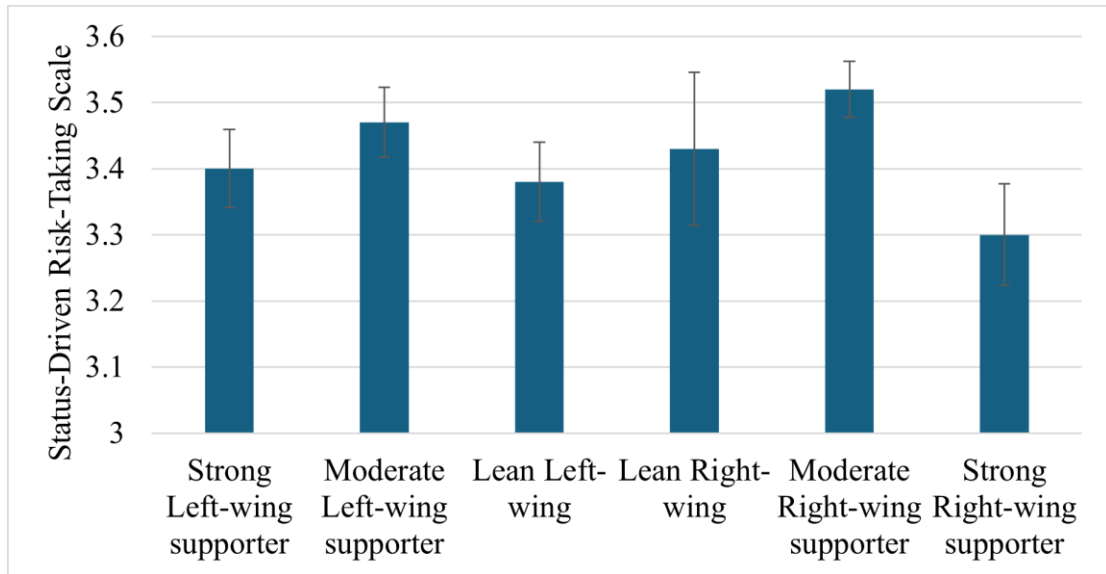


Figure 30

Differences in Short-Form Measure of Loneliness scores among Left-Wing and Right-Wing supporters in the US American sample

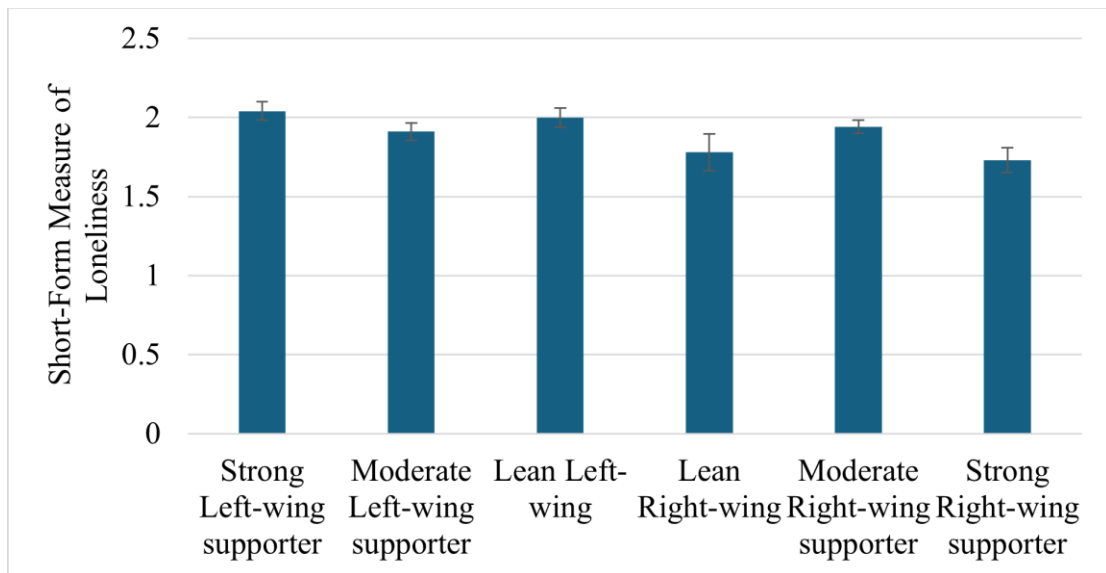
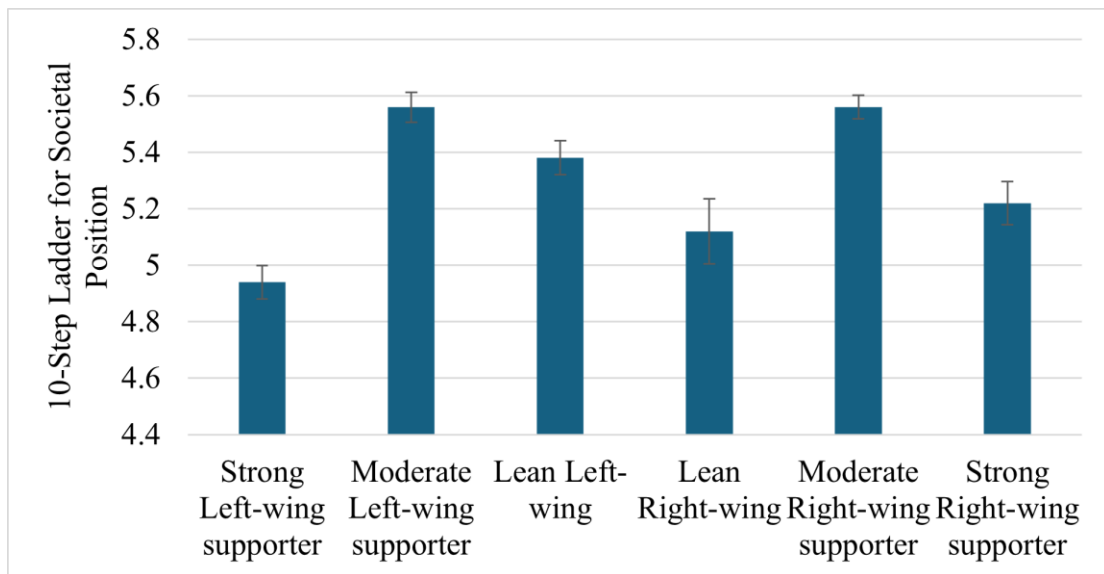


Figure 31

Differences in the 10-Step Ladder for Societal Position scores among Left-Wing and Right-Wing supporters in the US American sample



Sex differences in the US American sample

Student's *t*-tests were conducted to examine sex differences in the US American sample (see Table 8). Statistically significant differences were found for several variables.

Female participants tended to have lower levels of RWA, higher levels of LWA, and lower levels of SDO and SDRT compared to male participants. Effect sizes for these differences were generally small. Other sex differences were not statistically significant.

Table 9

*Sex differences in psychological scale scores in the US American sample: Student's *t*-test results*

	Female		Male		<i>t</i>	<i>p</i>	95% <i>CI</i>		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Need for Chaos	1.49	0.46	1.59	0.52	-1.92	.056	-0.19	0.00	0.19
Right-Wing Authoritarianism	3.69	1.99	4.11	1.84	-2.12	.035	-0.80	-0.03	0.22
Left-Wing Authoritarianism	4.18	1.20	3.80	1.18	3.16	.002	0.15	0.62	0.32
Social Dominance Orientation	2.06	1.09	2.58	1.29	-4.12	<.001	-0.77	-0.27	0.44
Status-Driven Risk-Taking Scale	3.34	0.57	3.55	0.63	-3.25	.001	-0.34	-0.08	0.35
Short-Form Measure of Loneliness	1.88	0.70	1.97	0.79	-1.08	.282	-0.25	0.07	0.12
10-Step Ladder for Societal Position	5.30	1.65	5.45	1.65	-0.82	.415	-0.50	0.21	0.09

Discussion

RQ1: "Is there a link between the $NFC_{\text{Chaos-R}}$ score and the degree of political preference for either left-wing or right-wing policies among US Americans?"

The first research question examined whether US individuals' degree of political preference for left-wing or right-wing policies is associated with their level of chaos-seeking motivation, as measured by the Need for Chaos Scale-Revised ($NFC_{\text{Chaos-R}}$). Contrary to theoretical expectations grounded in prior literature (e.g., Arceneaux et al., 2021; Petersen et al., 2023a), the results revealed no statistically significant relationship between $NFC_{\text{Chaos-R}}$ scores and self-identified political preference along the left-right spectrum. A Spearman's rank-order correlation showed no significant association ($r_s = -.06, p = .200$), and a Kruskal-Wallis test comparing NFC scores across six political orientation groups found no significant group differences ($H(5) = 9.53; p = .090$). These findings indicate that, within the US sample, the strength or direction of ideological alignment does not meaningfully predict an individual's inclination toward societal disruption.

This outcome is particularly noteworthy in light of prior work that has linked high NFC scores to anti-establishment behaviors and support for populist political candidates, such as Donald Trump (Edsall, 2019; Petersen et al., 2018). The theoretical framework proposed by Arceneaux et al. (2021) describes NFC as emerging from perceived marginalization, whereby individuals who view themselves as excluded or disadvantaged by the prevailing social order come to see chaos not as destructive but as an opportunity

for transformational change. Such individuals may become willing to adopt radical or disruptive tactics, including the spread of hostile political rumors, not out of ideological commitment but as a strategy for undermining institutions they perceive as illegitimate or unresponsive.

The lack of association with left-right political preference in this study suggests that NFC does not neatly map onto traditional ideological categories. Instead, the results support a view of NFC as an ideologically diffuse disposition, more closely related to personal psychological traits than to policy preferences or ideological identification. This interpretation is reinforced by significant correlations found between NFC_{Chaos-R} scores and several other individual difference variables. For example, NFC_{Chaos-R} was positively correlated with status-driven risk-taking ($r = .22, p < .001$), social marginalization via loneliness ($r = .14, p < .01$), and Social Dominance Orientation ($r = .11, p < .05$) (Table 4). These findings align with the notion that chaos-seeking motivations stem more from psychological alienation, status frustration, and a desire for recognition than from ideological conviction.

Furthermore, NFC_{Chaos-R} showed no significant correlation with Right-Wing Authoritarianism ($r = .03$) and only a weak positive correlation with Left-Wing Authoritarianism ($r = .15, p < .01$). This is critical because RWA and LWA are both conceptually related to ideological extremism, albeit in different forms. Their weak associations with NFC suggest that chaos-seeking motivations may arise independently of authoritarian attitudes, challenging assumptions that NFC reflects a variant of ideological radicalism. These findings also align with results from group comparisons,

where supporters of various political parties or ideological subgroups showed no significant differences in NFC scores, even when large and consistent differences emerged for RWA, LWA, and SDO (Table 5 and Table 6).

Taken together, these findings reinforce the theoretical model in which NFC is best conceptualized not as a derivative of ideology, but as a psychological orientation toward disruption, shaped by individual-level traits such as perceived marginalization, disaffection, and willingness to challenge social hierarchies. This perspective helps explain why $NFC_{\text{Chaos-R}}$ did not vary meaningfully across the left-right political spectrum. People with high NFC may be found across the ideological divide but are unified by a shared disposition toward institutional distrust, frustration, and a desire for radical transformation, regardless of the ideological content through which that desire is expressed.

This ideologically non-specific nature of NFC has important implications. It suggests that chaos-seeking behaviors are not inherently partisan and that strategies aimed at mitigating the spread of political disinformation, extremism, or institutional distrust should address underlying psychological and social grievances, rather than focusing narrowly on political affiliation. Moreover, this dissociation between ideology and chaos-seeking highlights the importance of examining contextual and structural factors (such as socioeconomic disadvantage or perceived political exclusion) that may fuel chaos-oriented motivations across diverse populations.

In conclusion, although prior research has linked NFC to political outcomes through an anti-elite or populist lens, the current findings emphasize that NFC operates

independently of ideological alignment. The absence of a relationship between $NFC_{\text{Chaos-R}}$ scores and left-right political preference in the US sample underscores the value of approaching NFC as a distinct psychological construct, rooted in marginalization and social discontent, rather than a derivative of political ideology.

RQ2: "Are there differences in $NFC_{\text{Chaos-R}}$ scores among US Americans' supporters of different political parties?"

The second research question aimed to determine whether US Americans' support for different political parties is associated with varying levels of chaos-seeking motivation, as assessed by the $NFC_{\text{Chaos-R}}$ scale. Based on previous research (e.g., Arceneaux et al., 2021; Edsall, 2019), it was hypothesized that supporters of parties with anti-establishment rhetoric might exhibit elevated NFC scores.

However, the results of Study 1 do not support this hypothesis. The analysis using the Mann-Whitney U test found no statistically significant difference in $NFC_{\text{Chaos-R}}$ scores between supporters of the Democratic Party ($M = 1.56$, $SD = 0.50$) and those of the Republican Party ($M = 1.53$, $SD = 0.49$) ($U = 18552.5$; $Z = -0.80$; $p = .426$; $r = .04$) (see Table 5 and Figure 11). Similarly, a more granular analysis using Kruskal-Wallis ANOVA across six party preference groups (from "Strong Democrat" to "Strong Republican") also yielded a non-significant result for $NFC_{\text{Chaos-R}}$ ($H(5) = 9.53$; $p = .090$; see Table 5 and Figure 18). These findings demonstrate that support for different political parties in the

US does not systematically relate to differences in chaos-seeking motivation in this sample.

These null findings are particularly striking in the context of earlier work that linked chaos-seeking tendencies with support for disruptive populist candidates (Arceneaux et al., 2021; Petersen et al., 2023a). However, the present results suggest that partisan alignment alone is not sufficient to predict NFC, which appears to reflect a broader motivational profile that transcends political affiliation.

Additional insights can be gleaned by examining the associations between $NFC_{\text{Chaos-R}}$ and other psychological constructs assessed in this study. Specifically, while $NFC_{\text{Chaos-R}}$ scores did not differ between party supporters, the psychological profiles of these groups differed sharply along ideological lines, as evidenced by significant differences in Right-Wing Authoritarianism, Left-Wing Authoritarianism, and Social Dominance Orientation (see Table 5 and Table 6).

Republican supporters scored significantly higher in RWA and SDO, and lower in LWA, compared to Democrats. These findings are consistent with previous literature (e.g., Altemeyer, 1981; Conway et al., 2018; Pratto et al., 1994) and confirm that partisan identity is strongly linked to ideological attitudes, especially those tied to authoritarianism and hierarchical worldviews. However, NFC did not track with these ideological orientations, suggesting that chaos-seeking reflects a distinct construct not reducible to traditional ideological or partisan affiliations.

Moreover, although $NFC_{\text{Chaos-R}}$ did show positive correlations with SDO ($r = .11$) and status-driven risk-taking ($r = .22$), these traits may be unevenly distributed across

parties, but not strongly enough to produce between-group differences in NFC. In other words, although Republicans as a group score higher on SDO, the variation in NFC within both partisan groups may be greater than the between-group differences, thus resulting in no significant party-level distinctions in NFC scores.

Additionally, the correlation between loneliness (a proxy for social marginalization) and NFC ($r = .14$) indicates that personal feelings of exclusion or disconnection, rather than political identity, may be more critical drivers of chaos-seeking behavior. These underlying psychological variables cut across partisan lines, supporting Arceneaux et al.'s (2021) conceptualization of NFC as a reaction to personal disenfranchisement, not ideological discontent.

The lack of difference in NFC across political parties also aligns with the notion that individuals high in NFC are motivated less by specific policy positions and more by a general desire to disrupt the status quo, regardless of which party currently holds power. This is consistent with findings that high NFC individuals are more likely to spread disinformation, not because of allegiance to one party, but because such actions serve their broader anti-establishment goals (Arceneaux et al., 2021; Petersen et al., 2023a).

In summary, although previous research has connected NFC with specific political outcomes, particularly in the context of populist campaigns, the present findings highlight that party affiliation does not meaningfully differentiate chaos-seeking motivations among US adults. The psychological underpinnings of NFC (such as perceived marginalization, risk orientation, and social alienation) appear to transcend party lines. These findings reinforce the conceptualization of NFC as an ideologically and politically

diffuse orientation, one that challenges the assumption that political partisanship alone can predict tendencies toward disruption and anti-institutional behavior.

STUDY 2

The aim of Study 2 is to create a Polish translation, adaptation, and validation of the Need for Chaos Scale-Revised (Petersen et al., 2023b). The translated scale will be used in Study 3 to obtain Polish data, which will afford a cross-cultural comparison with the US, which uses the English scale. The cross-cultural comparison can be found in Study 4. For details about Study 2, see Appendix B.

The translation of psychological scales is a process that requires attention to ensure the preservation of measurement equivalence and the instrument's validity across different cultural and linguistic contexts (Geisinger, 1994; Müller & Wytykowska, 2005). It is essential to retain semantic equivalence between different language versions of scales (Efstathiou, 2019). The conceptual equivalence between the original and translated instruments, along with empirical validation, is necessary to achieve consistent measurement across cultural groups or countries (Tang & Dixon, 2002). The Need for Chaos Scale-Revised translation process was conducted following established guidelines and research recommendations, as described below.

Translation and adaptation of the Need for Chaos Scale-Revised

The translation process involved several steps to ensure the accuracy, conceptual equivalence, and cultural relevance of the Polish version of the scale. In **Step 1**, a translator, a native Polish speaker familiar with the psychological concepts involved in accurately capturing the intended meaning, translated the scale from English to Polish, which served as the starting point for further evaluation and refinement. In **Step 2**, a back-translation was performed by two other translators, Polish native speakers proficient

in the source language but with no knowledge of the original scale, who translated the Polish version back into English. This allowed an assessment of the correspondence between the original English scale and the translated version, highlighting any potential discrepancies or issues. **Step 3** involved an expert review, harmonization, and adaptation process. The translation team and a panel of experts (the three translators who performed the translation and back-translation of the original scale, along with two additional expert translators, Polish native speakers holding graduate degrees in English and specializing in translations) reviewed and compared the original translation and the back-translation. Discrepancies or issues in the translated version were identified and discussed to ensure the accuracy and fidelity of the translation. In consultation with the experts, the translation team addressed the identified discrepancies and modified the translation as necessary. The aim was to ensure that the translated scale preserved the intended concepts, meaning, and cultural relevance in the Polish context.

Following the expert review and adaptation, **Step 4** involved pilot testing, reviewing, and revising the translated scale. A small sample of individuals ($n = 20$) who were native Polish speakers participated in the pilot testing. This phase aimed to identify any potential difficulties in comprehension, ambiguous items, or other issues specific to the target population. Participants' feedback and responses were collected, and based on the pilot testing results, the translated scale underwent further review and necessary revisions. The revisions focused on enhancing clarity, improving comprehension, and eliminating potential cultural bias or linguistic challenges. Finally, in **Step 5**, the final

version of the scale was established. It represented the culmination of the translation process and was considered the definitive Polish scale adaptation.

The translators

The team was composed of experts who included bilingual individuals proficient in both the source language (English) and the target language (Polish). The team consisted of psychologists, linguists, and translators.

Colleague #1: Olga Dudojć, Ph.D. candidate – Translator, Polish native speaker, familiar with the psychological concepts involved to accurately capture the intended meaning. Department of Psychosocial Science, University of Bergen, Norway.

Colleague #2: Daniel Sokołowski, Ph.D. – Translator, Polish native speaker, proficient in the source language, but has no knowledge of the original scale. The Faculty of Medicine, Norwegian University of Science and Technology, Trondheim, Norway.

Colleague #3: Amelia Walter-Dzikowska, MA – Translator, Polish native speaker, proficient in the source language but has no knowledge of the original scale. Department of Human Biology, University of Wrocław, Poland.

Colleague #4: Marta Sibierska, Ph.D. – Expert translator, native Polish speaker, with a graduate degree in English, with a specialization in translations. Centre for Language Evolution Studies, Nicolaus Copernicus University in Toruń, Poland.

Colleague #5: Marek Placiński, Ph.D. – Expert translator, native Polish speaker, with a graduate degree in English, with a specialization in translations.

Centre for Language Evolution Studies, Nicolaus Copernicus University in Toruń,
Poland.

Final version of the scale

Zew Chaosu – poprawiona skala

W jakim stopniu zgadzasz lub nie zgadzasz się z poniższymi stwierdzeniami?

(1 = Zdecydowanie się nie zgadzam; 7 = Zdecydowanie się zgadzam)

1. Kręcą mnie klęski żywiołowe w obcych krajach.
2. Fantazuję o klęsce żywiołowej o takiej skali, że tylko niewielka grupa ludzi, którzy przeżyli, mogłaby zacząć wszystko od nowa.
3. Uważam, że społeczeństwo powinno zostać doszczętnie spalone.
4. Kiedy myślę o naszych instytucjach społeczno-politycznych, to dochodzę do wniosku, że chciałbym, żeby oni wszyscy "po prostu spłonęli".
5. Nie możemy naprawić problemów w naszych instytucjach społecznych, musimy je zburzyć i zacząć budować wszystko od nowa.
6. Potrzebuję chaosu wokół siebie – jest zbyt nudno, gdy nic się nie dzieje.
7. Czasami mam ochotę niszczyć piękne rzeczy.
8. (R) Musimy utrzymywać ład i porządek, robiąc to, co dobre, a nie to, co złe.
9. (R) Lepiej jest żyć w społeczeństwie, w którym panuje porządek i obowiązują jasne zasady, niż w takim, w którym wszystko wolno.

Participants. Participants at least 18 years of age who spoke Polish and resided in Poland were recruited via Prolific (see Study 1 for more information about Prolific usage). Before data collection began, the study was approved by Oakland University's IRB (see Appendix D: the Institutional Review Board's decision letter). Every participant who completed the survey received financial compensation of 0.94 PLN (approx. \$0.24), based on Poland's minimum hourly rate of 28.10 PLN and the estimated 2 minutes required to complete the study. A total of $n = 21$ participants were excluded due to patterned responses in the NFC scale, such as selecting the same response (e.g., only "1") across all items, including reverse-coded ones, indicating a lack of engagement with the item content. An additional $n = 37$ participants were excluded for completing the survey in 30 seconds or less, which was substantially below the average completion time. The final Polish sample ($n = 474$) comprised 243 men (51.3%), 219 women (46.2%), and 12 individuals identifying as another gender (2.5%), with ages ranging from 18 to 67 years ($M = 28.79$, $SD = 8.01$). The US American sample from Study 1 was adjusted to match the demographic characteristics of the Polish group and included 142 participants: 65 men (45.8%), 75 women (52.8%), and 2 individuals identifying as another gender (1.4%), aged between 18 and 62 years ($M = 29.30$, $SD = 8.92$).

Procedure. Eligible Polish participants viewed the study advertisement on the Prolific dashboard. Those interested in participation provided informed consent and were directed to the survey. Those who did not provide consent were redirected out of the survey. Like Study 1, this study also implemented the same measures for ensuring data quality and preventing careless responses or automated survey completion.

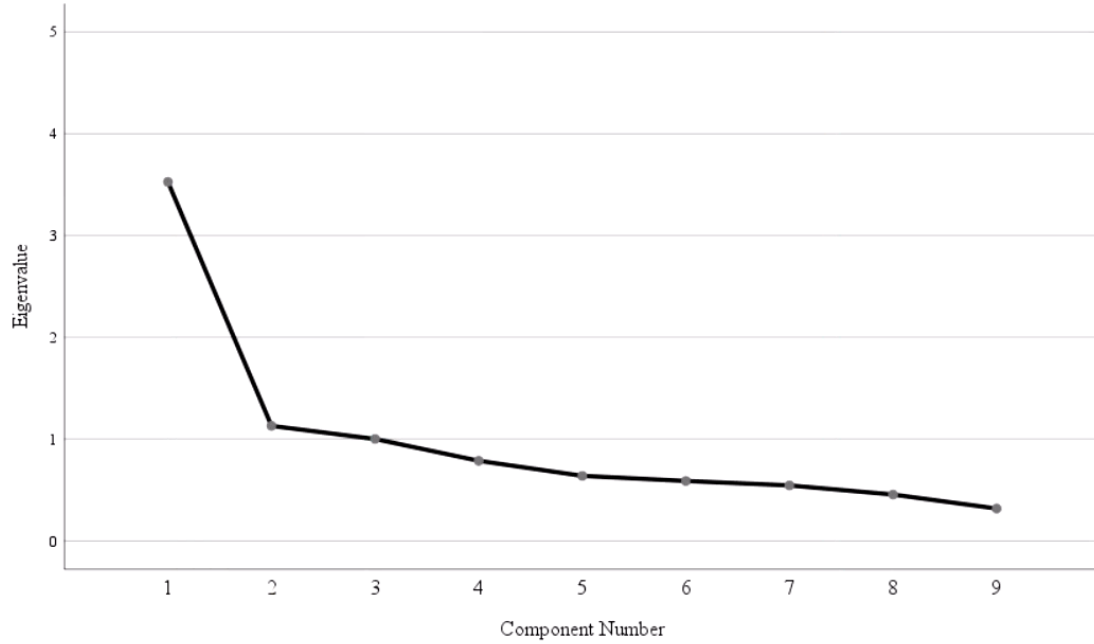
Materials. The entire questionnaire was presented in Polish, and the answers about education were adjusted to the Polish school system. A set of three questions was used to investigate demography. The first one asked for the participant's age (in years) as a numeric value. The second one asked for their gender (male, female, other). The third one asked for their level of education on a 6-level scale (no high school to post-graduate or beyond). Then, the Polish version of the NFC_{Chaos-R} was presented on the next page.

Results

Psychometric validation of scales

In the initial step, the single-factor structure of the original instrument was evaluated. A confirmatory factor analysis (CFA) was conducted using IBM® SPSS® Amos™ version 23 (Arbuckle, 2014). The RMSEA values indicated poor model fit in both the Polish sample (RMSEA = .13, 95% *CI* = .113 – .143) and the US American sample (RMSEA = .16, 95% *CI* = .129 – .186). Consequently, the original structure, including all items, could not be retained. An exploratory factor analysis (EFA) was therefore conducted using IBM® SPSS® version 25 (George & Mallery, 2020).

For the Polish sample, the data were deemed suitable for EFA, as indicated by a Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of .80 and a statistically significant Bartlett's test of sphericity, $\chi^2(36) = 1105.89$; $p < .001$. The scree plot (Figure 32) suggested the presence of one dominant factor, although two factors exceeded the eigenvalue threshold of 1. The single-factor solution accounted for 39.19% of the variance, and the two-factor solution accounted for 51.75%, which is considered acceptable. Promax rotation was performed. The two-factor model yielded subscales with acceptable factor loadings; however, these subscales lacked theoretical grounding. However, the two-factor model did not yield interpretable or distinct subscales. Factor loadings for both solutions are presented in Table 9.

Figure 32*Scree plot for the Polish sample***Table 10***Factor loadings for the Polish sample*

	Single factor	Factor I	Factor II
NFC 1	.61	.59	
NFC 2	.64	.47	
NFC 3	.72		.66
NFC 4	.72		.86
NFC 5	.60		.92
NFC 6	.66	.76	
NFC 7	.58	.72	
NFC 8	.64	.59	
NFC 9	.40	.62	
Cronbach's α		.73	.76

For the US American sample, the data were considered appropriate for exploratory factor analysis, as indicated by a Kaiser-Meyer-Olkin (KMO) measure of .81 and a statistically significant Bartlett's test of sphericity, $\chi^2(36) = 597.00; p < .001$. The scree plot (Figure 33) suggested the presence of one dominant factor, although two factors exceeded the eigenvalue threshold of 1. The single-factor solution accounted for 48.08% of the variance, and the two-factor solution accounted for 63.58%, representing a satisfactory outcome.

In the two-factor model, one factor consisted of seven items coded in a standard (non-reversed) manner, whereas the second comprised two reverse-coded items. This pattern suggests that, despite excluding clearly invalid responses, some respondents may have experienced confusion related to the reverse coding of these two items. Factor loadings for both solutions are presented in Table 10. Although the one-factor solution demonstrated slightly lower internal consistency compared to the Polish sample, it remained acceptable, with all nine questionnaire items exhibiting adequate factor loadings.

Figure 33

Scree plot for the US American sample

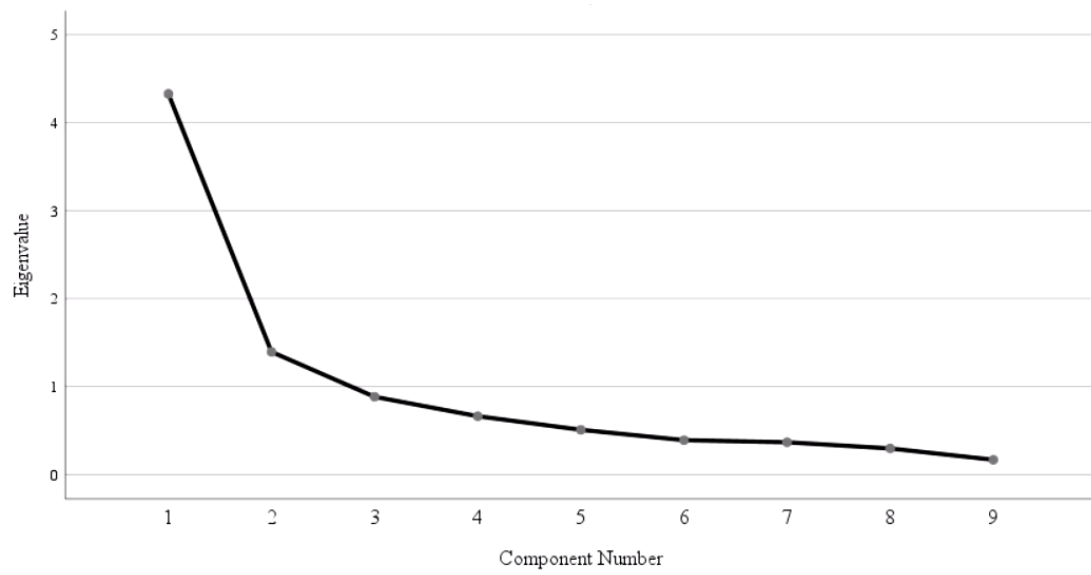


Table 11
Factor loadings for the US American sample

	Single factor	Factor I	Factor II
NFC 1	.61	.63	
NFC 2	.80	.81	
NFC 3	.86	.87	
NFC 4	.81	.80	
NFC 5	.65	.65	
NFC 6	.78	.77	
NFC 7	.82	.85	
NFC 8	.36		.85
NFC 9	.26		.89
Cronbach's α		.87	.68

In the subsequent step, descriptive statistics and item discrimination indices were calculated for all questionnaire items. As presented in Table 11, the items demonstrated good discriminatory power for the seven normally-coded items across both samples, whereas the two reverse-coded items showed marginally acceptable levels of discrimination. Removing the two reverse-coded items led to a slight improvement in internal consistency. Cronbach's alpha coefficients indicated good internal reliability for both samples.

Table 12

Descriptive statistics and discriminatory power of individual items in the final version of the questionnaire

	Polish sample			US American sample		
	<i>M</i>	<i>SD</i>	Discriminatory power of the single factors	<i>M</i>	<i>SD</i>	Discriminatory power of the single factors
NFC 1	1.94	1.36	0.48	1.67	1.36	0.47
NFC 2	1.65	1.26	0.50	1.58	1.21	0.68
NFC 3	1.73	1.33	0.60	1.55	1.12	0.75
NFC 4	2.41	1.71	0.60	1.82	1.33	0.71
NFC 5	2.76	1.69	0.48	2.32	1.70	0.53
NFC 6	2.03	1.42	0.53	1.61	1.19	0.65
NFC 7	1.67	1.21	0.45	1.42	1.05	0.68
NFC 8	2.29	1.14	0.51	2.36	1.55	0.34
NFC 9	2.57	1.22	0.29	2.61	1.34	0.26
Cronbach's α			.80			.83

Descriptive statistics for the Need for Chaos Scale

In the following step, basic descriptive statistics were calculated (Table 12). The Kolmogorov-Smirnov test was conducted to assess the normality of the distribution. In both samples, the distribution deviated significantly from normality, exhibiting skewness. The distributions of the scores are illustrated in Figure 34 and Figure 35.

Table 13

Basic descriptive statistics of the Need for Chaos scale

Variable	<i>M</i>	<i>Me</i>	<i>SD</i>	<i>Sk.</i>	<i>Kurt.</i>	<i>Min</i>	<i>Max</i>	<i>D</i>	<i>p</i>
Polish sample	2.12	1.89	0.86	1.05	0.77	1	5.56	.13	<.001
US American sample	1.88	0.87	1.67	1.36	1.13	1	4.44	.20	<.001

Differences in overall scores and individual item responses between the two samples were assessed using Mann-Whitney *U* tests (Table 13). Six statistically significant differences were identified: the overall Need for Chaos score and items 1, 4, 5, 6, and 7. In all cases, higher scores were observed in the Polish sample. The effect sizes, estimated using the *r* coefficient, were small. The results are presented in Figure 36.

Table 14*Differences in the Need for Chaos scale in Polish and US American samples*

	Polish sample		US American sample					
	(n = 474)		(n = 142)					
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>U</i>	<i>Z</i>	<i>p</i>	<i>r</i>
NFC 1	1.94	1.36	1.67	1.36	27827.0	-3.52	<.001	0.14
NFC 2	1.65	1.26	1.58	1.21	31989.0	-1.13	.260	0.05
NFC 3	1.73	1.33	1.55	1.11	31479.5	-1.42	.154	0.06
NFC 4	2.41	1.71	1.82	1.33	26830.5	-3.94	<.001	0.16
NFC 5	2.76	1.69	2.32	1.70	27465.0	-3.43	.001	0.14
NFC 6	2.03	1.42	1.61	1.19	27407.0	-3.74	<.001	0.15
NFC 7	1.67	1.21	1.42	1.05	28944.0	-3.11	.002	0.13
NFC 8	2.29	1.14	2.36	1.55	32058.5	-0.89	.372	0.04
NFC 9	2.57	1.22	2.61	1.34	33618.0	-0.02	.984	0.00
NFC	2.12	0.86	1.88	0.87	26650.5	-3.77	<.001	0.15

Figure 34

Distribution of the Need for Chaos scale in the Polish sample

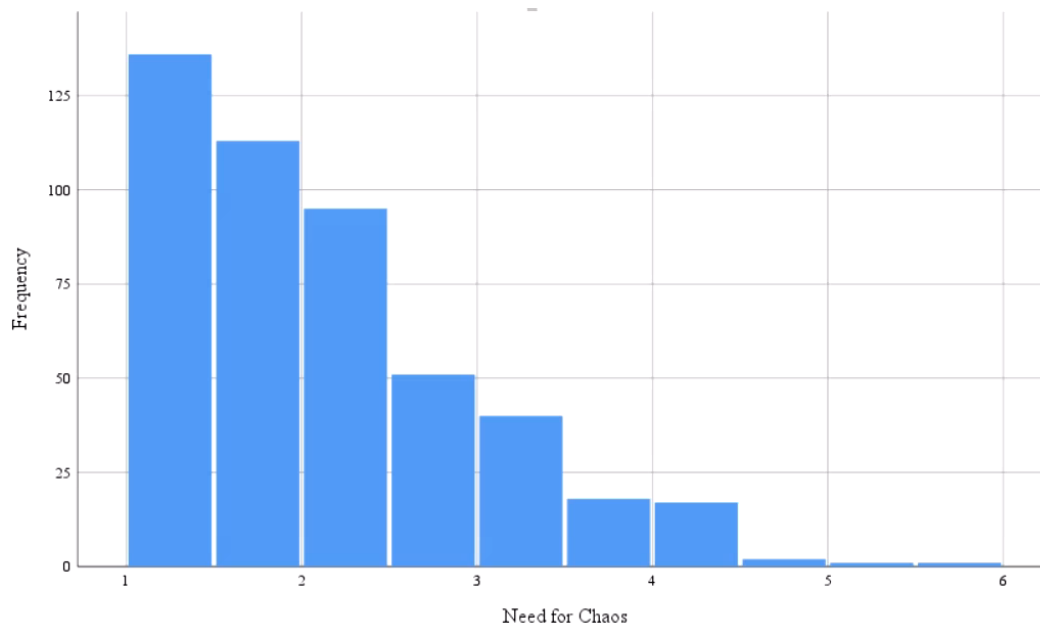


Figure 35

Distribution of the Need for Chaos scale in the US American sample

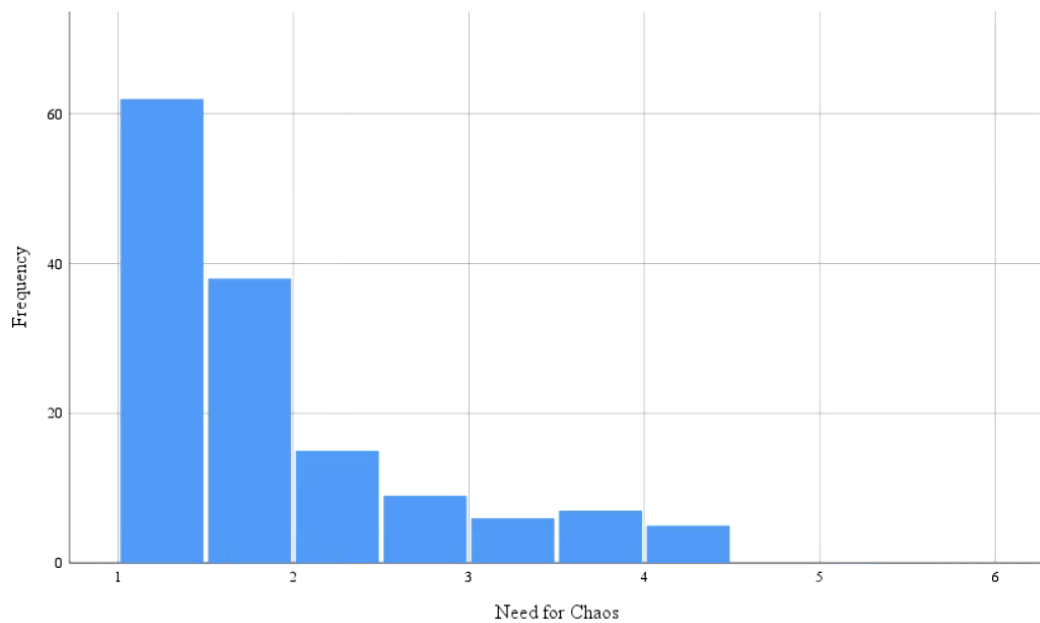
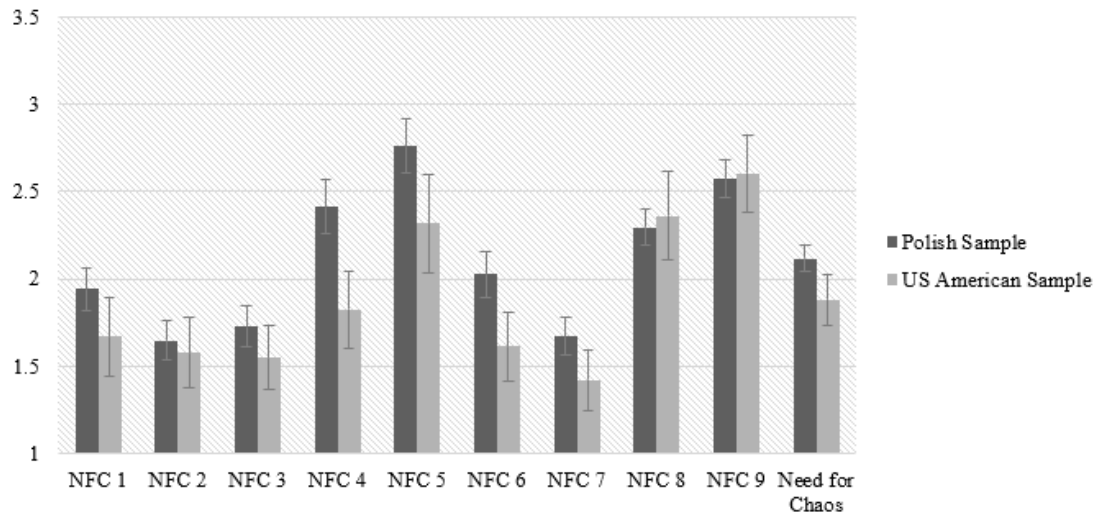


Figure 36

Mean value and 95% CI of the Need for Chaos results in Polish and US American samples



Sex differences were also examined using Mann–Whitney U tests (Table 14 and 15). In the Polish sample, six statistically significant differences were found: men scored higher on the overall Need for Chaos score as well as on items 2, 4, 5, 6, and 7. Five statistically significant differences were identified in the US American sample, with men scoring higher on items 1, 2, 3, 4, and 7. In both samples, the observed effect sizes were small.

Table 15Differences in the Need for Chaos scale in the Polish sample ($n = 474$)

	Male ($n = 243$)		Female ($n = 219$)		U	Z	p	r
	M	SD	M	SD				
NFC 1	2.02	1.40	1.84	1.28	24817.5	-1.37	.169	0.06
NFC 2	1.85	1.37	1.40	1.02	21705.5	-4.25	<.001	0.20
NFC 3	1.74	1.33	1.67	1.29	25928.0	-0.57	.566	0.03
NFC 4	2.65	1.76	2.13	1.61	21893.5	-3.48	.001	0.16
NFC 5	2.95	1.70	2.53	1.67	22499.0	-2.94	.003	0.14
NFC 6	2.16	1.45	1.84	1.34	22953.0	-2.78	.005	0.13
NFC 7	1.78	1.26	1.54	1.14	23435.0	-2.64	.008	0.12
NFC 8	2.36	1.20	2.21	1.08	25006.5	-1.17	.244	0.05
NFC 9	2.46	1.23	2.66	1.23	23953.0	-1.91	.056	0.09
NFC	2.22	0.87	1.98	0.83	21787.5	-3.37	.001	0.16

Table 16*Differences in the Need for Chaos scale in the US American sample (n = 142)*

	Male (n = 75)		Female (n = 65)		U	Z	p	r
	M	SD	M	SD				
NFC 1	1.93	1.61	1.38	0.95	2010.5	-2.28	.023	0.19
NFC 2	1.75	1.35	1.34	0.92	2054.0	-2.16	.031	0.18
NFC 3	1.65	1.13	1.43	1.10	2042.0	-2.14	.033	0.18
NFC 4	2.01	1.32	1.62	1.33	1910.0	-2.58	.010	0.22
NFC 5	2.45	1.65	2.14	1.73	2078.0	-1.61	.107	0.14
NFC 6	1.68	1.24	1.48	1.00	2244.5	-1.01	.311	0.09
NFC 7	1.63	1.28	1.20	0.64	2066.5	-2.22	.026	0.19
NFC 8	2.41	1.49	2.34	1.62	2275.5	-0.70	.482	0.06
NFC 9	2.53	1.37	2.69	1.33	2224.5	-0.92	.359	0.08
NFC	2.01	0.95	1.74	0.75	2032.0	-1.70	.089	0.14

Age-related associations were examined using Spearman's rank correlation coefficients. In both the Polish and the US American samples, the total Need for Chaos score was negatively correlated with age. In the Polish sample, eight items (items 1 through 8) showed statistically significant negative correlations with age. In contrast, in the US American sample, only items 1 and 9 demonstrated significant negative correlations. All observed correlations were weak in magnitude.

Table 17

Correlations between the Need for Chaos scale and participants' age in Polish and US American samples

	Age	
	Polish sample (<i>n</i> = 474)	US American sample (<i>n</i> = 142)
NFC 1	-.23***	-.18*
NFC 2	-.11*	-.02
NFC 3	-.17***	.02
NFC 4	-.12*	-.02
NFC 5	-.1*	-.08
NFC 6	-.19***	-.08
NFC 7	-.22***	-.05
NFC 8	-.23***	-.06
NFC 9	-.05	-.28***
NFC	-.22***	-.2*

Discussion

The Polish translation of the Need for Chaos scale appears to be valid, with psychometric properties showing that the translated version is consistent with the original English scale. Both samples demonstrated a similar overall structure, though some differences were observed in factor loadings and item discrimination. Specifically, the factor analyses conducted on both the Polish and US American samples indicated that a one- or two-factor solution could be imposed on the data structure, with a somewhat better statistical fit observed in the US sample. Despite this, the internal consistency

(Cronbach's alpha) was good for both groups (Polish sample $\alpha = .80$, US American sample $\alpha = .83$).

Differences between the two samples were noted, with the Polish sample showing higher scores on several items of the Need for Chaos scale (e.g., items 1, 4, 5, 6, and 7). These differences can likely be attributed to cultural factors rather than translation issues. For example, differences in political or social climates between Poland and the US may influence how individuals from each country relate to concepts like chaos and societal order.

Overall, the translation successfully maintains the scale's original intent, with minor discrepancies likely reflecting genuine cultural differences rather than flaws in the translation process. The Polish version of the scale captures similar constructs to the original, though small cultural differences exist in how these constructs are perceived and responded to.

STUDY 3

The aim of Study 3 is to investigate the associations and differences observed in the literature regarding a) the left-wing or right-wing political preference and b) the preference for a specific political party using data from a sample of Polish adults.

NFC: the left- or right-wing political preference and the specific political party preference in Poland:

1. Is there a link between the $NFC_{\text{Chaos-R}}$ score and the degree of political preference for either left-wing or right-wing policies among Poles?
2. Are there differences in the $NFC_{\text{Chaos-R}}$ score among the supporters of different political parties among Poles?

Participants. Participants at least 18 years of age who were fluent in Polish and resided in Poland were recruited via Prolific (see Study 1 for more information about Prolific usage). Prolific is available to participants in many countries, including Poland. For the same reasons as Studies 1 and 2, the target sample for Study 3 was $n = 500$ participants. Before data collection began, the study was approved by Oakland University's IRB (see Appendix D: the Institutional Review Board's decision letter). Every participant who completed the survey received financial compensation of approximately 4.70 PLN (approx. \$1.20), based on Poland's minimum hourly rate of 28.10 PLN (approx. \$7.17) and the estimated 10 minutes to complete the study.

A total of $n = 48$ unreliable responses were identified and excluded based on patterned responses in reverse-coded scales (NFC, RWA, LWA, SDO), such as selecting only the lowest response option (e.g., "1") across all items, indicating a lack of

engagement with item content. Participants who failed at least two embedded attention checks were automatically screened out during the survey process, and therefore, no *n* is available for that subset, as their data were not recorded beyond termination. The final sample consisted of 472 Polish participants. Of these, 204 were female (43.0%), 262 were male (55.5%), and seven identified as another gender (1.5%). Participants ranged in age from 18 to 86 years ($M = 43.84$, $SD = 16.98$). One participant (0.2%) had completed elementary education, five participants (1.1%) had completed secondary education, 140 participants (29.7%) had completed high school, 129 participants (27.3%) held a Bachelor's or Engineer's degree, 181 participants (38.3%) had obtained a Master's degree, and 16 participants (3.4%) had attained a Ph.D. or higher.

Procedure. Eligible participants viewed the study advertisement on the Prolific dashboard. Those interested in participation provided informed consent and were directed to the survey. Those who did not provide consent were redirected out of the survey. Like Studies 1 and 2, this study also implemented the same measures for ensuring data quality and preventing careless responses or automated survey completion.

Materials. All materials used in Study 3 can be found in Appendix C. The materials used in Study 3 are the same as in Study 2, only translated into Polish. In the Demography section, the question about education has slightly different answers (from *Podstawowe* [Elementary] to *Wyższe – doktorat lub wyżej* [Ph.D. or beyond]); this is due to differences between education systems in the US and Poland. The Polish version of the NFC_{Chaos-R} has been translated, validated, and checked for reliability. The details can be

found in Appendix B. Instead of the two parties (like in the US), the participants selected one out of five:

- Komitet Wyborczy Nowa Lewica
- Koalicyjny Komitet Wyborczy Koalicja Obywatelska PO .N IPL Zieloni
- Koalicyjny Komitet Wyborczy Trzecia Droga Polska 2050 Szymona Hołowni – Polskie Stronnictwo Ludowe
- Komitet Wyborczy Prawo i Sprawiedliwość
- Komitet Wyborczy Konfederacja Wolność i Niepodległość

The participants were asked to indicate their party support similarly to the English version of the question in the next step after choosing the supported party "*Strong party name supporter*", "*Party name supporter*", or "*Lean party name*". Additionally, the participants were able to mark the "Other" and "Don't know" options.

In this study, only the political parties that received enough votes in the most recent parliamentary elections to join the parliament were included. The results of the 2023 parliamentary elections for both Sejm (lower house) and Senate (higher house) can be found online (National Electoral Commission, 2023). This decision was made due to the presence of numerous small and relatively irrelevant parties in the Polish political landscape. Including these small parties in the study could have introduced noise and potentially diluted the focus of the proposed research. Limiting inclusion to parties that surpassed the noted threshold ensured that the study focused on the parties with a more significant presence and influence within the political system.

159 participants declared themselves as Lewica supporters (33.7%), 51 participants supported Koalicja Polski 2050 Szymona Hołowni i PSL (10.8%), 141 participants supported Koalicja Obywatelska (29.9%), 31 participants supported Prawo i Sprawiedliwość (6.6%), and 90 participants declared themselves as supporters of Konfederacja Wolność i Niepodległość (19.1%) (see Table 17). 289 (61.2 %) participants declared themselves Left-wing supporters, and 183 (38.8%) participants declared themselves Right-wing supporters (see Table 18).

Table 18
Political party preferences in Poland.

	<i>N</i>	<i>%</i>
Lean Lewica supporter	67	14.2
Moderate Lewica supporter	64	13.6
Strong Lewica supporter	28	5.9
Lean Koalicja Obywatelska supporter	87	18.4
Moderate Koalicja Obywatelska supporter	42	8.9
Strong Koalicja Obywatelska supporter	12	2.5
Lean Koalicja Polski 2050 Szymona Hołowni i PSL-K. P. supporter	34	7.2
Moderate Koalicja Polski 2050 Szymona Hołowni i PSL-K. P. supporter	16	3.4
Strong Koalicja Polski 2050 Szymona Hołowni i PSL-K. P. supporter	1	0.2
Lean Prawo i Sprawiedliwość supporter	17	3.6
Moderate Prawo i Sprawiedliwość supporter	13	2.8
Strong Prawo i Sprawiedliwość supporter	1	0.2
Lean Konfederacja Wolność i Niepodległość supporter	53	11.2
Moderate Konfederacja Wolność i Niepodległość supporter	32	6.8
Strong Konfederacja Wolność i Niepodległość supporter	5	1.1

Table 19
Left-wing and Right-wing preferences in Poland.

	<i>N</i>	%
Strong Left-wing supporter	35	7.4
Moderate Left-wing supporter	86	18.2
Lean Left-wing	168	35.6
Lean Right-wing	127	26.9
Moderate Right-wing supporter	50	10.6
Strong Right-wing supporter	6	1.3

Status Dispositions and Social Marginalization. The Polish versions of the Status-Driven Risk-Taking scale, the Short-Form Measure of Loneliness, and Adler's ladder measure did not exist, requiring the creation of new translations. Each translation was reviewed by two bilingual experts fluent in English and Polish to ensure both conceptual accuracy and cultural relevance.

Additional measures. Following Study 1, in addition to the primary measures, to further explain participants' $NFC_{\text{Chaos-R}}$ scores, the Polish versions of three supplementary scales were incorporated into the study: RWA, LWA, and SDO.

Right-Wing and Left-Wing Authoritarianism. The Polish version of the RWA does not exist, necessitating the creation of a new translation. This translation was inspired by Radkiewicz's (2011) translation of a similar scale (based on the RWA version used by Duckitt, 2001 and Duckitt & Fisher, 2003) while maintaining fidelity to Altemeyer's original RWA scale. Several items were almost directly translatable; for

instance, "*Nasz kraj potrzebuje ludzi myślących samodzielnie, którzy mają odwagę przeciwstawić się różnym tradycjom nawet wtedy, gdy może to irytować wiele osób.*" (translation: "Our country needs people who think independently, who have the courage to oppose different traditions even when it may annoy many people.") was closely aligned with the original item "Our country needs free thinkers who have the courage to defy traditional ways, even if this upsets many people." Despite being the only translated tool available, Radkiewicz's (2011) scale contained significant errors that rendered it unsuitable for use; for example, it included the item "*Homoseksualiści i lesbijki są równie zdrowi i moralni, jak wszyscy inni.*" (translation: "Homosexuals and lesbians are just as healthy and moral as anybody else"), which inaccurately implied that lesbians are not homosexuals. Similarly, no Polish version of the LWA existed. Consequently, a new Polish LWA scale was developed, mirroring the original LWA scale in the same manner as the RWA translation. Both final Polish versions of the RWA and LWA scales were reviewed and refined by two bilingual experts proficient in both English and Polish, ensuring the accuracy and reliability of the translations.

Social Dominance Orientation. The Polish version of the 16-item SDO (*Skala orientacji na dominację społeczną*) has been translated and published by Klebaniuk (2010: p. 53, Appendix 4). It has been repeatedly used in Polish studies, consequently showing high reliability (see, e.g., Klebaniuk, 2006a, 2006b, 2007, 2009a, 2009b, 2009c).

Informal predictions. Similarly to the US Americans (Study 1), predictions for this study anticipate that both political orientation and party support may influence NFC_{Chaos-R} scores among Polish participants, though the available literature does not offer

enough certainty to form clear hypotheses. Instead, the research questions are exploratory, with some expectations based on previous studies and existing political dynamics. It is expected that individuals with strong political preferences on both the left and right will likely exhibit higher $NFC_{\text{Chaos-R}}$ scores. However, higher scores are anticipated among right-leaning participants, as NFC attitudes often align with preferences commonly associated with right-wing ideologies (e.g., Arceneaux et al., 2021; Petersen et al., 2023a). This might manifest, for example, in greater support for radical change or skepticism towards “elite” institutions, especially among those leaning right. In terms of party support, $NFC_{\text{Chaos-R}}$ scores are expected to be particularly high among supporters of the right-wing “Komitet Wyborczy Konfederacja Wolność i Niepodległość” and left-wing “Komitet Wyborczy Nowa Lewica” (see Figure 2), both of which attract more extreme or unconventional left- and right-wing supporters, respectively. Additionally, despite not being considered “far-right”, supporters of “Komitet Wyborczy Prawo i Sprawiedliwość” are also expected to show elevated $NFC_{\text{Chaos-R}}$ scores. This party employs rhetoric that strongly appeals to voter fear by emphasizing populist themes, such as emphasizing a need to oppose “corrupt elites” and immigration, which are strategies seen in other political groups where high NFC is common.

Results

To investigate the research questions and hypotheses, all statistical analyses were conducted using IBM SPSS Statistics 25 (Arbuckle, 2014). The conventional significance level of $\alpha = .05$ was used.

Descriptive statistics

Basic descriptive statistics were calculated for all variables measured on a quantitative scale (see Table 19 and Figure 37 to 43). The Shapiro–Wilk test was conducted to assess the normality of the distributions. In most cases, the distributions differed significantly from normality. However, the skewness value was within ± 3 , which, according to George and Mallery (2020), supports the use of parametric tests when other assumptions are satisfied. High kurtosis (13.87) was also observed for the NFC. High kurtosis reflects heavy tails or rare extreme events rather than data flaws (DeCarlo, 1997; Loperfido, 2020). Importantly, the performance of parametric methods is generally robust to heavy-tailed distributions, especially when sample sizes are sufficiently (Borroni & De Capitani, 2022; Golam Kibria, 2017). More broadly, with an adequate sample size, departures from normality, including high kurtosis, have a limited impact on statistical inference (Lumley et al., 2002).

Table 20*Basic descriptive statistics for Poles.*

	<i>M</i>	<i>Me</i>	<i>SD</i>	<i>Sk.</i>	<i>Kurt.</i>	<i>Min</i>	<i>Max</i>	<i>D</i>	<i>p</i>
Need for Chaos	1.82	1.67	0.66	2.71	13.87	1	7	.80	<.001
Right-Wing Authoritarianism	3.49	3.40	1.35	0.49	-0.27	1	8.20	.97	<.001
Left-Wing Authoritarianism	4.29	4.30	0.92	-0.07	0.26	1.30	6.75	1.00	.216
Social Dominance Orientation	3.09	3.06	1.06	0.29	-0.18	1	6.81	.99	.004
Status-Driven Risk- Taking Scale	3.59	3.50	0.60	0.36	0.72	1.64	5.50	.98	<.001
Short-Form Measure of Loneliness	2.08	2	0.62	0.31	-0.32	1	4	.98	<.001
10-Step Ladder for Societal Position	5.76	6	1.54	-0.40	-0.23	1	10	.94	<.001

Figure 37

Histogram of Need for Chaos scores in the Polish sample

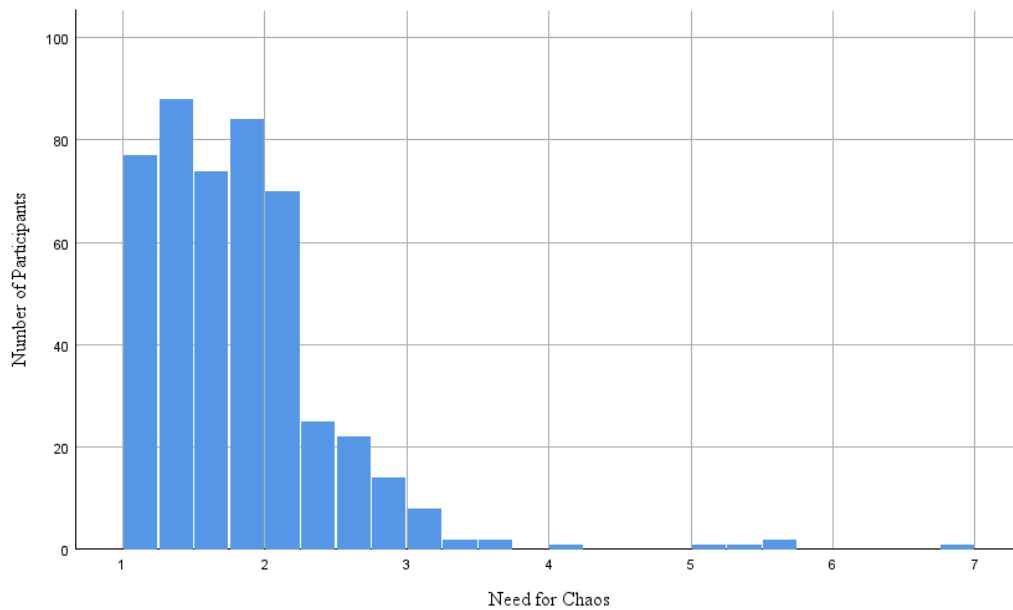


Figure 38

Histogram of Right-Wing Authoritarianism scores in the Polish sample

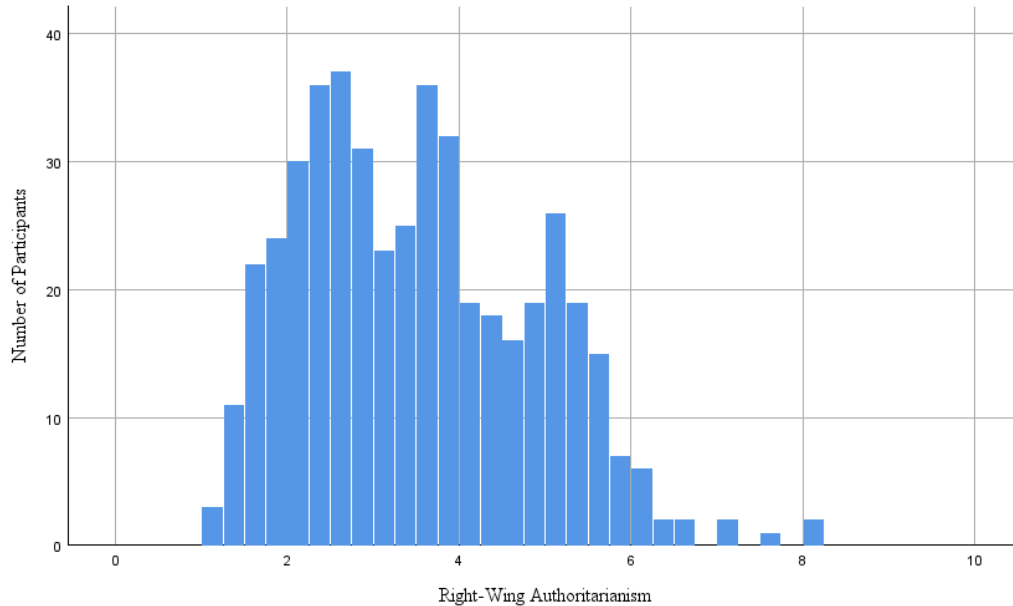


Figure 39

Histogram of Left-Wing Authoritarianism scores in the Polish sample

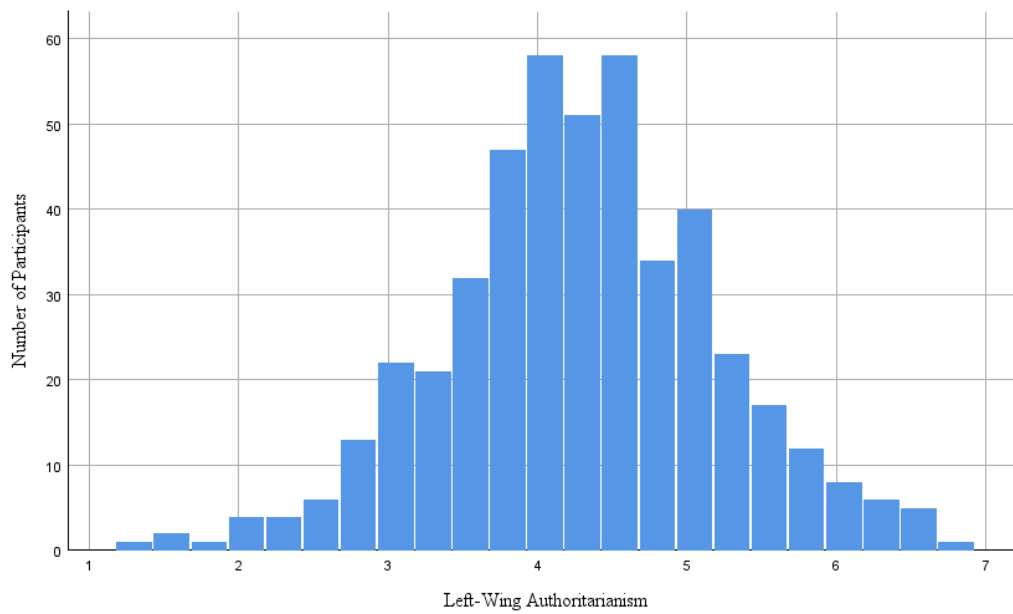


Figure 40

Histogram of Social Dominance Orientation scores in the Polish sample

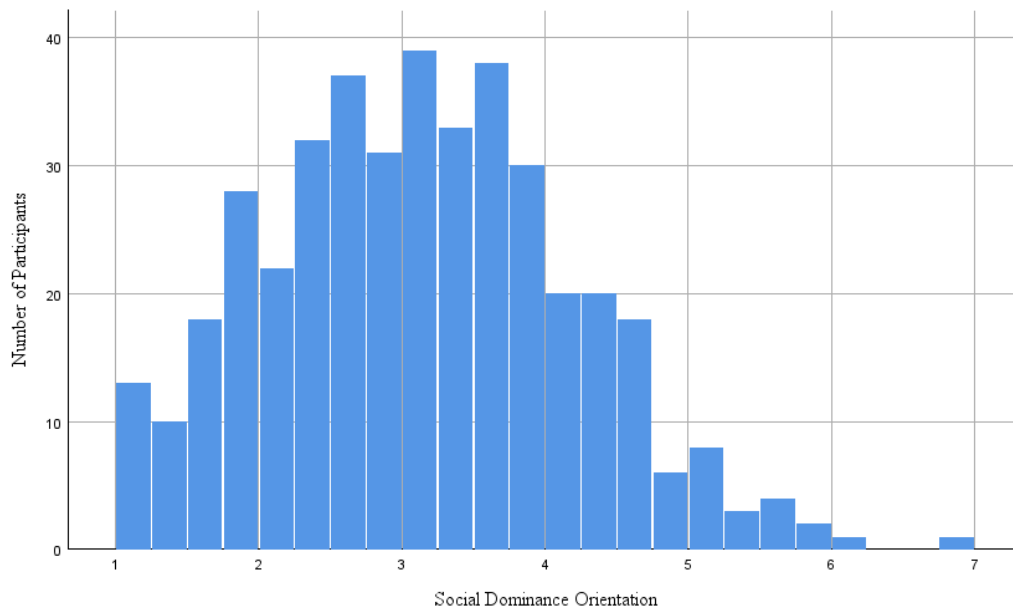


Figure 41

Histogram of Status-Driven Risk-Taking scores in the Polish sample

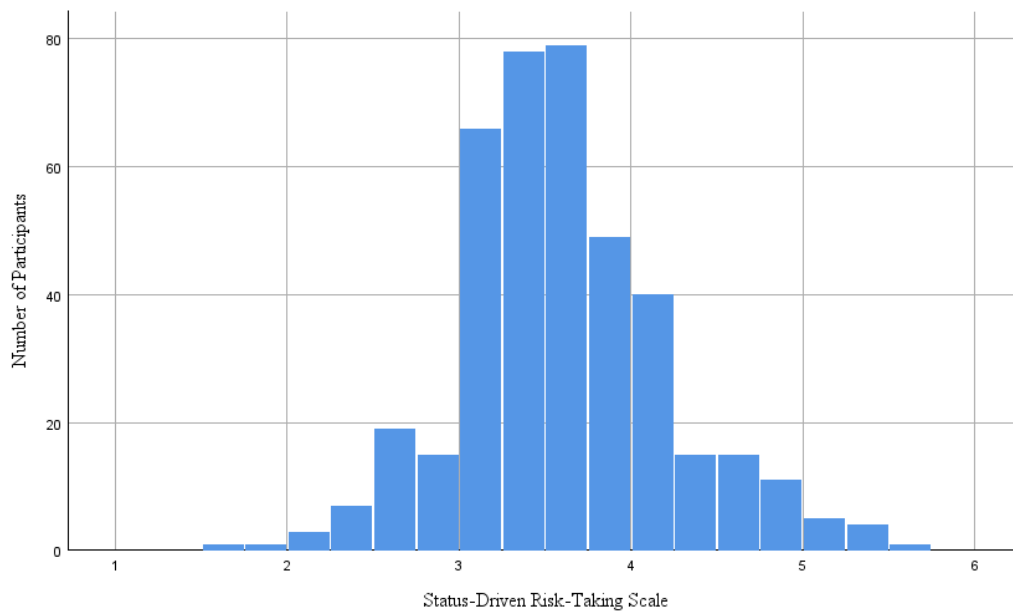


Figure 42

Histogram of Loneliness scores in the Polish sample

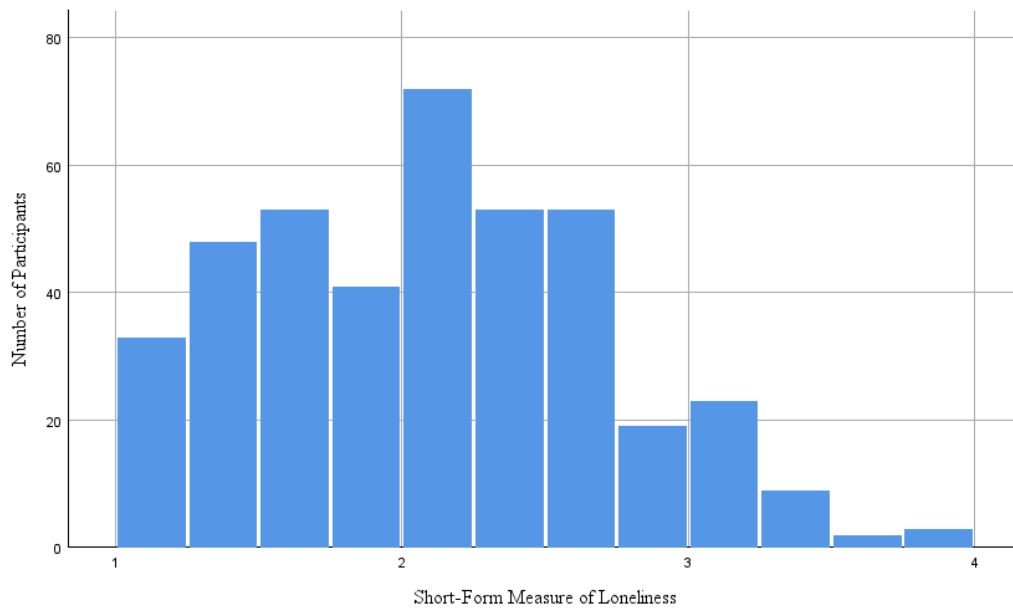
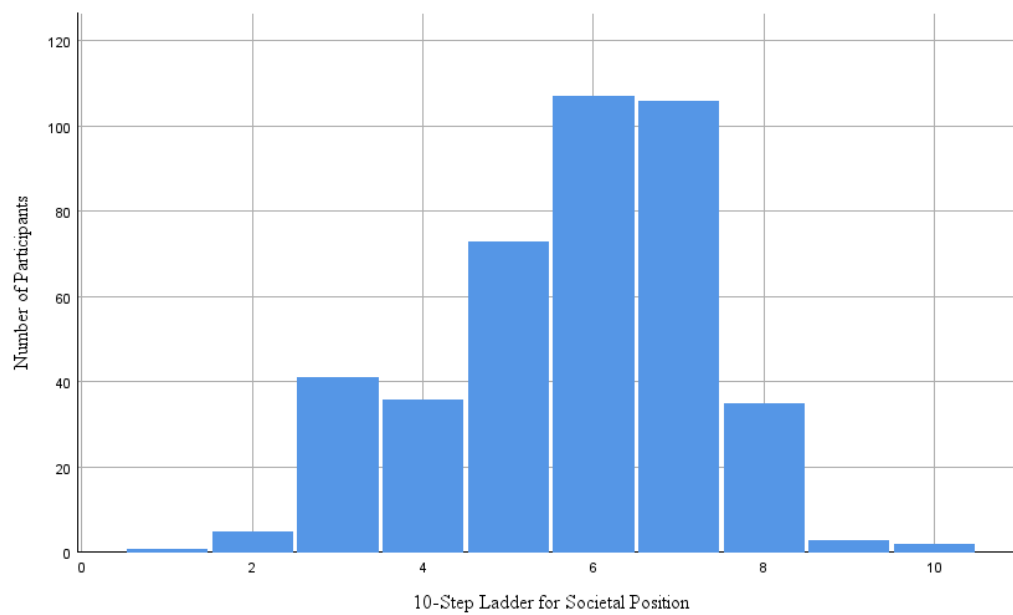


Figure 43

Histogram of 10-Step Ladder for Societal Position scores in the Polish sample



Correlations between the scales

Pearson's r correlations were computed to examine the relationships among the seven measured scales. Twelve statistically significant correlations were observed (see Table 20).

Table 21
Correlations between the scales for Poles

	1.	2.	3.	4.	5.	6.	7.
Need for Chaos	X						
Right-Wing Authoritarianism	.11*	X					
Left-Wing Authoritarianism	.01	-.62***	X				
Social Dominance Orientation	.12*	.50***	-.28***	X			
Status-Driven Risk-Taking Scale	.20***	.05	-.11*	.17***	X		
Short-Form Measure of Loneliness	.25***	0	.06	-.05	.10*	X	
10-Step Ladder for Societal Position	-.08	0	-.03	.05	-.12*	-.34***	X

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

1. - Need for Chaos; 2. - Right-Wing Authoritarianism; 3. - Left-Wing Authoritarianism; 4. - Social Dominance Orientation; 5. - Status-Driven Risk-Taking Scale; 6. - Short-Form Measure of Loneliness; 7. - 10-Step Ladder for Societal Position

In the Polish sample, quadratic regressions revealed several significant but inconsistent associations. NFC showed quadratic effects with Left-Wing Authoritarianism ($R^2 = .04 - .05$, $p < .05/.01$, depending on subgroup) and with Social Dominance Orientation in selected subgroups (e.g., Lewica $R^2 = .05$, $p < .05$; PiS $R^2 = .18$). However, many other associations were non-significant (see Table 22).

Table 22

Results of quadratic regression analysis in the Polish sample (Model Fit – R^2)

	1.	2.	3.	4.	5.	6.	7.
Right-Wing Authoritarianism	.03	0	.04	.03	.11	.11	.01
Left-Wing Authoritarianism	.04**	.05*	.04*	.02	.08	.06	.05
Social Dominance Orientation	.01	.01	.05*	.01	.07	.18	.01

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; 1. Left-wing; 2. Right-Wing; 3. Lewica; 4. KO; 5. PL2050; 6. PiS; 7. Konfederacja

Differences among Polish party supporters

The Kruskal-Wallis ANOVA (Table 21) was used to assess differences in scale scores across political affiliation groups. For NFC, SDRT, SFML, and LFSP, no statistically significant differences were found between the analyzed groups. Results are presented in Figure 44 to 47. For the remaining three variables, statistically significant Kruskal-Wallis test results were observed; therefore, post-hoc analyses using Dunn-Šidák tests were conducted.

Table 23

Kruskal-Wallis ANOVA results for differences in scale scores among supporters of political parties in the Polish sample

		<i>N</i>	<i>M</i>	<i>SD</i>	
Need for Chaos	Lewica	159	1.84	0.63	<i>H</i> (4) = 8.13 <i>p</i> = .087
	Koalicja Obywatelska	141	1.70	0.50	
	Koalicja Polski 2050 Szymona	51	1.87	0.69	
	Hołowni i PSL-Koalicji Polskiej				
	Prawo i Sprawiedliwość	31	1.73	0.52	
	Konfederacja Wolność i Niepodległość	90	1.97	0.92	
Right-Wing Authoritarianism	Lewica	159	2.45	0.93	<i>H</i> (4) = 231.59 <i>p</i> < .001
	Koalicja Obywatelska	136	3.46	0.95	
	Koalicja Polski 2050 Szymona	51	3.54	0.96	
	Hołowni i PSL-Koalicji Polskiej				
	Prawo i Sprawiedliwość	30	5.02	0.95	
	Konfederacja Wolność i Niepodległość	88	4.87	1.08	
Left-Wing Authoritarianism	Lewica	158	4.81	0.90	<i>H</i> (4) = 141.79 <i>p</i> < .001
	Koalicja Obywatelska	138	4.37	0.66	
	Koalicja Polski 2050 Szymona	51	4.23	0.71	
	Hołowni i PSL-Koalicji Polskiej				
	Prawo i Sprawiedliwość	30	3.35	0.76	
	Konfederacja Wolność i Niepodległość	89	3.59	0.74	
Social Dominance Orientation	Lewica	142	2.50	0.94	<i>H</i> (4) = 103.88 <i>p</i> < .001
	Koalicja Obywatelska	120	3.17	0.94	
	Koalicja Polski 2050 Szymona	48	3.19	1.04	
	Hołowni i PSL-Koalicji Polskiej				
	Prawo i Sprawiedliwość	26	3.20	0.83	
	Konfederacja Wolność i Niepodległość	78	3.96	0.85	
Status-Driven Risk-Taking Scale	Lewica	141	3.53	0.60	<i>H</i> (4) = 5.86 <i>p</i> = .209
	Koalicja Obywatelska	119	3.57	0.60	
	Koalicja Polski 2050 Szymona	47	3.69	0.67	
	Hołowni i PSL-Koalicji Polskiej				
	Prawo i Sprawiedliwość	25	3.52	0.29	
	Konfederacja Wolność i Niepodległość	77	3.70	0.65	
2Short-Form Measure of Loneliness	Lewica	141	2.11	0.62	<i>H</i> (4) = 2.60 <i>p</i> = .626
	Koalicja Obywatelska	119	2.06	0.61	
	Koalicja Polski 2050 Szymona	47	2.15	0.71	
	Hołowni i PSL-Koalicji Polskiej				
	Prawo i Sprawiedliwość	25	1.93	0.52	
	Konfederacja Wolność i Niepodległość	77	2.07	0.62	
10-Step Ladder for Societal Position	Lewica	141	5.65	1.40	<i>H</i> (4) = 9.03 <i>p</i> = .060
	Koalicja Obywatelska	119	6.05	1.57	
	Koalicja Polski 2050 Szymona	47	5.53	1.43	
	Hołowni i PSL-Koalicji Polskiej				
	Prawo i Sprawiedliwość	25	5.92	1.96	
	Konfederacja Wolność i Niepodległość	77	5.58	1.64	

Figure 44

Differences in Need for Chaos scores among supporters of different political parties in Poland

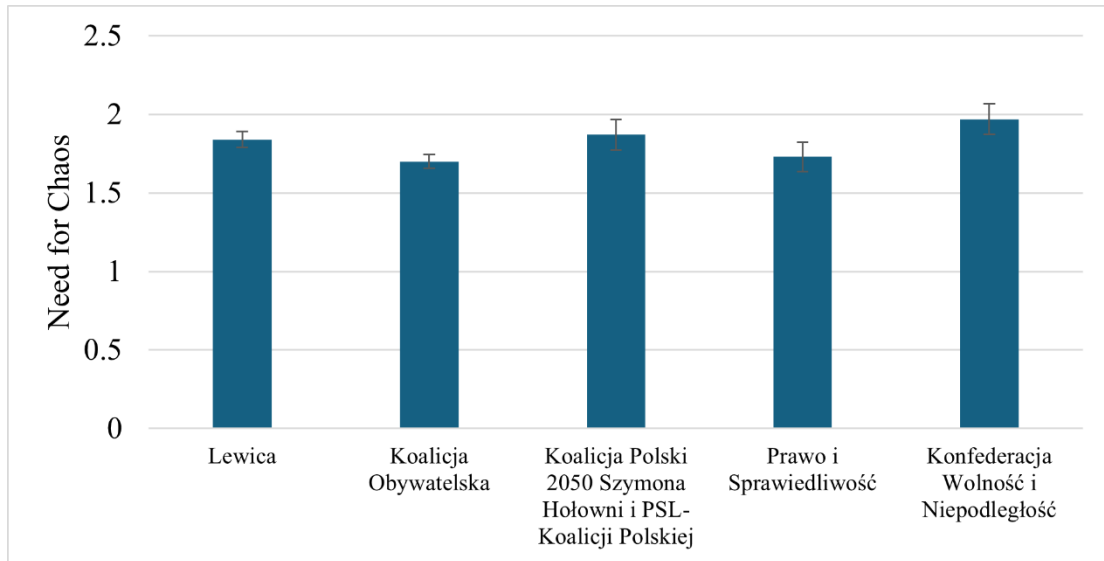


Figure 45

Differences in Status-Driven Risk-Taking scores among supporters of different political parties in Poland

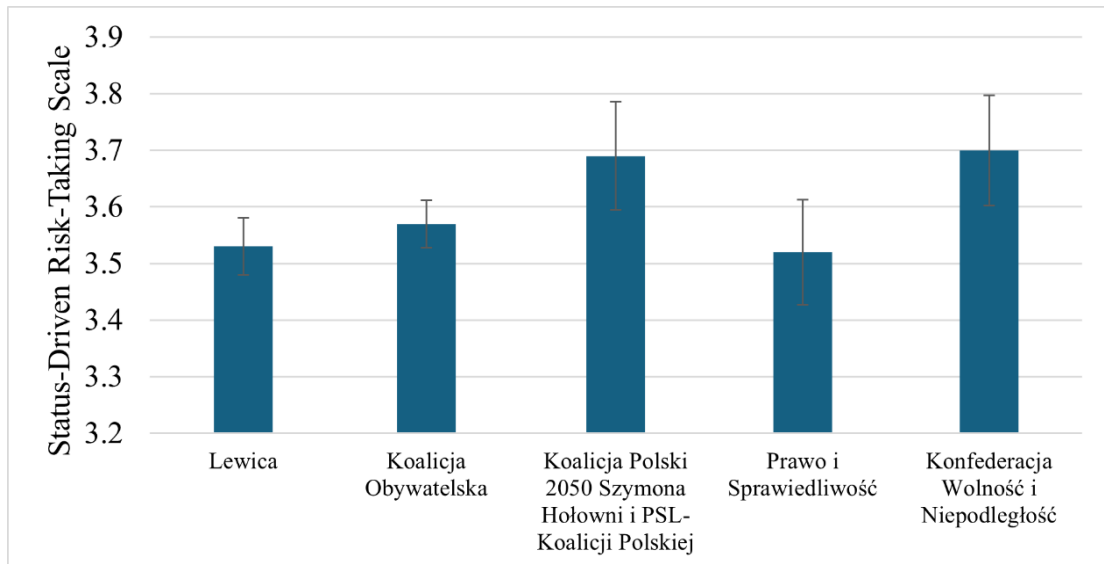


Figure 46

Differences in Short-Form Measure of Loneliness scores among supporters of different political parties in Poland

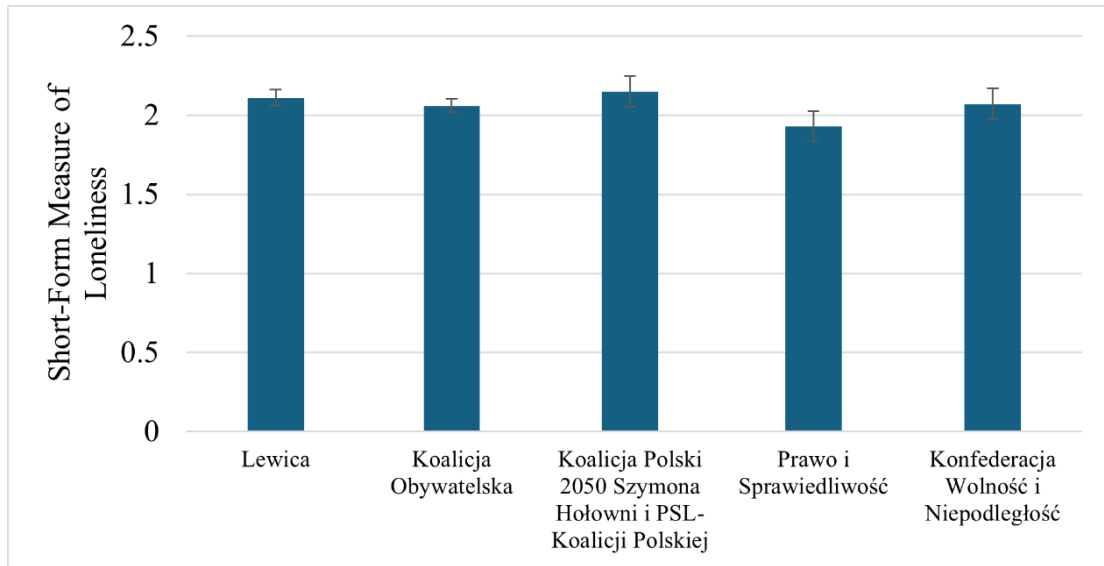
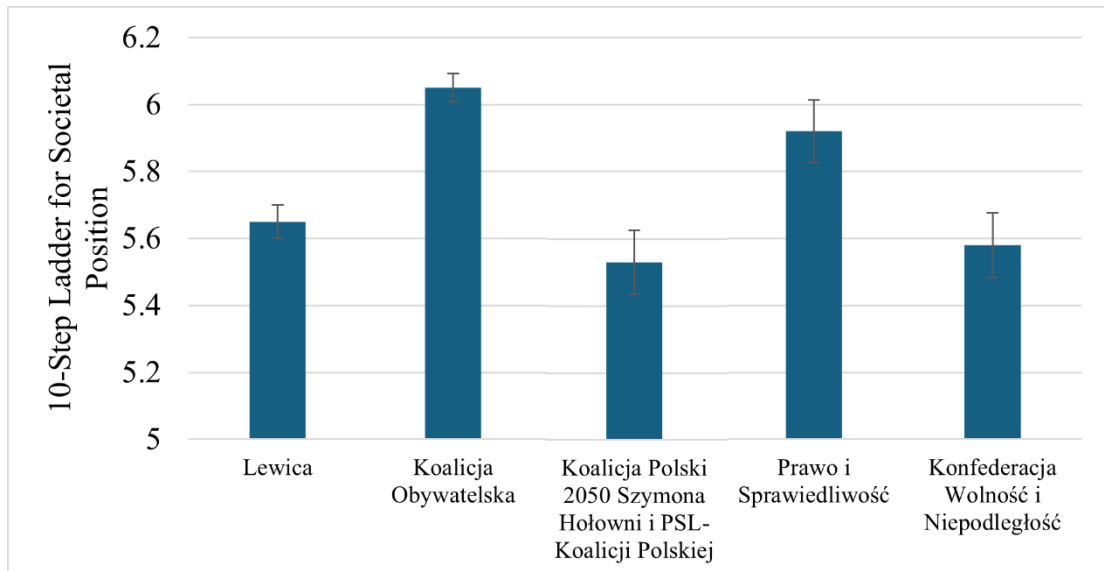


Figure 47

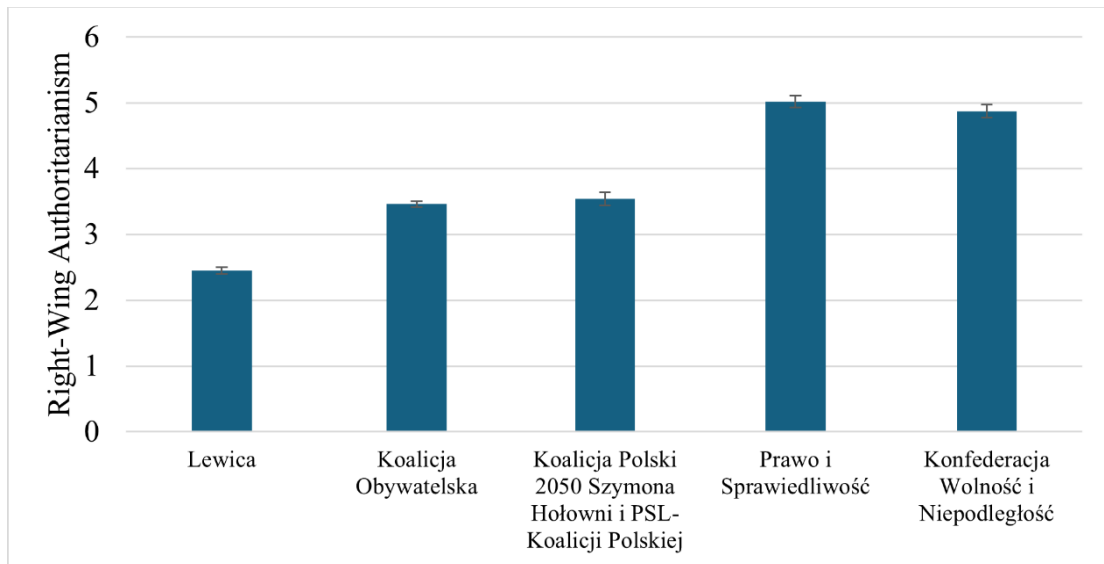
Differences in the 10-Step Ladder for Societal Position scores among supporters of different political parties in Poland



Right-Wing Authoritarianism. For RWA, eight statistically significant between-group differences were identified. Lewica supporters demonstrated significantly lower RWA scores than supporters of all four other parties ($p < .001$). KO supporters had significantly lower RWA scores than supporters of Konfederacja ($p < .001$) and PiS ($p < .001$). PL2050 supporters also reported lower RWA scores than supporters of Konfederacja ($p < .001$) and PiS ($p < .001$). No other differences were statistically significant. See Figure 48.

Figure 48

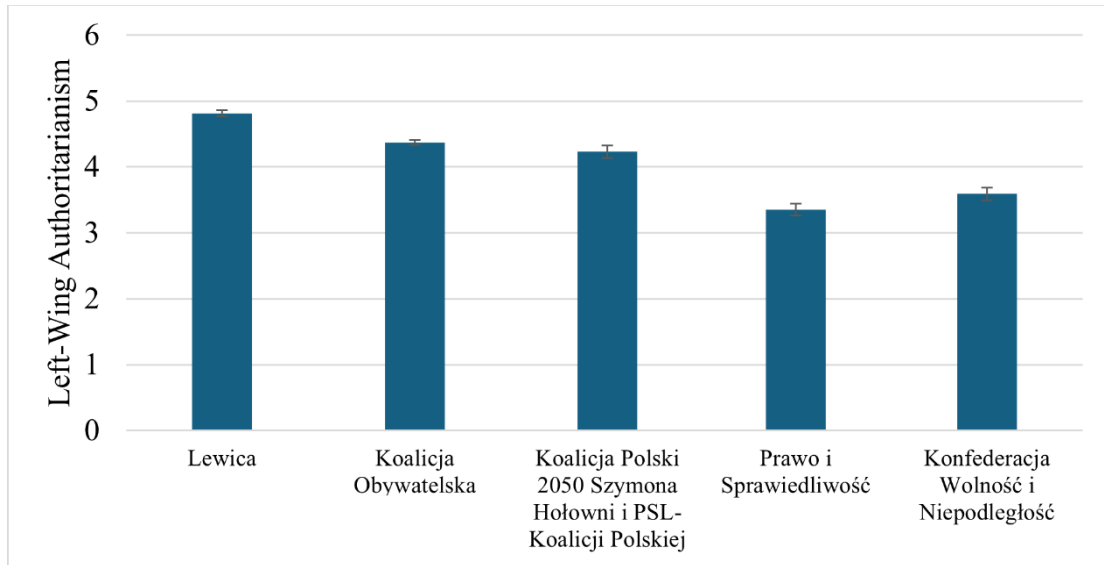
Differences in Right-Wing Authoritarianism scores among supporters of different political parties in Poland



Left-Wing Authoritarianism. For LWA, eight statistically significant differences were also found. Lewica supporters showed significantly higher LWA scores compared to all other party supporters ($p < .001$). KO supporters had higher LWA scores than supporters of Konfederacja ($p < .001$) and PiS ($p < .001$). PL2050 supporters reported higher LWA scores than supporters of Konfederacja ($p < .001$) and PiS ($p < .001$). No additional group differences reached statistical significance. See Figure 49.

Figure 49

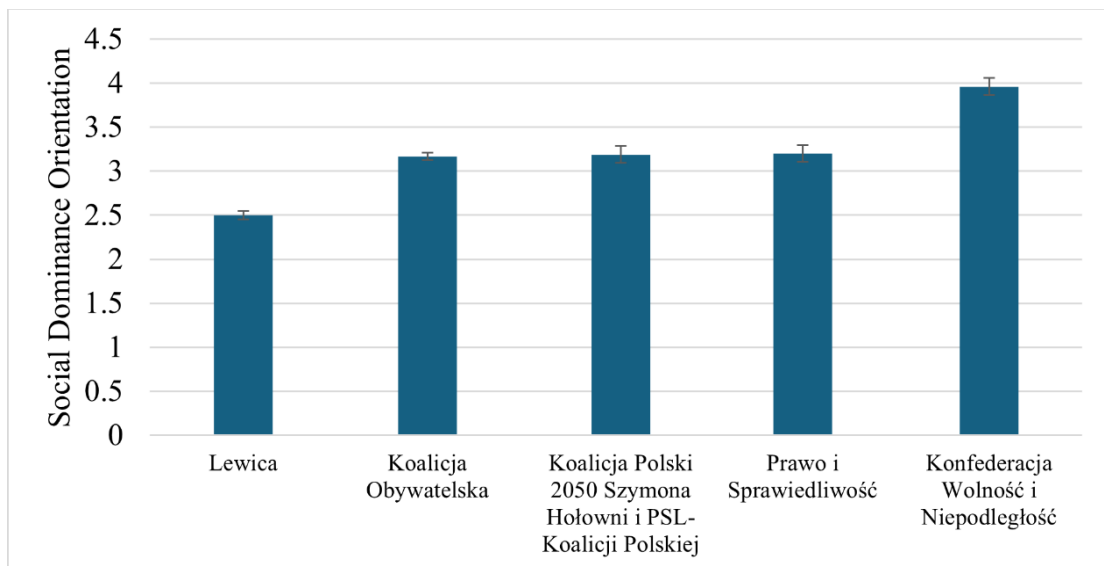
Differences in Left-Wing Authoritarianism scores among supporters of different political parties in Poland



Social Dominance Orientation. For SDO, seven statistically significant differences were observed. Lewica supporters reported significantly lower SDO scores than all other party supporters ($p < .001$ for KO, PL2050, and Konfederacja; $p = .010$ for PiS). Supporters of Konfederacja demonstrated significantly higher SDO scores than those of KO ($p < .001$), PL2050 ($p = .001$), and PiS ($p = .017$). No other differences were statistically significant. See Figure 50.

Figure 50

Differences in Social Dominance Orientation scores among supporters of different political parties in Poland



Differences between Lean, Moderate, and Strong supporters of all parties in Poland

To examine the relationship between the strength of political affiliation and the psychological variables under study, Spearman's rank-order correlations (*rho*) were calculated for each party group. For Lewica supporters, four statistically significant correlations were identified (see Table 22). Stronger affiliation with the party was associated with higher levels of LWA and lower levels of RWA, SDO, and SDRT. The correlation coefficients for RWA and LWA were moderate, while those for SDO and SDRT were low. No other statistically significant correlations were observed.

Table 24

Spearman's rank-order correlations between the strength of affiliation with Lewica and scale scores in the Polish sample

	Lean supporter (<i>n</i> = 67)		Moderate supporter (<i>n</i> = 64)		Strong supporter (<i>n</i> = 28)		<i>r_s</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Need for Chaos	1.87	0.64	1.82	0.53	1.81	0.81	-.07	.372
Right-Wing Authoritarianism	2.75	1.08	2.33	0.81	1.98	0.48	-.33	<.001
Left-Wing Authoritarianism	4.42	0.82	4.96	0.87	5.38	0.76	.42	<.001
Social Dominance Orientation	2.69	0.96	2.37	0.90	2.35	0.95	-.17	.049
Status-Driven Risk-Taking Scale	3.65	0.58	3.53	0.62	3.29	0.53	-.21	.012
Short-Form Measure of Loneliness	2.09	0.51	2.13	0.70	2.12	0.67	0	.998
10-Step Ladder for Societal Position	5.63	1.32	5.56	1.51	5.85	1.35	.04	.652

For KO supporters, one statistically significant correlation was observed (see Table 23). Stronger affiliation with the party was associated with higher scores on the LFSP. The strength of this correlation was weak. No other statistically significant correlations were found.

Table 25

Spearman's rank-order correlations between the strength of affiliation with KO and scale scores in the Polish sample

	Lean supporter (<i>n</i> = 87)		Moderate supporter (<i>n</i> = 42)		Strong supporter (<i>n</i> = 12)		<i>r_s</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Need for Chaos	1.74	0.48	1.64	0.55	1.61	0.46	-.13	.122
Right-Wing Authoritarianism	3.57	0.96	3.20	0.88	3.60	1.02	-.11	.203
Left-Wing Authoritarianism	4.31	0.68	4.44	0.62	4.55	0.68	.11	.189
Social Dominance Orientation	3.24	0.98	2.98	0.84	3.47	0.94	-.07	.420
Status-Driven Risk- Taking Scale	3.61	0.58	3.48	0.66	3.55	0.48	-.11	.252
Short-Form Measure of Loneliness	2.07	0.59	2.01	0.65	2.16	0.63	.03	.725
10-Step Ladder for Societal Position	5.76	1.56	6.39	1.33	6.80	2.04	.25	.007

For PL2050 supporters, no statistically significant correlations were found between the strength of support and any of the psychological variables (see Table 24).

Table 26

Spearman's rank-order correlations between the strength of affiliation with PL2050 and scale scores in the Polish sample

	Lean supporter (<i>n</i> = 34)		Moderate supporter (<i>n</i> = 16)		Strong supporter (<i>n</i> = 1)		<i>r_s</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Need for Chaos	1.93	0.79	1.71	0.37	2.11	-	-.04	.764
Right-Wing Authoritarianism	3.57	1.00	3.46	0.94	3.45	-	-.08	.586
Left-Wing Authoritarianism	4.09	0.64	4.50	0.80	4.45	-	.26	.061
Social Dominance Orientation	3.19	0.98	3.11	1.19	4.31	-	-.06	.702
Status-Driven Risk- Taking Scale	3.77	0.60	3.53	0.84	3.00	-	-.27	.069
Short-Form Measure of Loneliness	2.10	0.68	2.29	0.80	2.29	-	.09	.554
10-Step Ladder for Societal Position	5.55	1.54	5.46	1.20	6.00	-	-.03	.834

For PiS supporters, one statistically significant correlation was found (see Table 25).

Stronger party affiliation was associated with lower SDO scores. The strength of this correlation was strong. Other correlations were not statistically significant.

Table 27

Spearman's rank-order correlations between the strength of affiliation with PiS and scale scores in the Polish sample

	Lean supporter (<i>n</i> = 17)		Moderate supporter (<i>n</i> = 13)		Strong supporter (<i>n</i> = 1)		<i>r_s</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Need for Chaos	1.68	0.44	1.72	0.54	2.89	-	.12	.507
Right-Wing Authoritarianism	4.77	0.88	5.32	1.01	5.05	-	.28	.134
Left-Wing Authoritarianism	3.53	0.63	3.09	0.87	3.85	-	-.23	.204
Social Dominance Orientation	3.57	0.73	2.77	0.73	-	-	-.50	.010
Status-Driven Risk- Taking Scale	3.44	0.29	3.62	0.26	-	-	.34	.093
Short-Form Measure of Loneliness	1.88	0.43	1.99	0.63	-	-	.05	.830
10-Step Ladder for Societal Position	5.86	2.03	6.00	1.95	-	-	.01	.956

For Konfederacja supporters, three statistically significant correlations were identified (see Table 26). Stronger affiliation with the party was associated with higher levels of RWA and lower levels of SDRT and SFML. The correlation for SDRT was of moderate strength, while the correlations for RWA and SFML were weak. No additional statistically significant correlations were observed.

Table 28

Spearman's rank-order correlations between the strength of affiliation with Konfederacja and scale scores in the Polish sample

	Lean supporter (<i>n</i> = 53)		Moderate supporter (<i>n</i> = 32)		Strong supporter (<i>n</i> = 5)		<i>r_s</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Need for Chaos	2.02	1.04	1.95	0.75	1.60	0.26	-.03	.789
Right-Wing Authoritarianism	4.65	0.87	5.08	1.29	5.94	0.99	.29	.006
Left-Wing Authoritarianism	3.68	0.69	3.54	0.79	3.00	0.67	-.17	.106
Social Dominance Orientation	4.01	0.84	3.80	0.76	4.34	1.35	-.06	.612
Status-Driven Risk- Taking Scale	3.86	0.67	3.54	0.51	3.03	0.44	-.33	.004
Short-Form Measure of Loneliness	2.18	0.61	1.93	0.62	1.66	0.33	-.26	.022
10-Step Ladder for Societal Position	5.48	1.66	5.75	1.73	5.80	1.10	.11	.341

Differences among Polish Left-Wing and Right-Wing supporters

To examine the relationship between the strength of left- or right-wing political orientation and the psychological variables under study, a series of Spearman's rank-order correlations was conducted (see Table 27 and Figure 51 to 57). Four statistically significant correlations were identified. A stronger right-wing orientation was associated with higher levels of RWA, SDO, and SDRT, and lower levels of LWA. The correlation with RWA was very strong, with LWA strong, with SDO moderately strong, and with SDRT weak. Other correlations were not statistically significant.

Table 29

Spearman's rank-order correlations between left-wing and right-wing political orientation and psychological scale scores in the Polish sample

		<i>N</i>	<i>M</i>	<i>SD</i>	
Need for Chaos	Strong Left-wing supporter	35	1.82	0.77	$r_s = .03$ $p = .573$
	Moderate Left-wing supporter	86	1.75	0.47	
	Lean Left-wing	168	1.82	0.63	
	Lean Right-wing	127	1.79	0.68	
	Moderate Right-wing supporter	50	1.88	0.55	
	Strong Right-wing supporter	6	2.61	2.22	
Right-Wing Authoritarianism	Strong Left-wing supporter	35	1.94	0.53	$r_s = .73$ $p < .001$
	Moderate Left-wing supporter	86	2.46	0.81	
	Lean Left-wing	165	3.15	0.99	
	Lean Right-wing	123	4.36	0.94	
	Moderate Right-wing supporter	49	5.02	1.00	
	Strong Right-wing supporter	6	6.45	1.09	
Left-Wing Authoritarianism	Strong Left-wing supporter	35	5.21	0.84	$r_s = -.57$ $p < .001$
	Moderate Left-wing supporter	86	4.90	0.81	
	Lean Left-wing	165	4.38	0.73	
	Lean Right-wing	125	3.90	0.68	
	Moderate Right-wing supporter	49	3.41	0.81	
	Strong Right-wing supporter	6	3.09	0.88	
Social Dominance Orientation	Strong Left-wing supporter	32	2.21	0.73	$r_s = .49$ $p < .001$
	Moderate Left-wing supporter	79	2.57	0.98	
	Lean Left-wing	148	2.93	0.97	
	Lean Right-wing	108	3.64	0.84	
	Moderate Right-wing supporter	43	3.78	1.04	
	Strong Right-wing supporter	4	4.66	0.91	
Status-Driven Risk-Taking Scale	Strong Left-wing supporter	32	3.38	0.53	$r_s = .13$ $p = .012$
	Moderate Left-wing supporter	79	3.50	0.59	
	Lean Left-wing	146	3.64	0.61	
	Lean Right-wing	107	3.64	0.60	
	Moderate Right-wing supporter	43	3.66	0.65	
	Strong Right-wing supporter	2	3.18	0.66	
Short-Form Measure of Loneliness	Strong Left-wing supporter	32	2.02	0.62	$r_s = -.05$ $p = .326$
	Moderate Left-wing supporter	79	2.18	0.67	
	Lean Left-wing	146	2.07	0.62	
	Lean Right-wing	107	2.08	0.61	
	Moderate Right-wing supporter	43	1.98	0.58	
	Strong Right-wing supporter	2	1.93	0.71	
10-Step Ladder for Societal Position	Strong Left-wing supporter	32	5.53	1.52	$r_s = -.05$ $p = .307$
	Moderate Left-wing supporter	79	5.8	1.58	
	Lean Left-wing	146	5.97	1.38	
	Lean Right-wing	107	5.58	1.65	
	Moderate Right-wing supporter	43	5.63	1.73	
	Strong Right-wing supporter	2	4.5	0.71	

Figure 51

Differences in Need for Chaos scores among Left-Wing and Right-Wing supporters in the Polish sample

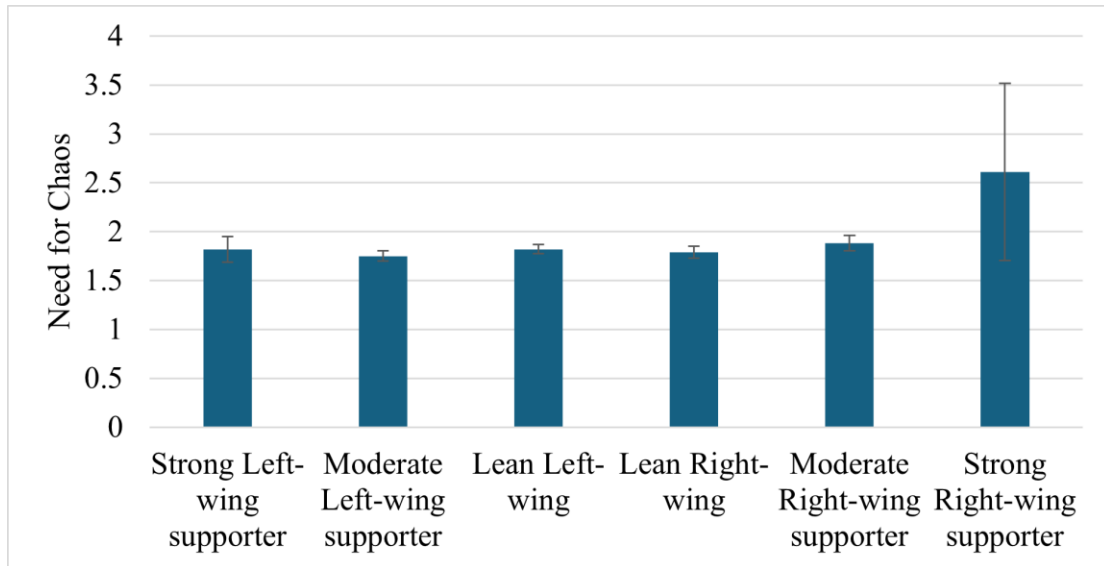


Figure 52

Differences in Right-Wing Authoritarianism scores among Left-Wing and Right-Wing supporters in the Polish sample

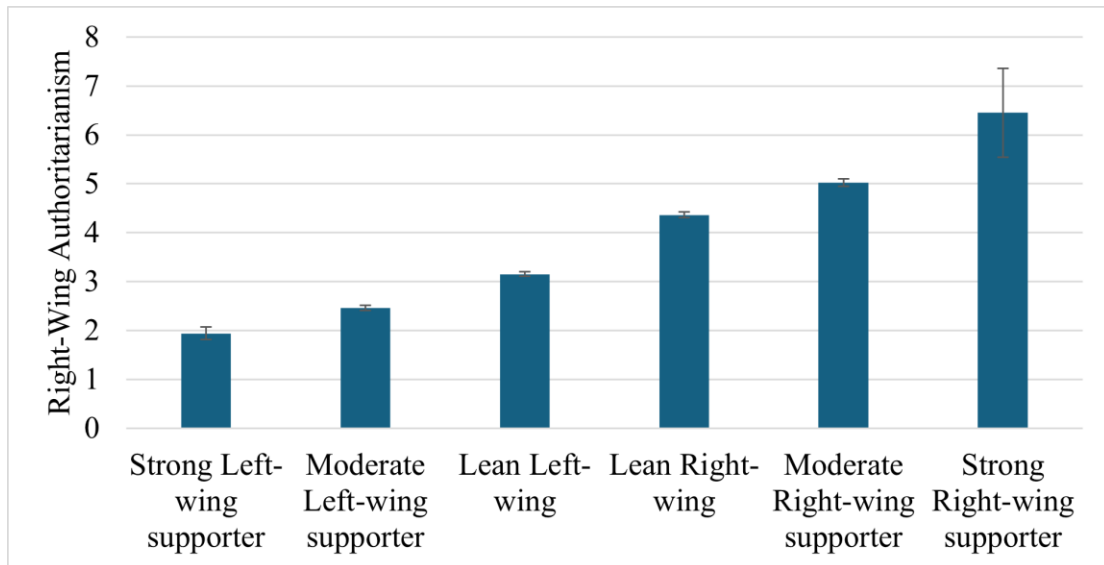


Figure 53

Differences in Left-Wing Authoritarianism scores among Left-Wing and Right-Wing supporters in the Polish sample

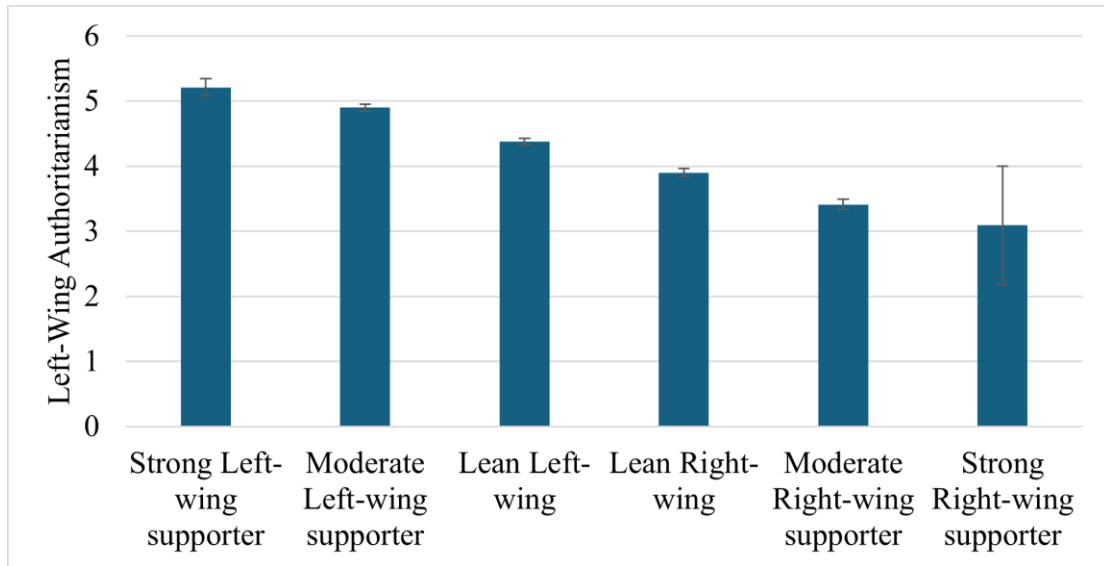


Figure 54

Differences in Social Dominance Orientation scores among Left-Wing and Right-Wing supporters in the Polish sample

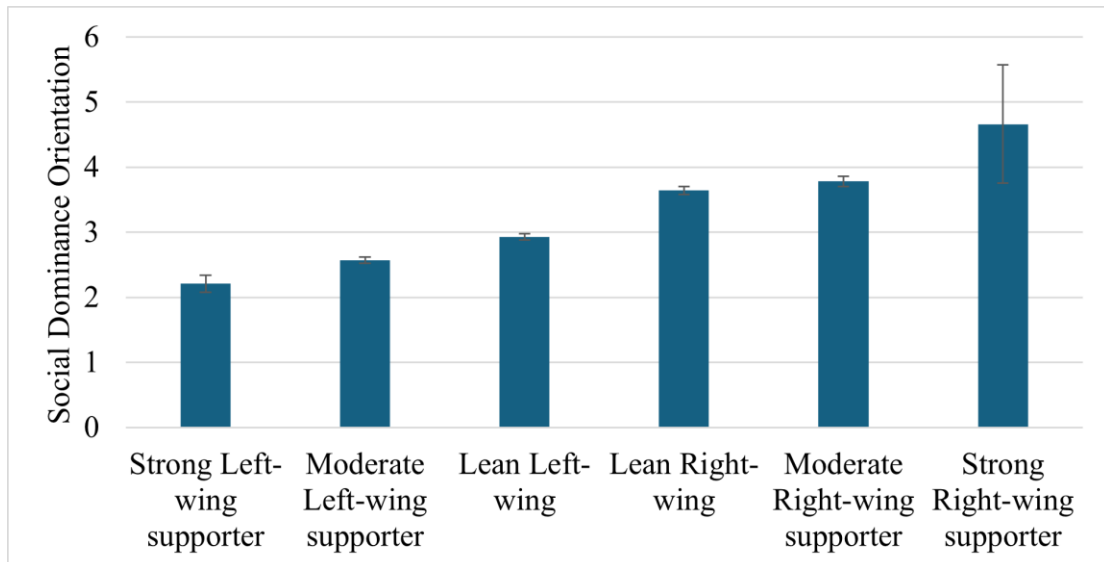


Figure 55

Differences in Status-Driven Risk-Taking scores among Left-Wing and Right-Wing supporters in the Polish sample

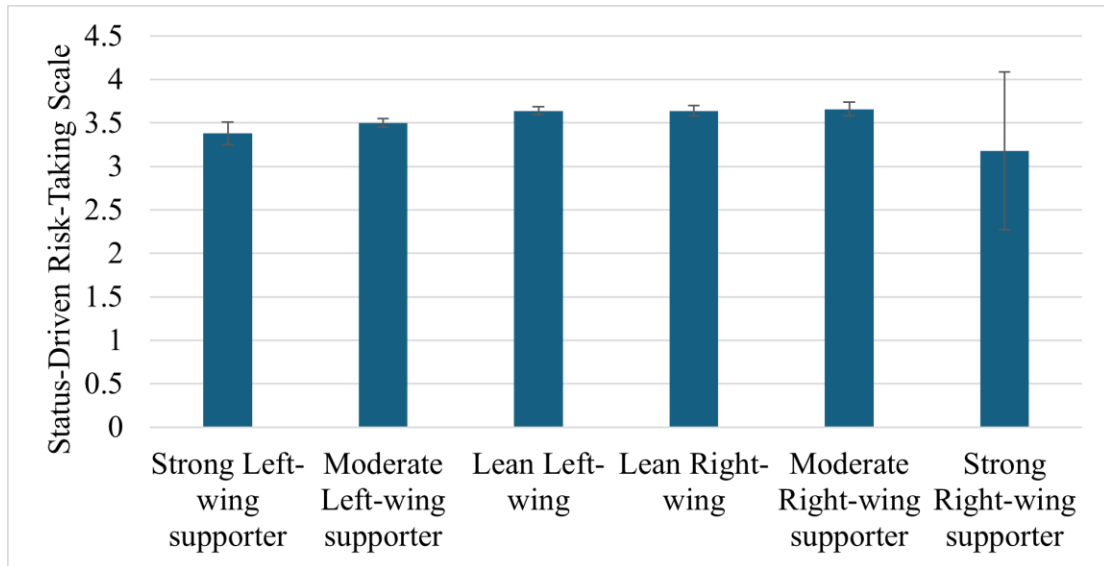


Figure 56

Differences in Short-Form Measure of Loneliness scores among Left-Wing and Right-Wing supporters in the Polish sample

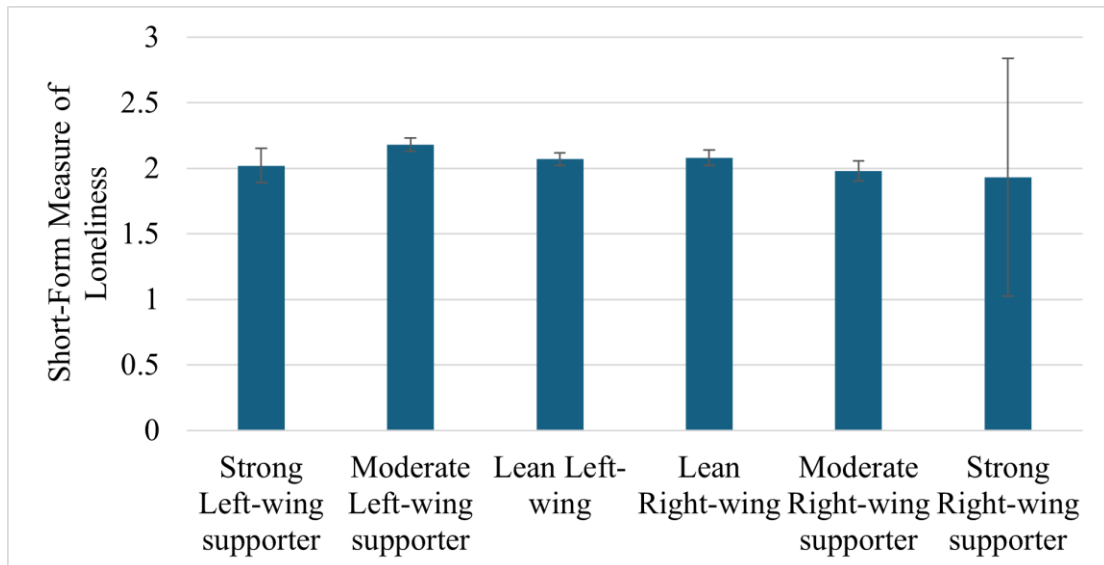
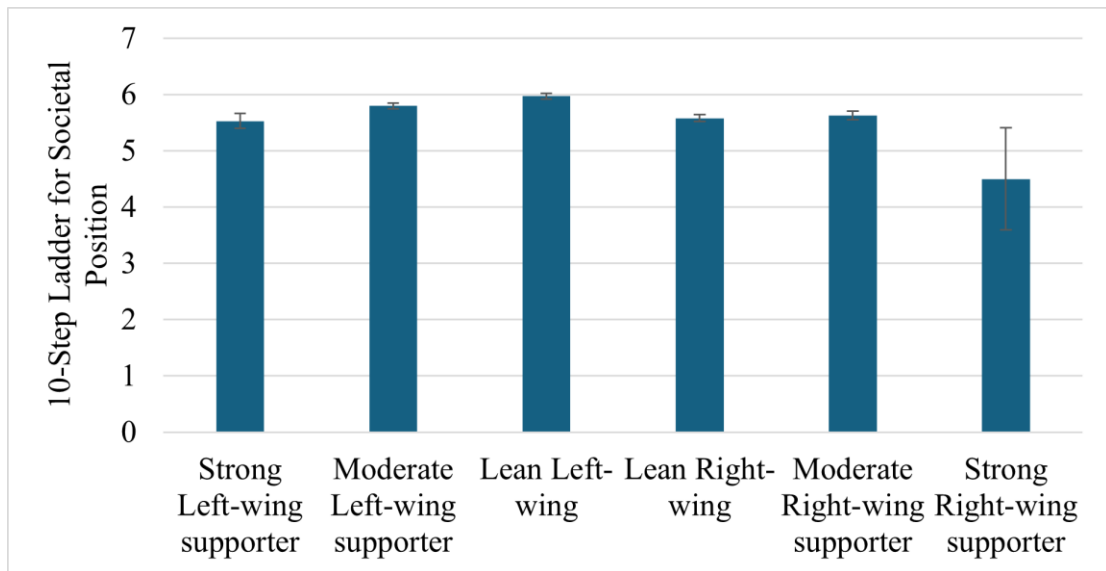


Figure 57

Differences in the 10-Step Ladder for Societal Position scores among Left-Wing and Right-Wing supporters in the Polish sample



Sex differences in the Polish sample

Student's *t*-tests were also performed to assess sex differences in the Polish sample (see Table 28). Female participants similarly exhibited lower RWA, higher LWA, and lower SDO and SDRT levels compared to males. The effect sizes for RWA and SDO differences were moderate, whereas those for other variables were small. No other significant sex differences were observed.

Table 30

*Sex differences in psychological scale scores in the Polish sample: Student's *t*-test results*

	Female		Male		<i>t</i>	<i>p</i>	95% <i>CI</i>		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Need for Chaos	1.76	0.62	1.84	0.66	-1.38	.170	-0.20	0.04	0.13
Right-Wing Authoritarianism	2.99	1.09	3.92	1.39	-7.99	<.001	-1.16	-0.70	0.73
Left-Wing Authoritarianism	4.51	0.90	4.09	0.88	5.08	<.001	0.26	0.59	0.48
Social Dominance Orientation	2.74	1.00	3.39	1.02	-6.43	<.001	-0.85	-0.45	0.64
Status-Driven Risk-Taking Scale	3.51	0.59	3.65	0.61	-2.22	.027	-0.25	-0.02	0.22
Short-Form Measure of Loneliness	2.12	0.61	2.04	0.62	1.39	.166	-0.04	0.21	0.14
10-Step Ladder for Societal Position	5.78	1.45	5.76	1.62	0.11	.917	-0.29	0.32	0.01

Discussion

RQ1: "Is there a link between the $NFC_{\text{Chaos-R}}$ score and the degree of political preference for either left-wing or right-wing policies among Poles?"

The first research question sought to investigate whether individuals in Poland who identify with varying degrees of left-wing or right-wing political orientation differ in their levels of chaos-seeking motivation, as measured by the $NFC_{\text{Chaos-R}}$. In contrast to theoretical expectations grounded in prior research (e.g., Arceneaux et al., 2021; Petersen et al., 2023a), the results of Study 3 revealed no statistically significant correlation between the strength of political preference and $NFC_{\text{Chaos-R}}$ scores among Polish participants.

A Spearman's rank-order correlation analysis yielded a non-significant result ($r_s = .03, p = .573$), indicating that self-reported alignment with either strong left-wing or strong right-wing views does not systematically relate to higher or lower $NFC_{\text{Chaos-R}}$ scores (Table 7 and Figure 51). This lack of association mirrors the pattern observed in the US sample from Study 1 and suggests that the desire for societal disruption, as measured by the $NFC_{\text{Chaos-R}}$, does not increase with ideological intensity in either direction, at least in the Polish context.

This finding may initially appear counterintuitive. Previous literature suggested that high NFC might emerge particularly among individuals who support anti-elite or radical change narratives, which are often embedded in the platforms of both far-left and far-right movements. However, in European settings like Poland, the ideological labels of

“left” and “right” may not consistently reflect coherent ideological content. As noted by Wojcik et al. (2021), the left-right spectrum in Eastern Europe often fails to capture consistent policy attitudes or ideological values, in contrast to Western Europe or the US. As a result, self-reported left-right identification in Poland may lack the predictive clarity necessary to serve as a meaningful correlate of NFC.

Further evidence for this interpretation is provided by a more detailed analysis of the associations between political orientation and other psychological constructs measured in the Polish sample. The study found that stronger right-wing identification was significantly associated with higher levels of RWA, SDO, and SDRT), and lower levels of LWA (Table 27). However, these ideological and status-related attitudes (though strongly structured along the left-right continuum) were not mirrored in $NFC_{\text{Chaos-R}}$ scores, which remained stable across the political spectrum. Moreover, $NFC_{\text{Chaos-R}}$ in the Polish sample showed only modest positive correlations with RWA ($r = .11, p < .05$) and SDO ($r = .12, p < .05$), while demonstrating a stronger correlation with status-driven risk-taking ($r = .20, p < .001$) and loneliness ($r = .25, p < .001$) (Table 20). These patterns support the conceptualization of NFC as a psychological disposition linked more closely to personal alienation and risk orientation than to ideological identification *per se*.

Importantly, the fact that authoritarian and dominance-oriented attitudes strongly differed between ideological groups, yet NFC did not, suggests that NFC may operate independently of these ideological constructs. For instance, while strong right-wing supporters showed much higher levels of RWA ($M = 6.45$) than strong left-wing

supporters ($M = 1.94$), their $NFC_{Chaos-R}$ scores were nearly indistinguishable ($M = 2.61$ vs. $M = 1.82$) and the correlation was nonsignificant.

These results reaffirm the idea proposed by Arceneaux et al. (2021) that NFC is motivated by a generalized discontent with social structures, rather than by adherence to specific ideologies. This interpretation aligns with the view that individuals high in NFC seek disruption as an end, often driven by personal perceptions of exclusion, low social status, or disempowerment: factors that cut across ideological lines.

In sum, the lack of an association between $NFC_{Chaos-R}$ scores and ideological preference in the Polish sample adds to a growing body of evidence suggesting that Need for Chaos is not meaningfully predicted by conventional left-right political orientation, at least when such orientation is measured through self-reported ideological strength. Instead, NFC appears to reflect a broader dispositional tendency toward anti-establishment sentiment and societal destabilization, grounded in social marginalization and risk-oriented status motivations, rather than ideological extremism.

RQ2: "Are there differences in the $NFC_{Chaos-R}$ score among the supporters of different political parties among Poles?"

The second research question assessed whether supporters of different political parties in Poland differ in their levels of NFC, as measured by the $NFC_{Chaos-R}$ scale. This question was informed by theoretical expectations that anti-elite rhetoric, often adopted by both far-left and far-right parties, may resonate more strongly with individuals high in

NFC (Arceneaux et al., 2021; Petersen et al., 2023a). However, the empirical findings from Study 3 offer no evidence for significant differences in $NFC_{\text{Chaos-R}}$ scores between party supporters in the Polish sample.

A Kruskal-Wallis ANOVA revealed no statistically significant differences in $NFC_{\text{Chaos-R}}$ scores across the five major political parties: Lewica ($M = 1.84$), Koalicja Obywatelska ($M = 1.70$), Polska 2050/PSL ($M = 1.87$), Prawo i Sprawiedliwość ($M = 1.73$), and Konfederacja ($M = 1.97$) ($H(4) = 8.13$; $p = .087$). Although the highest mean NFC score was observed among far-right Konfederacja supporters ($M = 1.97$), and the lowest among Koalicja Obywatelska supporters ($M = 1.70$), these differences did not reach statistical significance, indicating that party affiliation in Poland is not a reliable predictor of chaos-seeking motivation.

This null finding is particularly notable considering the initial expectations that voters supporting parties with populist, anti-systemic rhetoric (such as Konfederacja on the right and Lewica on the left) would display elevated NFC levels. These expectations were grounded in the assumption that such parties attract individuals who feel disenfranchised by the political mainstream and are more likely to endorse radical change, a psychological orientation thought to underlie the Need for Chaos.

Although NFC scores did not vary by party, RWA, LWA, and SDO all showed significant between-party differences. Specifically, supporters of PiS and Konfederacja exhibited the highest RWA scores, while Lewica supporters scored lowest on RWA and highest on LWA. Konfederacja supporters also had the highest SDO scores, suggesting a preference for social hierarchy and dominance. Importantly, none of these ideological

traits (despite being highly differentiated across parties) translated into meaningful differences in $NFC_{\text{Chaos-R}}$. This suggests that NFC operates independently of ideological structure, further reinforcing the findings from earlier studies in both the US and Poland. While political ideology may capture individuals' preferences for order, hierarchy, or collective control (RWA/LWA), chaos-seeking appears to reflect a motivational drive toward disruption and institutional breakdown, which may be more rooted in personal psychology than in political identity.

This interpretation is further supported by the bivariate correlations reported in the study. $NFC_{\text{Chaos-R}}$ was positively associated with status-driven risk-taking ($r = .20, p < .001$) and loneliness ($r = .25, p < .001$), as well as modestly correlated with SDO ($r = .12$) and RWA ($r = .11$). These findings suggest that feelings of social marginalization, status anxiety, and willingness to engage in risky or destabilizing behavior are more central to the chaos-seeking mindset than political loyalty. This would explain why individuals with similar levels of NFC can be found across the entire political spectrum, including within both ruling and opposition parties. Moreover, post hoc analyses of affiliation strength (lean, moderate, strong) within specific parties such as Lewica and Konfederacja revealed no significant correlation between strength of identification and $NFC_{\text{Chaos-R}}$ scores (e.g., $r_s = -.07$ for Lewica; $r_s = -.03$ for Konfederacja). This indicates that the intensity of party support does not predict higher or lower NFC, again distinguishing NFC from ideological extremity.

In sum, the results suggest that although political parties in Poland differ markedly in their authoritarian and dominance-related ideological profiles, these

differences do not extend to chaos-seeking tendencies. The Need for Chaos remains ideologically diffuse, driven more by social marginalization, emotional disconnection, and status-related frustrations, rather than by allegiance to particular political platforms. This finding reinforces theoretical models positing NFC as a dispositional, anti-establishment orientation that cuts across partisan boundaries (Arceneaux et al., 2021; Petersen et al., 2023a).

STUDY 4

The aim of Study 4 is to investigate whether there are cross-cultural differences between US-Americans and Poles in their Need for Chaos, left-wing or right-wing political preference, or the preference for a specific political party.

Participants, procedure, materials. The study used the sample ($n = 872$) obtained in Study 1 (US Americans, $n = 400$) and Study 3 (Poles, $n = 472$).

Cross-cultural comparison. This section presents the analysis conducted to address the research questions and examine differences between the US and Poland.

1. Do supporters of left-wing or right-wing in the US and Poland differ in their $NFC_{\text{Chaos-R}}$ score?
2. Do supporters of political parties considered left-wing or right-wing in the US and Poland differ in their $NFC_{\text{Chaos-R}}$ score?
3. Do extreme left-wing and extreme right-wing voters in the US and Poland differ in their $NFC_{\text{Chaos-R}}$ score?

The following analysis was conducted separately for all three groups (left-wing or right-wing supporters, supporters of specific political parties, and extremely left-wing and right-wing voters).

First, an examination was conducted to determine if significant differences existed in $NFC_{\text{Chaos-R}}$ scores between these groups within both the US and Poland. Descriptive statistics were provided for each group. Then, normality tests were performed for each group. Depending on the normality of the data, appropriate statistical tests (t -test if

normal, Mann-Whitney *U*-test, if not) were employed to compare NFC_{Chaos-R} scores between left-wing and right-wing supporters in each country.

Informal predictions. Predictions for this study suggest that NFC_{Chaos-R} scores among political supporters in the US and Poland may vary by political orientation and intensity, but limited literature means these questions are approached as exploratory rather than hypothesis-driven. First, it is expected that left- and right-wing supporters in both the US and Poland will differ in their NFC_{Chaos-R} scores. Prior research on political orientation suggests that left-right identification plays a central role in organizing political opinions, but it can carry different meanings in different regions (e.g., Dymek, 2024; Wojcik et al., 2021). For instance, in Western Europe, left-right divides often map onto distinctions between economic and cultural liberalism, with left-wing individuals typically endorsing cultural liberalism and economic regulation (see Dymek, 2024). In Eastern Europe, however, this distinction tends to blur, making left-right identification less reliable as a proxy for specific ideologies (see Wojcik et al., 2021). Given this complexity, NFC scores are expected to differ among left- and right-leaning individuals in both countries, reflecting these distinct regional patterns in how political orientation influences societal views and responses to institutional distrust. Second, though comparing political parties between the US and Poland is challenging, it is anticipated that NFC_{Chaos-R} scores will be relatively consistent across left- and right-wing parties. Although American and Polish parties serve different cultural and political contexts, both nations show trends whereby parties leverage populist, anti-elite messaging (see, e.g., Dymek, 2024). Consequently, NFC_{Chaos-R} scores are expected to be similar across left-

and right-wing party supporters, as both sides may use rhetoric that resonates with high-NFC individuals, regardless of regional, ideological variance. For supporters of extreme left- and right-wing parties, it is expected that $NFC_{\text{Chaos-R}}$ scores will be similar. Both the far-left and far-right often align with narratives that emphasize great societal change or distrust in mainstream political elites, potentially appealing to those with a high NFC mindset. These attitudes might be especially prominent among extreme partisans in both countries, who may view chaos as an avenue for systemic transformation. Finally, males are expected to have slightly higher $NFC_{\text{Chaos-R}}$ scores across both nations. Research indicates that men are more prone to adopt anti-establishment views and risky or disruptive attitudes, traits that align with an NFC mindset (e.g., Arceneaux et al., 2021; Petersen et al., 2023a). However, these gender differences are not expected to be significant, as both male and female supporters of high-NFC ideologies may engage in chaos in ways that reflect the intensity of their political beliefs.

Results

To investigate the research questions and hypotheses, all statistical analyses were conducted using IBM SPSS Statistics 25 (Arbuckle, 2014). The conventional significance level of $\alpha = .05$ was used.

Differences between the US and Poland

Student's *t*-tests were conducted to compare the scales between the US and Polish supporters. Among supporters of Democratic/Left-wing parties, five statistically significant differences were observed. The Polish sample (see Table 29) showed higher levels of NFC, RWA, SDO, SDRT, and SLSP. Effect sizes were very large for SDO and small for the other variables.

Table 31

Comparison of the scale scores between US Democratic supporters and Polish Left-Wing parties' supporters

	US		Poland		<i>t</i>	<i>P</i>	95% <i>CI</i>		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Need for Chaos	1.56	0.50	1.77	0.57	-4.54	<.001	-0.31	-0.12	0.40
Right-Wing Authoritarianism	2.68	1.34	2.91	1.07	-2.15	.032	-0.45	-0.02	0.20
Left-Wing Authoritarianism	4.68	1.01	4.61	0.82	0.85	.399	-0.09	0.23	0.08
Social Dominance Orientation	1.71	0.80	2.81	1.00	-13.24	<.001	-1.26	-0.93	1.20
Status-Driven Risk-Taking Scale	3.43	0.57	3.55	0.60	-2.15	.032	-0.22	-0.01	0.20
Short-Form Measure of Loneliness	1.98	0.76	2.09	0.61	-1.62	.106	-0.23	0.02	0.15
10-Step Ladder for Societal Position	5.30	1.65	5.83	1.49	-3.62	<.001	-0.82	-0.24	0.34

Among supporters of Republican/Right-wing parties, six statistically significant differences were found (see Table 30). The Polish group exhibited higher levels of NFC, LWA, SDO, SDRT, and SFML, while the US sample showed higher RWA levels. Effect sizes were moderate for NFC, LWA, and SDO, and small for the other variables.

Table 32

Comparison of the scale scores between US Republican supporters and Polish Right-Wing parties' supporters

	US		Poland		<i>t</i>	<i>p</i>	95% <i>CI</i>		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Need for Chaos	1.53	0.49	1.91	0.84	-4.53	<.001	-0.55	-0.22	0.58
Right-Wing Authoritarianism	5.50	1.33	4.91	1.04	4.23	<.001	0.32	0.87	0.49
Left-Wing Authoritarianism	3.10	0.79	3.53	0.75	-4.66	<.001	-0.62	-0.25	0.56
Social Dominance Orientation	3.12	1.22	3.77	0.90	-4.94	<.001	-0.92	-0.39	0.60
Status-Driven Risk-Taking Scale	3.45	0.65	3.66	0.58	-2.61	.010	-0.37	-0.05	0.34
Short-Form Measure of Loneliness	1.84	0.71	2.03	0.59	-2.21	.028	-0.36	-0.02	0.29
10-Step Ladder for Societal Position	5.42	1.66	5.67	1.72	-1.12	.264	-0.68	0.19	0.15

For strong Left-wing supporters (see Table 31), only one statistically significant difference emerged: higher SDO levels in the Polish group. The effect size was large. No other differences were statistically significant.

Table 33

Comparison of the scale scores among Strong Left-Wing supporters in the US and Poland

	US		Poland		<i>t</i>	<i>p</i>	95% <i>CI</i>		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Need for Chaos	1.61	0.52	1.82	0.77	-1.72	.088	-0.46	0.03	0.35
Right-Wing Authoritarianism	2.09	0.87	1.94	0.53	1.13	.261	-0.11	0.42	0.19
Left-Wing Authoritarianism	5.37	0.77	5.21	0.84	0.94	.351	-0.17	0.48	0.20
Social Dominance Orientation	1.50	0.61	2.21	0.73	-5.09	<.001	-0.98	-0.43	1.10
Status-Driven Risk-Taking Scale	3.40	0.48	3.38	0.53	0.16	.872	-0.19	0.23	0.04
Short-Form Measure of Loneliness	2.04	0.85	2.02	0.62	0.10	.925	-0.28	0.31	0.03
10-Step Ladder for Societal Position	4.94	1.78	5.53	1.52	-1.62	.109	-1.31	0.13	0.35

Among moderate Left-wing supporters (see Table 32), four statistically significant differences were identified. The Polish group had higher levels of NFC, LWA, SDO, and SFML. The effect size for SDO was large, whereas those for the other three variables were small. Other differences were not statistically significant.

Table 34

Comparison of the scale scores among Moderate Left-Wing supporters in the US and Poland

	US		Poland		<i>t</i>	<i>p</i>	95% <i>CI</i>		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Need for Chaos	1.54	0.53	1.75	0.47	-2.79	.006	-0.35	-0.06	0.41
Right-Wing Authoritarianism	2.73	1.35	2.46	0.81	1.64	.104	-0.06	0.59	0.24
Left-Wing Authoritarianism	4.58	0.86	4.90	0.81	-2.60	.010	-0.57	-0.08	0.39
Social Dominance Orientation	1.75	0.83	2.57	0.97	-5.88	<.001	-1.10	-0.54	0.91
Status-Driven Risk-Taking Scale	3.47	0.65	3.50	0.59	-0.30	.762	-0.22	0.16	0.05
Short-Form Measure of Loneliness	1.91	0.71	2.18	0.66	-2.56	.011	-0.49	-0.06	0.40
10-Step Ladder for Societal Position	5.56	1.52	5.80	1.58	-0.96	.337	-0.71	0.24	0.15

For lean Left-wing supporters (see Table 33), five statistically significant differences were observed. Polish participants scored higher on NFC, LWA, SDO, SDRT, and SLSP. The effect size was large for SDO, moderate for NFC and LWA, and small for the remaining variables. No other differences reached statistical significance.

Table 35
Comparison of the scale scores among Lean Left-Wing supporters in the US and Poland

	US		Poland		<i>t</i>	<i>p</i>	95% <i>CI</i>		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Need for Chaos	1.52	0.42	1.82	0.63	-3.86	<.001	-0.45	-0.15	0.51
Right-Wing Authoritarianism	3.26	1.39	3.15	0.99	0.50	.618	-0.32	0.54	0.10
Left-Wing Authoritarianism	3.97	0.92	4.38	0.73	-2.73	.008	-0.69	-0.11	0.52
Social Dominance Orientation	1.99	0.98	2.93	0.96	-5.70	<.001	-1.26	-0.61	0.97
Status-Driven Risk-Taking Scale	3.38	0.62	3.64	0.61	-2.41	.017	-0.46	-0.05	0.41
Short-Form Measure of Loneliness	2.00	0.74	2.07	0.62	-0.60	.552	-0.32	0.17	0.11
10-Step Ladder for Societal Position	5.38	1.70	5.97	1.38	-2.12	.038	-1.14	-0.03	0.40

Among Lean Right-wing supporters (see Table 34), four statistically significant differences were found. The Polish group had higher LWA, SDO, and SFML levels, whereas the US group showed higher RWA levels. The effect size was large for SDO, moderate for RWA and LWA, and small for SFML. Other differences were not significant.

Table 36
Comparison of the scale scores among Lean Right-Wing supporters in the US and Poland

	US		Poland		<i>t</i>	<i>p</i>	95% <i>CI</i>		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Need for Chaos	1.60	0.65	1.79	0.68	-1.43	.155	-0.45	0.07	0.28
Right-Wing Authoritarianism	5.03	1.29	4.36	0.94	2.73	.009	0.17	1.16	0.65
Left-Wing Authoritarianism	3.50	0.64	3.90	0.68	-2.96	.004	-0.67	-0.13	0.59
Social Dominance Orientation	2.71	1.40	3.64	0.84	-3.35	.002	-1.49	-0.36	0.95
Status-Driven Risk-Taking Scale	3.43	0.77	3.64	0.60	-1.51	.134	-0.49	0.07	0.33
Short-Form Measure of Loneliness	1.78	0.67	2.08	0.61	-2.24	.027	-0.57	-0.04	0.49
10-Step Ladder for Societal Position	5.12	1.73	5.58	1.65	-1.28	.204	-1.18	0.26	0.28

For Moderate Right-wing supporters (see Table 35), three statistically significant differences were detected. The Polish sample exhibited higher levels of NFC, LWA, and SDO. Effect sizes were moderate for NFC and RWA, and small for LWA. Other differences were not statistically significant.

Table 37

Comparison of the scale scores among Moderate Right-Wing supporters in the US and Poland

	US		Poland		<i>t</i>	<i>p</i>	95% <i>CI</i>		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Need for Chaos	1.51	0.42	1.88	0.55	-4.53	<.001	-0.53	-0.21	0.78
Right-Wing Authoritarianism	5.29	1.37	5.02	0.99	1.40	.164	-0.11	0.67	0.22
Left-Wing Authoritarianism	3.09	0.76	3.41	0.81	-2.33	.021	-0.58	-0.05	0.41
Social Dominance Orientation	3.08	1.13	3.78	1.04	-3.43	.001	-1.10	-0.30	0.63
Status-Driven Risk-Taking Scale	3.52	0.56	3.66	0.65	-1.33	.186	-0.37	0.07	0.25
Short-Form Measure of Loneliness	1.94	0.71	1.98	0.58	-0.29	.771	-0.28	0.21	0.05
10-Step Ladder for Societal Position	5.56	1.54	5.63	1.73	-0.23	.816	-0.66	0.52	0.04

For strong right-wing supporters (see Table 36), one statistically significant difference was found between the Polish and US samples. Polish supporters exhibited higher SDO levels than US supporters. No other differences were statistically significant. It should be noted that the Polish strong right-wing group was very small (ranging from 2 to 6 participants), which limits the reliability of these results.

Table 38
Comparison of the scale scores among Strong Right-Wing supporters in the US and Poland

	US		Poland		<i>t</i>	<i>p</i>	95% <i>CI</i>		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Need for Chaos	1.47	0.49	2.61	2.22	-1.25	.266	-3.47	1.19	1.30
Right-Wing Authoritarianism	6.17	1.14	6.45	1.09	-0.57	.575	-1.27	0.72	0.25
Left-Wing Authoritarianism	2.86	0.87	3.09	0.88	-0.60	.554	-0.99	0.54	0.26
Social Dominance Orientation	3.17	1.35	4.66	0.91	-2.13	.039	-2.89	-0.08	1.12
Status-Driven Risk-Taking Scale	3.30	0.65	3.18	0.66	0.27	.787	-0.83	1.09	0.20
Short-Form Measure of Loneliness	1.73	0.74	1.93	0.71	-0.38	.705	-1.29	0.88	0.28
10-Step Ladder for Societal Position	5.22	1.82	4.50	0.71	0.55	.584	-1.93	3.38	0.40

Sex differences between the US Americans and Poles

In both the US American (Table 8) and Polish (Table 28) samples, several psychological constructs demonstrated statistically significant differences between men and women, with broadly consistent patterns across countries. Across both samples, men scored higher than women on RWA, SDO, and SDRT, although the effect sizes were generally larger in the Polish sample.

For RWA, men in the US scored significantly higher than women ($t(388) = -2.12$, $p = .035$, $d = 0.22$), and this difference was even more pronounced in Poland ($t(472) = -7.99$, $p < .001$, $d = 0.73$). Similarly, SDO scores were significantly higher among men than women in both the US ($t(388) = -4.12$, $p < .001$, $d = 0.44$) and Poland ($t(472) = -6.43$, $p < .001$, $d = 0.64$). Men also reported higher SDRT scores in both samples, though with smaller effect sizes (US: $d = 0.35$; Poland: $d = 0.22$).

For LWA, women scored significantly higher than men in both countries (US: $t(388) = 3.16$, $p = .002$, $d = 0.32$; Poland: $t(472) = 5.08$, $p < .001$, $d = 0.48$). In both cases, the effect was moderate, with a slightly larger difference observed in the Polish sample.

No statistically significant sex differences were found in NFC or subjective societal position in either sample. For loneliness, sex differences were nonsignificant in both the US and Polish samples.

In summary, although the direction of sex differences was largely consistent across cultural contexts, Polish participants showed larger effect sizes, particularly for authoritarian and dominance-oriented attitudes.

Discussion

"Do supporters of left-wing or right-wing in the US and Poland differ in their NFC_{Chaos-R} score?"

This research question investigated whether supporters of left-wing and right-wing political orientations differ in their NFC scores across two national contexts: the United States and Poland. The purpose of this cross-cultural comparison was to assess whether ideological orientation, when situated within distinct political and cultural frameworks, predicts variation in chaos-seeking motivation.

The results revealed that Polish participants scored significantly higher in NFC_{Chaos-R} than their US counterparts, regardless of ideological alignment. Among left-wing identifiers, Poles reported higher NFC scores ($M = 1.77$, $SD = 0.57$) than US Americans who identified as left-wing ($M = 1.56$, $SD = 0.50$), with the difference being statistically significant ($t = -4.54$, $p < .001$, Cohen's $d = 0.40$). Similarly, right-wing identifiers in Poland also had higher NFC_{Chaos-R} scores ($M = 1.91$, $SD = 0.84$) compared to their US counterparts ($M = 1.53$, $SD = 0.49$), with a significant difference and a moderate effect size ($t = -4.53$, $p < .001$, Cohen's $d = 0.58$).

These findings suggest that national context significantly moderates the relationship between ideological identification and chaos-seeking motivation. Individuals in Poland, whether identifying as left- or right-wing, appear more inclined toward societal disruption than their ideological peers in the US. This suggests that ideological extremity

does not universally predict NFC, but its expression may be conditioned by broader socio-political structures.

To better understand these differences, it is helpful to consider the associated psychological profiles of left- and right-wing respondents in each country. In both the US and Poland, right-wing identifiers exhibited higher scores on RWA and SDO than left-wing individuals, whereas left-wing identifiers scored higher on LWA. However, these ideological attitudes (despite being strongly structured along the ideological continuum) did not explain the cross-national difference in $NFC_{Chaos-R}$, as ideological orientation had no significant correlation with NFC in either country.

More relevant predictors of $NFC_{Chaos-R}$ appeared to be status-related and affective variables. In both national samples, $NFC_{Chaos-R}$ was positively correlated with status-driven risk-taking and loneliness, with effect sizes stronger in the Polish sample (e.g., $r = .25$ for loneliness in Poland vs. $r = .14$ in the US). These results indicate that chaos-seeking is more strongly rooted in psychological dispositions linked to marginalization, social disconnection, and status frustration, rather than in ideological content.

Furthermore, research suggests that the ideological categories of “left” and “right” may carry different connotations across political cultures. In the United States, these categories are relatively stable and closely tied to policy positions and value systems. In contrast, in Poland, self-placement on the left-right spectrum may be less ideologically coherent and more influenced by populist, anti-systemic sentiment, regardless of direction (Aspelund et al., 2013; Wojcik et al., 2021). As such, individuals identifying as left- or right-wing in Poland may include a broader range of attitudes, including those

aligned with political disenchantment or radicalism, potentially inflating NFC scores relative to their US counterparts.

In conclusion, the findings indicate that ideological self-identification does not predict NFC scores in a consistent or universal manner, and that cross-national context plays a critical role. Polish respondents identifying as either left- or right-wing reported higher Need for Chaos than Americans with similar ideological self-placement. This supports the conceptualization of NFC as a context-sensitive psychological disposition, shaped more by social experiences, structural conditions, and national political culture than by ideology per se.

"Do supporters of political parties considered left-wing or right-wing in the US and Poland differ in their $NFC_{Chaos-R}$ score?"

This research question explored whether supporters of left- or right-wing political parties in the United States and Poland differ in their levels of NFC, as measured by the $NFC_{Chaos-R}$ scale. By grouping parties into ideologically left or right camps within each national context, the analysis aimed to assess whether NFC scores differ systematically across both ideology and country, using party support as the indicator of political alignment.

The findings revealed a clear pattern of elevated $NFC_{Chaos-R}$ scores among Polish party supporters, particularly those aligned with right-wing parties. Among US respondents, Democratic Party supporters reported a mean NFC score of 1.56 ($SD =$

0.50), while Republican supporters reported a nearly identical mean of 1.53 ($SD = 0.49$), which is a non-significant difference ($U = 18552.5$; $p = .426$). In contrast, among Polish respondents, Lewica supporters scored 1.84 ($SD = 0.61$), Koalicja Obywatelska scored 1.70 ($SD = 0.55$), PiS scored 1.73 ($SD = 0.55$), and Konfederacja supporters showed the highest NFC at 1.97 ($SD = 0.68$).

Statistical comparison confirmed that Polish left-wing party supporters (Lewica, KO) had significantly higher NFC scores than US Democrats, and Polish right-wing party supporters (PiS, Konfederacja) scored higher than US Republicans. The differences were especially pronounced for Konfederacja compared to Republicans (Cohen's $d = 0.74$) and for Lewica compared to Democrats (Cohen's $d = 0.51$), suggesting a broader trend of higher chaos-seeking motivation among Polish party supporters across the ideological spectrum.

To interpret these differences, it is necessary to examine underlying psychological profiles. Among Polish respondents, both Lewica and Konfederacja supporters reported elevated levels of SDRT, SDO and LWA. These traits, previously linked with NFC in the literature, reflect an orientation toward hierarchy-challenging behavior, status anxiety, and anti-establishment sentiment. Notably, while PiS supporters also scored high in RWA and SDO, their NFC levels were not significantly different from those of KO or Lewica supporters, suggesting that NFC is not reducible to authoritarian conservatism, but is instead a more general disposition toward societal disruption, shared across party lines.

In contrast, the US sample showed clear ideological polarization in RWA and LWA, but no such polarization in NFC. Republicans scored markedly higher in RWA and

SDO, and lower in LWA, than Democrats (Table 5), yet NFC scores did not differ between these groups. This reinforces the notion that NFC is orthogonal to conventional partisan or ideological identity in the US, consistent with earlier findings from Arceneaux et al. (2021), who argued that NFC reflects a desire to destabilize systems perceived as illegitimate, regardless of ideological content.

Furthermore, affective variables such as loneliness and perceived low social status, both positively correlated with $NFC_{\text{Chaos-R}}$ in the Polish sample ($r = .25$ and $r = .20$, respectively), were also elevated among Polish voters, particularly those supporting Lewica and Konfederacja. This suggests that perceived marginalization and status deprivation (rather than left- or right-wing convictions) may be the most salient predictors of NFC in this context. Both parties adopt populist, anti-elite rhetoric, albeit with different ideological content, which may legitimize disruptive political expressions among their supporters.

In sum, the results demonstrate that Polish party supporters exhibit significantly higher $NFC_{\text{Chaos-R}}$ scores than US party supporters, regardless of ideological alignment. While both Lewica and Konfederacja differ sharply in ideological content, their supporters converge in terms of elevated NFC, indicating that party-based political identity interacts with structural and psychological factors, such as status-driven grievance, alienation, and anti-establishment sentiment, to shape chaos-seeking motivation. These findings underscore the importance of considering both cultural-political context and party rhetoric when analyzing NFC across democracies.

"Do extreme left-wing and extreme right-wing voters in the US and Poland differ in their NFC_{Chaos-R} score?"

The final research question examined whether individuals who identify with extreme left-wing or extreme right-wing political orientations differ in their Need for Chaos across two cultural contexts: the United States and Poland. This inquiry aimed to determine whether highly ideologically committed individuals exhibit different levels of chaos-seeking motivation based on their political extremity and national context.

The findings indicate no statistically significant differences in NFC_{Chaos-R} scores between US and Polish respondents who identified as strong left-wing or strong right-wing. For strong left-wing voters, Polish participants ($M = 1.82$, $SD = 0.77$) had numerically higher NFC scores than US participants ($M = 1.61$, $SD = 0.52$), but the difference did not reach statistical significance ($t = -1.72$, $p = .088$, Cohen's $d = 0.35$). Among strong right-wing voters, NFC scores were also higher in Poland ($M = 2.61$, $SD = 2.22$) than in the US ($M = 1.47$, $SD = 0.49$), but again, the difference was not statistically significant, likely due in part to the very small sample size in the Polish strong right-wing group ($n \approx 2-6$), which undermines statistical power and result stability.

These results suggest that, despite observable numerical trends, extreme ideological orientation alone does not systematically predict higher NFC scores across national contexts. This finding aligns with prior analyses in this dissertation, showing that political extremity (whether on the left or right) does not consistently co-vary with chaos-seeking motivations. Although both far-left and far-right ideologies may endorse systemic

change or exhibit distrust of elites (Arceneaux et al., 2021; Petersen et al., 2023a), the motivational basis for NFC appears to lie outside the ideological spectrum, instead rooted in more general psychological and social dispositions.

Supporting this interpretation, the same group comparisons revealed no significant cross-national differences in most other psychological traits (such as RWA, LWA, SDRT, or SFML) for strong left- or right-wing supporters. Only SDO showed a consistent and statistically significant difference: Polish participants scored significantly higher in SDO than their US counterparts in both ideological groups. Among strong left-wing voters, the effect size was large (Cohen's $d = 1.10$). However, these SDO differences did not correspond to differences in NFC, indicating conceptual independence between hierarchical orientation and chaos-seeking.

Further, the absence of a clear association between extreme ideology and NFC may reflect cultural differences in political engagement and the semantic ambiguity of ideological labels, particularly in Central and Eastern Europe. As highlighted by Wojcik et al. (2021) and Aspelund et al. (2013), left- and right-wing terms in Poland often lack consistent ideological substance, functioning more as identity markers than expressions of coherent political belief systems. Therefore, even individuals identifying as “strongly left-wing” or “strongly right-wing” may not uniformly endorse the systemic distrust or revolutionary rhetoric that typically aligns with NFC.

The results also underscore the importance of sample distribution and measurement stability in detecting cross-national psychological effects. The small number of respondents identifying as “strong right-wing” in Poland makes it difficult to

determine whether the observed higher NFC mean in this group ($M = 2.61$) is a reliable pattern or a sampling artifact. This limitation highlights the need for larger and more balanced samples in future comparative studies of political extremism and psychological motivation.

In conclusion, the findings do not support the hypothesis that extreme political ideology systematically predicts higher NFC scores across the US and Poland. Although both far-left and far-right movements may attract individuals dissatisfied with existing systems, the motivation to seek chaos appears to be more closely associated with psychological traits such as social alienation, status-driven frustration, and institutional distrust, rather than with ideological extremity per se. These findings reinforce the conceptualization of NFC as a domain-general orientation toward disruption, rather than a byproduct of political radicalism.

LIMITATIONS

This research has several limitations. For example, it relied solely on self-report measures, which are vulnerable to social desirability and self-assessment biases. Also, the cross-sectional design limits the ability to draw causal conclusions, as all data were collected at one time point. A key limitation is the low presence of truly extreme political supporters. Although participants reported strong ideological or party affiliations, the sample included few individuals with clear extreme political views. Even among "strong" identifiers, it is unclear whether they held radical beliefs or simply consistent preferences. As such, the study likely underrepresents the psychological profile of extreme partisans, which may affect conclusions about the link between extremity and chaos-seeking. The use of non-representative, online samples also limits generalizability to broader US and Polish populations. Some political subgroups (particularly in Poland, such as Konfederacja supporters) were small, reducing the reliability of between-group comparisons. Additionally, cultural and historical influences, such as institutional trust or economic precarity, were not directly measured but may shape how NFC is expressed across countries. Also, the study used a simple left–right ideological scale, which may not fully capture the complexity of individuals' political beliefs. Lastly, sex was not examined as a potential moderating factor in the current analyses. Although some consistent differences between men and women were observed at the descriptive level, the statistical models did not test whether sex moderated the associations between NFC and other variables. Despite these limitations, they point to valuable directions for refinement and offer a rich foundation for future research.

GENERAL DISCUSSION

The present dissertation set out to examine how the Need for Chaos, a psychological tendency to seek societal disruption, relates to political preferences in two distinct national contexts: the United States and Poland. The research explored NFC in relation to left-right ideological orientation, party affiliation, and extremity of political views. The final study presented direct cross-cultural comparisons.

Synthesizing the Findings

The core finding of this dissertation is that NFC does not systematically align with political ideology or party preference in a linear or directional manner. Instead, NFC appears to reflect underlying psychological and social dispositions, such as status dissatisfaction, loneliness, and risk tolerance, that can be present among supporters of both left- and right-wing parties. Although initial hypotheses assumed that NFC might be higher among those aligned with the far right (especially given prior associations between NFC and populist, anti-elite rhetoric in US politics), this pattern did not generalize across contexts. In fact, some of the highest NFC scores were observed among Polish supporters of both Lewica (far left) and Konfederacja (far right), suggesting a shared psychological orientation toward disruption, despite ideological opposition.

Notably, US participants reported lower NFC scores across ideological and party groups. Differences were modest among Democrats and Republicans, whereas Polish respondents consistently exhibited higher NFC levels. These national patterns suggest that macro-level cultural and institutional factors shape how NFC is expressed politically.

An additional possibility is that individuals with high NFC scores in the United States may have been more likely to support third-party candidates, rather than the two major parties. Choosing a third-party option can be seen as a signal of dissatisfaction with the political status quo and a desire for dramatic change, or “flipping the table.” Examples of such candidates in the 2025 election context included Jill Stein (Green Party) and Chase Oliver (Libertarian Party). While the present study focused on comparisons between Democrats and Republicans, it is possible that third-party support would have attracted relatively more high-scoring NFC individuals. Future research should examine this possibility directly, as it could clarify the political expression of NFC in multiparty versus two-party systems.

It is also important to consider the historical context of the data collection periods. In the United States, the survey took place in February 2025, shortly after Donald Trump, a Republican, was inaugurated as President on January 20, 2025. In Poland, data were collected in April 2025, during the emotionally charged weeks between the first and second rounds of the presidential election, when the race was narrowed to candidates from Koalicja Obywatelska and Prawo i Sprawiedliwość, just prior to the victory of Karol Nawrocki, the PiS candidate, on June 1, 2025. These politically tense moments may have shaped participants’ general outlooks and responses, and should be kept in mind when interpreting the results. For example, perceptions of marginalization might also have been shaped by the immediate political outcomes during the period of data collection. Although the scale used in the Dissertation measures marginalization in a broad, non-political sense, the timing of elections and the victory of particular parties or

candidates could have influenced how participants evaluated their social position. For example, groups that found themselves on the losing side of the election may have reported stronger feelings of marginalization, not necessarily because of their objective social status but due to the political context at the time. While this study does not specifically address political marginalization, this possibility should be kept in mind as an additional contextual factor.

Cross-national and systemic contexts

One explanation for the observed cross-national differences lies in the political system structure. The US operates under a consolidated two-party system, where parties are relatively stable and integrated into formal governance institutions (Flanagan, 2021). In contrast, Poland's fragmented multi-party system creates space for more ideologically hybrid or system-challenging parties, such as *Konfederacja* and even elements of *Lewica*, which often blend traditional ideology with anti-elite rhetoric (Dymek, 2024). These structural differences may influence the mobilization of individuals with high NFC tendencies. In a system like Poland's, where populist narratives and dissatisfaction with post-communist transformation remain salient (Havrylyshyn, 2020; Pridham & Vanhanen, 1994), chaos-seeking individuals may find more resonant political outlets. Moreover, historical and cultural trajectories appear to shape how political disruption is perceived. The US, founded on liberal individualism and democratic stability, contrasts with Poland's more turbulent past of foreign occupation, totalitarian rule, and systemic overhaul (Bifulco, 2018; Skórczewski & Polakowska, 2020). These experiences likely

contribute to varying thresholds for chaos tolerance and different interpretations of political change.

Interpreting NFC beyond ideology

The theoretical framework advanced in this dissertation suggests that NFC is best understood not as a partisan or ideological orientation but as a psychological tendency associated with deeper motivational systems. The research draws upon emerging work linking NFC to status-driven risk-taking, social alienation, and authoritarian tendencies from both the left and right (Fasce & Avendaño, 2020). Indeed, authoritarianism may intersect with NFC when individuals desire radical transformation of the social order, whether in pursuit of traditionalism (as in RWA) or justice-based reordering (as in LWA). However, NFC is conceptually distinct in that it reflects a desire for systemic breakdown rather than control, and thus may co-exist with both hierarchical and anti-hierarchical worldviews, depending on individual grievances and societal context. This perspective aligns with Arnulf & Larsen's (2020) argument that semantic inconsistencies in political language across nations complicate direct ideological mapping. In Eastern Europe, and Poland in particular, the terms “left” and “right” often diverge from Western liberal-conservative associations, which may partly explain the lack of consistent ideological patterning in NFC scores.

The role of psychological dispositions

Across all studies, $NFC_{\text{Chaos-R}}$ was consistently associated with psychological traits related to dissatisfaction and disconnection (especially status-driven risk-taking and loneliness). These findings reinforce prior research suggesting that NFC emerges from

personal experiences of marginalization or perceived lack of recognition. Individuals high in NFC may not seek chaos out of ideological conviction, but out of frustration with perceived systemic failure or personal insignificance. This aligns with the argument by Kagitcibasi (2017) and White et al. (1982) that political preferences must be understood in the context of underlying psychological needs and social conditions, not merely belief systems. Such findings support a motivational model of political disruption, in which NFC serves as a latent disposition activated by perceived social threats or blocked pathways to influence.

RESEARCH IMPLICATIONS

This dissertation's findings carry several important implications for the theoretical understanding of the Need for Chaos, its relationship to political ideology, and its expression across cultural and systemic contexts. Although previous studies (particularly in the context of populist surges in Western democracies) have associated NFC with radical or authoritarian-right constituencies (e.g., Edsall, 2019; Petersen et al., 2018), the present research suggests that NFC may not be inherently tied to a specific ideological direction. Rather, it emerges as a broader psychological orientation toward disruption, shaped by personal dispositions and contextual political structures.

Reframing NFC as a systemic orientation

The findings imply that NFC is less about the content of political ideology and more about how individuals relate to political systems themselves. Instead of expressing strong commitments to particular political goals, individuals high in NFC appear to reflect disaffection with institutional authority, irrespective of whether that disaffection is channeled through left- or right-wing narratives. This aligns with the framework proposed by Arceneaux et al. (2021), in which NFC is rooted in feelings of exclusion and low societal influence, rather than ideological conviction. From this perspective, NFC should not be treated as an attitudinal measure tied to party identification or ideology, but rather as a meta-political disposition: a rejection of the system as such. This suggests that NFC might more appropriately be modeled alongside constructs like political anomie, social distrust, and expressive nihilism, which reflect deeper motivational structures rather than explicit belief systems.

Clarifying NFC's relationship to extremism

One common interpretation in prior research is that NFC correlates with ideological extremity, particularly on the right. Although this study found no consistent association between NFC and left- or right-wing positioning, it is important to note that the data contained relatively few individuals with clearly strong political views. Even among participants who identified as “strongly” left- or right-wing, it remained unclear whether they held radical beliefs or were simply firmly committed to mainstream ideologies. As such, this study cannot decisively rule out a relationship between NFC and ideological extremism. However, its findings may suggest that NFC might also be present in individuals who are not ideologically extreme, and that political extremity is not a necessary condition for chaos-seeking motivation to emerge. This distinction also highlights the need for greater conceptual differentiation between motivational radicalism (disruption-seeking) and ideological radicalism (goal-driven extremity), and for future work to empirically investigate their overlap using more targeted sampling strategies.

Measurement and cross-cultural considerations

Another implication concerns the context-dependence of NFC's political expression. While the NFC_{Chaos-R} scale was psychometrically robust across both language versions, its interpretive validity differed by national context. In the Polish sample, elevated NFC scores were observed among supporters of both Lewica and Konfederacja (two ideologically opposed parties). In the US, NFC scores were lower and more evenly distributed, reflecting perhaps a more institutionalized and stable party system. These findings affirm the view that NFC's relationship to political behavior is mediated by

political opportunity structures (including the discursive environment, the legitimacy of system-challenging parties, and cultural norms surrounding political expression). As argued by Wojcik et al. (2021), Aspelund et al. (2013), and Medzihorsky (2024), ideological labels such as “left” and “right” carry different cultural meanings across nations, especially in post-communist contexts. These distinctions caution against assuming that NFC operates similarly across ideological or geographic boundaries.

Toward a motivational-contextual model of disruption

Together, the findings support a more nuanced, motivational-contextual model of NFC. Rather than emerging from ideological commitment or political doctrine, NFC appears to be rooted in subjective experiences of marginalization, social disconnection, and perceived lack of influence. These psychological conditions may lead individuals to view disruption as a way to reclaim agency, particularly in environments where political systems are seen as unresponsive or exclusionary. This perspective frames NFC as a general psychological posture: not inherently ideological, but potentially activated in various political contexts depending on available discourses and institutional cues. NFC may gain traction when conventional channels for expression feel closed, thereby making system-challenging attitudes more resonant. As such, NFC offers a valuable lens for understanding how dissatisfaction and alienation can drive support for disruption, even among individuals embedded in mainstream political environments.

KEY FUTURE DIRECTIONS

Although this dissertation advances understanding of the Need for Chaos in political contexts, it also reveals important questions that remain open for future investigation. The following directions outline key priorities for extending this work through more targeted, diverse, and applied research approaches.

Include more politically extreme individuals

A primary limitation of the current study was the relatively small number of participants with clearly extreme political views, limiting conclusions about how NFC may relate to ideological radicalism. Future studies should purposefully recruit individuals with explicitly extreme or radical positions, allowing for more robust testing of whether NFC is associated with political extremity or support for undemocratic actions.

Study NFC in other countries

This dissertation focused on two democracies with markedly different political systems. However, further research is needed to examine NFC in a broader range of national contexts, including both consolidated and less stable democracies, as well as non-democratic regimes. Expanding the cross-national scope would help identify which institutional or cultural conditions amplify or suppress NFC, and whether certain political systems are more vulnerable to chaos-seeking tendencies.

Study the role of party rhetoric

Political communication may serve as a key pathway for activating or reinforcing chaos-seeking motivations. Future studies should analyze how party rhetoric and elite

messaging interact with NFC, particularly whether populist or anti-system narratives are more likely to resonate with individuals high in NFC, and whether this effect varies across parties or contexts.

Explore offline and online behavior

Although previous studies have linked NFC to attitudes and intentions, there is a need to examine actual political behaviors. This includes both offline actions (e.g., voting, protesting, political disengagement) and online behaviors (e.g., disinformation sharing, antagonistic discourse). Understanding these behavioral expressions is essential for assessing NFC's real-world impact.

Examine interventions

Finally, future studies could explore whether targeted interventions can reduce NFC or its behavioral consequences. Potential strategies include increasing social inclusion, improving perceived recognition, or enhancing trust in democratic institutions. Testing such interventions would help clarify whether NFC is a stable disposition or a context-sensitive response that can be mitigated.

CONCLUSIONS

This dissertation investigated the psychological construct of the Need for Chaos and its relationship to political orientation across two national contexts: the United States and Poland. Drawing on four empirical studies, it examined how NFC relates to self-reported ideology, party support, and political intensity, while also comparing patterns across different political systems.

The findings show that NFC is not systematically linked to left-right political orientation, party preference, or ideological strength. Instead, NFC appears more closely associated with psychological dispositions such as status-driven risk-taking, social alienation, and feelings of marginalization. Polish participants generally exhibited higher NFC scores than US participants, suggesting that political and cultural context shapes how NFC is expressed.

These results contribute to a growing body of evidence positioning NFC as a motivational orientation toward system disruption, rather than a direct reflection of ideology. The findings underscore the importance of considering contextual, psychological, and institutional factors in understanding political disaffection and system-challenging behavior.

APPENDICES

Appendix A

Survey used in Study 1

Demography

What is your age?

Respondents insert a numeric value.

What is your gender?

Male

Female

Other

What is the highest level of education you have completed?

No high school

High school

Some college

2-year college

4-year college

Post-graduate or beyond

Specific political party preference

Generally speaking, do you usually think of yourself as the...

1. Democrat

2. Republican

3. Other

4. Don't know

(If the participants select 1. Democrat)

Generally speaking, do you usually think of yourself as the...

1. Strong Democrat supporter

2. Democrat supporter

3. Lean Democrat

(If the participants select 1. Democrat)

Generally speaking, do you usually think of yourself as the...

1. Strong Republican supporter

2. Republican supporter

3. Lean Republican

Left-wing or right-wing political preference

Generally speaking, do you usually think of yourself as the...

1. Strong Left-wing supporter
2. Moderate Left-wing supporter
3. Lean Left-wing
4. Lean Right-wing
5. Moderate Right-wing supporter
6. Strong Right-wing supporter
7. Other
8. Don't know

Need for Chaos Scale-Revised

To what extent do you agree or disagree with the following statements? (1 = Strongly Disagree; 7 = Strongly Agree).

1. I get a kick when natural disasters strike in foreign countries.
2. I fantasize about a natural disaster wiping out most of humanity such that a small group of people can start all over.
3. I think society should be burned to the ground.
4. When I think about our political and social institutions, I cannot help thinking “just let them all burn”.
5. We cannot fix the problems in our social institutions, we need to tear them down and start over.
6. I need chaos around me – it is too boring if nothing is going on.
7. Sometimes I just feel like destroying beautiful things.
8. We need to uphold order by doing what is right, not what is wrong. (R)
9. It's better to live in a society where there is order and clear rules than one where anything goes. (R)

Right-Wing Authoritarianism Scale

To what extent do you agree or disagree with the following statements? (-4 = Very strongly disagree; 4 = Very strongly agree).

1. Our country desperately needs a mighty leader who will do what has to be done to destroy the radical new ways and sinfulness that are ruining us.
2. (R) Gays and lesbians are just as healthy and moral as anybody else.

3. It is always better to trust the judgment of the proper authorities in government and religion than to listen to the noisy rabble-rousers in our society who are trying to create doubt in people's minds.
4. (R) Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly.
5. The only way our country can get through the crisis ahead is to get back to our traditional values, put some tough leaders in power, and silence the troublemakers spreading bad ideas.
6. (R) There is absolutely nothing wrong with nudist camps.
7. (R) Our country needs free thinkers who have the courage to defy traditional ways, even if this upsets many people.
8. Our country will be destroyed someday if we do not smash the perversions eating away at our moral fiber and traditional beliefs.
9. (R) Everyone should have their own lifestyle, religious beliefs, and sexual preferences, even if it makes them different from everyone else.
(attention check) I host daily dinner parties on Saturn with my alien friends.
10. The "old-fashioned ways" and the "old-fashioned values" still show the best way to live.
11. (R) You have to admire those who challenged the law and the majority's view by protesting for women's abortion rights, for animal rights, or to abolish school prayer.
12. What our country really needs is a strong, determined leader who will crush evil, and take us back to our true path.
13. (R) Some of the best people in our country are those who are challenging our government, criticizing religion, and ignoring the "normal way things are supposed to be done."
14. God's laws about abortion, pornography and marriage must be strictly followed before it is too late, and those who break them must be strongly punished.
15. There are many radical, immoral people in our country today, who are trying to ruin it for their own godless purposes, whom the authorities should put out of action.
16. (R) A "woman's place" should be wherever she wants to be. The days when women are submissive to their husbands and social conventions belong strictly in the past.
17. Our country will be great if we honor the ways of our forefathers, do what the authorities tell us to do, and get rid of the "rotten apples" who are ruining everything.
18. (R) There is no "ONE right way" to live life; everybody has to create their own way.
19. (R) Homosexuals and feminists should be praised for being brave enough to defy "traditional family values".
20. This country would work a lot better if certain groups of troublemakers would just shut up and accept their group's traditional place in society.

Left-Wing Authoritarianism Scale

To what extent do you agree or disagree with the following statements? (1 = I disagree completely; 4 = neutral/undecided; 7 = I completely agree).

1. Our country desperately needs a mighty and liberal leader who will do what has to be done to destroy the radical traditional ways of doing things that are ruining us.
2. (R) Christian fundamentalists are just as healthy and moral as anybody else.
3. It's always better to trust the judgment of the proper authorities in science with respect to issues like global warming and evolution than to listen to the noisy rabble-rousers in our society who are trying to create doubts in people's minds.
4. (R) Christian Fundamentalists and others who have rebelled against the established sciences are no doubt every bit as good and virtuous as those who agree with the best scientific minds.
5. The only way our country can get through the crisis ahead is to get rid of our "traditional" values, put some tough leaders in power who oppose those values, and silence the troublemakers spreading bad (and so-called "traditional") ideas.
6. (R) There is absolutely nothing wrong with Christian Fundamentalist camps designed to create a new generation of Fundamentalists.
7. (R) Our country needs traditional thinkers who will have the courage to defy modern progressive movements, even if this upsets many people.
8. Our country will be destroyed someday if we do not smash the traditional beliefs eating away at our national fiber and growing progressive beliefs.
9. (R) With respect to environmental issues, everyone should have their own perspective¹, even if it makes them different from everyone else.
(attention check) I travel faster than the speed of light to visit other galaxies on weekends.
10. Progressive ways and liberal values show the best way of life.
11. (R) You have to admire those who challenged the law and the majority's view by protesting against abortion rights or in favor of reinstating school prayer.
12. What our country really needs is a strong, determined leader who will crush the evil of pushy Christian religious people, and take us forward to our true path.
13. (R) Some of the best people in our country are those who are challenging our government, supporting religion, and ignoring the "normal way" things are supposed to be done.
14. We should strongly punish those who try to uphold what they claim are "God's laws" about abortion, pornography, and marriage, when they break the actual laws of the country in order to do so.

¹ In the original scale, the term "personality" appears in the "With respect to environmental issues, everyone should have their own personality, even if it makes them different from everyone else" item. However, based on the context, this is likely an error. The term "perspective" was used instead, as it aligns better with discussions on individual viewpoints or opinions on environmental matters.

15. There are many radical, immoral Christian people in our country today, who are trying to ruin it for their religious purposes, whom the authorities should put out of action.
16. (R) A Christian's place should be wherever he or she wants to be. The days when Christians are submissive to the conventions of this country belong strictly in the past.
17. Our country will be great if we honor the ways of progressive thinking, do what the best liberal authorities tell us to do, and get rid of the religious and conservative "rotten apples" who are ruining everything.
18. (R) With respect to environmental issues, there is no "ONE right way" to live life; everybody has to create their own way.
19. (R) Christian Fundamentalists should be praised for being brave enough to defy the current societal and legal norms.
20. This country would work a lot better if certain groups of Christian troublemakers would just shut up and accept their group's proper place in society.

Social Dominance Orientation Scale

Indicate your agreement with the following statements. Use the following scale to respond to each statement (1 = Strongly Disagree; 7 = Strongly Agree).

1. Some groups of people are simply inferior to other groups.
2. In getting what you want, it is sometimes necessary to use force against other groups.
3. It's OK if some groups have more of a chance in life than others.
4. To get ahead in life, it is sometimes necessary to step on other groups.
5. If certain groups stayed in their place, we would have fewer problems.
6. It's probably a good thing that certain groups are at the top and other groups are at the bottom.
7. Inferior groups should stay in their place.
8. Sometimes other groups must be kept in their place.
- (attention check) It is a known fact that humans are already inhabiting Mars.
9. (R) It would be good if groups could be equal.
10. (R) Group equality should be our ideal.
11. (R) All groups should be given an equal chance in life.
12. (R) We should do what we can to equalize conditions for different groups.
13. (R) Increased social equality is beneficial to society.
14. (R) We would have fewer problems if we treated people more equally.
15. (R) We should strive to make incomes as equal as possible.
16. (R) No group should dominate in society.

Status-Driven Risk-Taking Scale

How much do you agree or disagree with the following statements? (1 = Strongly Disagree; 7 = Strongly Agree)

1. I would rather live as an average person in a safe place than live as a rich and powerful person in a dangerous place.
2. I would enjoy being a famous and powerful person, even if it meant a high risk of assassination.
3. If the pay was really high, I would be willing to work with extremely explosive materials.
4. I would risk my life for a good chance of finding a huge amount of buried treasure.
5. If I could become rich and famous by winning a major competition, I would put my life on the line to win it.
6. I would like to live in a country where people who take huge risks have the chance to gain superior social status.
7. No matter how good the pay of "perks"; I would not want to be a spy who takes very dangerous assignments.
8. I would rather live a secure life as an ordinary person than risk everything to be "at the top".
9. For a very high-status job, I would be willing to live in a place that had an extremely high crime rate.
10. I would take a very high-status job even if I had to live in a place where there are many deadly diseases.
11. I would volunteer for a risky medical experiment if it paid me enough to retire early.
12. Being an organized crime boss would be far too dangerous for me.
13. To become a billionaire, I would be willing to trade 10 years from my life expectancy.
14. I would not go to a war zone even if the business opportunities were extremely profitable.

Short-Form Measure of Loneliness

How often do you feel that the following statements apply to you? (1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Always)

1. I lack companionship.
2. There is no one I can turn to.
3. I feel left out.
4. I feel isolated from others.
5. (R) I can find companionship when I want it.
6. I am unhappy being so withdrawn.
7. People are around me, but not with me.

10-Step Ladder for Societal Position

Think of a ladder with 10 steps representing where people stand in your country. At step 10 are people who are the best off - those who have the most money, the most education, and the most respected jobs. At step 1 are the people who are worst off - those who have the least money, the least education, and the least respected jobs or no job. Where would you place yourself on this ladder?
(Step 1 = Bottom of ladder; Step 10 = Top of ladder).

Figure 58
*10-Step Ladder
for Societal
Position*



Appendix B

Survey used in Study 2

Demography

Ile masz lat? [*What is your age?*]

Respondents insert a numeric value.

Jaka jest twoja płeć? [*What is your gender?*]

Mężczyzna [*Male*]

Kobieta [*Female*]

Inna [*Other*]

Jaki jest twój najwyższy osiągnięty etap edukacji? [*What is the highest level of education you have completed?*]

Podstawowe [*Elementary*]

Gimnazjalne [*Secondary school*]

Średnie [*High school or equivalent*]

Wyższe – licencjat lub inżynier [*BA or equivalent engineering degree*]

Wyższe – magister [*MA*]

Wyższe – doktorat lub wyżej [*PhD or beyond*]

Need for Chaos Scale-Revised: Zew Chaosu – poprawiona skala

W jakim stopniu zgadzasz lub nie zgadzasz się z poniższymi stwierdzeniami?

(1 = Zdecydowanie się nie zgadzam; 7 = Zdecydowanie się zgadzam) [*To what extent do you agree or disagree with the following statements? (1 = Very strongly disagree; 7 = Very strongly agree).*]

1. Kręcą mnie klęski żywiołowe w obcych krajach.
2. Fantazjuję o klęsce żywiołowej o takiej skali, że tylko niewielka grupa ludzi, którzy przeżyli, mogłaby zacząć wszystko od nowa.
3. Uważam, że społeczeństwo powinno zostać doszczętnie spalone.
4. Kiedy myślę o naszych instytucjach społeczno-politycznych, to dochodzę do wniosku, że chciałbym, żeby oni wszyscy "po prostu spłonęli".
5. Nie możemy naprawić problemów w naszych instytucjach społecznych, musimy je zburzyć i zacząć budować wszystko od nowa.
6. Potrzebuję chaosu wokół siebie – jest zbyt nudno, gdy nic się nie dzieje.
7. Czasami mam ochotę niszczyć piękne rzeczy.
8. (R) Musimy utrzymywać ład i porządek, robiąc to, co dobre, a nie to, co złe.
9. (R) Lepiej jest żyć w społeczeństwie, w którym panuje porządek i obowiązują jasne zasady, niż w takim, w którym wszystko wolno.

Appendix C

Survey used in Study 3

Demography

Ile masz lat? [*What is your age?*]

Respondents insert a numeric value.

Jaka jest twoja płeć? [*What is your gender?*]

Mężczyzna [*Male*]

Kobieta [*Female*]

Inna [*Other*]

Jaki jest twój najwyższy osiągnięty etap edukacji? [*What is the highest level of education you have completed?*]

Podstawowe [*Elementary*]

Gimnazjalne [*Secondary school*]

Średnie [*High school or equivalent*]

Wyższe – licencjat lub inżynier [*BA or equivalent engineering degree*]

Wyższe – magister [*MA*]

Wyższe – doktorat lub wyżej [*PhD or beyond*]

Specific political party preference

Only the political parties that received enough votes to join the parliament are listed here (National Electoral Commission, 2023). The items aim to resemble the English version to enable cross-cultural comparisons closely. However, there are differences linked to the fact that the US-American and Polish political systems differ significantly.

Ogólnie rzecz ujmując, najbardziej utożsamiasz się z poglądami partii... [*Generally speaking, do you usually think of yourself as a...*]

1. Prawo i Sprawiedliwość
2. Koalicja Obywatelska
3. Konfederacja Wolność i Niepodległość
4. Lewica
5. Koalicja Polski 2050 Szymona Hołowni i PSL-Koalicji Polskiej
6. Inna [*Other*]
7. Nie wiem [*Don't know*]

Czy uważasz się za osobę... [*Would you call yourself a person...*]

1. Zdecydowanie wspierającą {the name of the party} [*Strongly supporting {the name of the party}*]
2. Wspierającą {the name of the party} [*Supporting {the name of the party}*]
3. Umiarkowanie wspierającą {the name of the party} [*Moderately supporting {the name of the party}*]
4. Nie wiem [*Don't know*]

Left-wing or right-wing political preference

Ogólnie rzecz ujmując, najbardziej utożsamiasz się z poglądami... [*Generally speaking, do you usually think of yourself as a person supporting the views...*]

1. Zdecydowanie lewicowymi [*Strongly left-wing*]
2. Lewicowymi [*Left-wing*]
3. Umiarkowanie lewicowymi [*Moderately left-wing*]
4. Umiarkowanie prawicowymi [*Moderately right-wing*]
5. Prawicowymi [*Right-wing*]
6. Zdecydowanie prawicowymi [*Strongly right-wing*]
6. Inne [*Other*]
7. Nie wiem [*Don't know*]

Need for Chaos Scale-Revised: Zew Chaosu – poprawiona skala

W jakim stopniu zgadzasz lub nie zgadzasz się z poniższymi stwierdzeniami?
(1 = Zdecydowanie się nie zgadzam; 7 = Zdecydowanie się zgadzam) [*To what extent do you agree or disagree with the following statements? (1 = Very strongly disagree; 7 = Very strongly agree).*]

1. Kręcą mnie klęski żywiołowe w obcych krajach.
2. Fantazjuję o klęsce żywiołowej o takiej skali, że tylko niewielka grupa ludzi, którzy przeżyli, mogłaby zacząć wszystko od nowa.
3. Uważam, że społeczeństwo powinno zostać doszczętnie spalone.
4. Kiedy myślę o naszych instytucjach społeczno-politycznych, to dochodzę do wniosku, że chciałbym, żeby oni wszyscy "po prostu spłonęli".
5. Nie możemy naprawić problemów w naszych instytucjach społecznych, musimy je zburzyć i zacząć budować wszystko od nowa.
6. Potrzebuję chaosu wokół siebie – jest zbyt nudno, gdy nic się nie dzieje.
7. Czasami mam ochotę niszczyć piękne rzeczy.
8. (R) Musimy utrzymywać ład i porządek, robiąc to, co dobre, a nie to, co złe.
9. (R) Lepiej jest żyć w społeczeństwie, w którym panuje porządek i obowiązują jasne zasady, niż w takim, w którym wszystko wolno.

Right-Wing Authoritarianism Scale: Skala Prawicowego Autorytaryzmu

W jakim stopniu zgadzasz się lub nie zgadzasz z poniższymi stwierdzeniami? (-4 = Zdecydowanie się nie zgadzam; 4 = Zdecydowanie się zgadzam). [*To what extent do you agree or disagree with the following statements? (-4 = Very strongly disagree; 4 = Very strongly agree).*]

1. Nasz kraj pilnie potrzebuje silnego przywódcy, który zrobi to, co należy zrobić, aby zniszczyć radykalne nowomodne myślenie i grzeszność, które nas rujną.
2. (R) Geje i lesbijki są tak samo zdrowi i moralni jak wszyscy inni.
3. Zawsze lepiej jest zaufać osądowi właściwych autorytetów rządowych i religijnych, niż słuchać hałaśliwych wicherzycieli, którzy próbują wzbudzić wątpliwości w społeczeństwie.
4. (R) Ateiści i inni, którzy zbuntowali się przeciwko przyjętej religii, są bez wątpienia tak samo dobrzy i moralni jak ci, którzy regularnie uczęszczają do kościoła.
5. Jedynym sposobem na przetrwanie przez nasz kraj nadchodzącego kryzysu jest powrót do tradycyjnych wartości, objęcie władzy przez silnych przywódców i uciszenie wicherzycieli szerzących szkodliwe idee.
6. (R) Nie ma absolutnie nic złego w plażach nudystów.
7. (R) Nasz kraj potrzebuje wolnomyślicieli, którzy mają odwagę przeciwstawić się tradycji, nawet jeśli zdenerwuje to wielu ludzi.
8. Nasz kraj zostanie pewnego dnia zniszczony, jeśli nie rozprawimy się ze zboczeniami trawiącymi naszą moralność i tradycyjne przekonania.
9. (R) Każdy powinien mieć swój własny styl życia, przekonania religijne i preferencje seksualne, nawet jeśli różnią się one od ogólnie przyjętej normy.
- (sprawdzenie uwagi) Podróżuję z prędkością większą niż prędkość światła, żeby odwiedzać inne galaktyki w weekendy.**
10. "Tradycyjne metody" i "tradycyjne wartości" wciąż są najlepszym sposobem na życie.
11. (R) Należy szanować tych, którzy rzucili wyzwanie prawu i poglądom większości, protestując na rzecz praw kobiet do aborcji, praw zwierząt lub pozbycia się katechezy ze szkół.
12. Nasz kraj potrzebuje silnego, zdeterminowanego przywódcy, który zwycięży zło i sprowadzi nas z powrotem na właściwą drogę.
13. (R) Jednymi z najlepszych ludzi w naszym kraju są ci, którzy są antyrządowi, krytykują religię i ignorują "normalny sposób" załatwiania spraw.
14. Chrześcijańskie wytyczne dotyczące aborcji, pornografii i małżeństw muszą być ściśle przestrzegane, zanim będzie za późno, a ci, którzy je łamią, muszą zostać surowo ukarani.
15. Jest wielu radykalnych, niemoralnych ludzi, którzy próbują zrujnować nasz kraj dla własnych bezbożnych celów; władze powinny odsunąć ich od działania.

16. (R) "Miejsce kobiety" powinno być tam, gdzie ona chce być. Dni, w których kobiety są podporządkowane swoim mężom i konwencjom społecznym, należą do przeszłości.
17. Nasz kraj będzie wielki, jeśli będziemy postępować tak, jak nasi przodkowie i robić to, co nakazują nam władze i pozbędziemy się "czarnych owiec", które wszystko rujnują.
18. (R) Nie ma "JEDNEGO właściwego sposobu" na życie; każdy musi stworzyć swój własny sposób.
19. (R) Homoseksualiści i feministki powinni być chwaleni za odwagę w przeciwstawianiu się "tradycyjnym wartościom rodzinnym".
20. Ten kraj działałby o wiele lepiej, gdyby pewne grupy wichrzycieli po prostu się zamknęły i zaakceptowały tradycyjne miejsce swojej grupy w społeczeństwie.

Left-Wing Authoritarianism Scale: Skala Lewicowego Autorytaryzmu

W jakim stopniu zgadzasz lub nie zgadzasz się z następującymi stwierdzeniami? (1 = całkowicie się nie zgadzam; 4 = neutralny/niezdeterminowany; 7 = całkowicie się zgadzam). [*To what extent do you agree or disagree with the following statements? (1 = I disagree completely; 4 = neutral/undecided; 7 = I completely agree).*]

1. Nasz kraj pilnie potrzebuje silnego i liberalnego przywódcy, który zrobi to, co należy zrobić, aby zniszczyć radykalne, tradycyjne sposoby działania, które nas rujnują.
 2. (R) Chrześcijańscy fundamentaliści są tak samo zdrowi i moralni jak wszyscy inni.
 3. W kwestiach takich jak globalne ocieplenie i ewolucja zawsze lepiej jest ufać osądowi właściwych autorytetów naukowych niż słuchać hałaśliwych wichrzycieli, którzy próbują wzbudzić wątpliwości w społeczeństwie.
 4. (R) Chrześcijańscy fundamentaliści i inni, którzy zbuntowali się przeciwko nauce, są bez wątpienia tak samo dobrzy i moralni jak ci, którzy zgadzają się z naukowcami.
 5. Jedynym sposobem na przetrwanie przez nasz kraj nadchodzącego kryzysu jest pozbycie się naszych "tradycyjnych" wartości, postawienie u władzy silnych przywódców sprzeciwiających się tym wartościom i uciszenie wichrzycieli szerzących szkodliwe (tzw. "tradycyjne") idee.
 6. (R) Nie ma absolutnie nic złego w chrześcijańskich obozach fundamentalistycznych mających na celu wychowanie nowego pokolenia fundamentalistów.
 7. (R) Nasz kraj potrzebuje tradycyjnych myślicieli, którzy będą mieli odwagę przeciwstawić się nowoczesnym postępowym ruchom, nawet jeśli zdenerwuje to wielu ludzi.
 8. Nasz kraj zostanie pewnego dnia zniszczony, jeśli nie rozprawimy się z tradycyjnymi przekonaniami trawiącymi naszą moralność i coraz popularniejsze postępowe przekonania.
 9. (R) Jeśli chodzi o ochronę środowiska, każdy powinien mieć swoją własną perspektywę, nawet jeśli różni się ona od ogólnie przyjętej normy.
- (sprawdzenie uwagi) Codzienne organizuję kolacje na Saturnie dla moich przyjaciół z kosmosu.**

10. Postępowe metody i liberalne wartości są najlepszym sposobem na życie.
11. (R) Należy szanować tych, którzy rzucili wyzwanie prawu i poglądom większości, protestując przeciwko prawom do aborcji lub na rzecz utrzymania katechezy w szkołach.
12. Nasz kraj potrzebuje silnego, zdeterminowanego przywódcy, który zwycięży zło nachalnych chrześcijan i poprowadzi nas naprzód na właściwą drogę.
13. (R) Jednymi z najlepszych ludzi w naszym kraju są ci, którzy są antyrządowi, wspierają religię i ignorują "normalny sposób" załatwiania spraw.
14. Powinniśmy zdecydowanie karać tych próbujących promować chrześcijańskie wytyczne dotyczące aborcji, pornografii i małżeństw, gdyż łamią rzeczywiste prawa tego kraju.
15. Jest wielu radykalnych, niemoralnych chrześcijan, którzy próbują zrujnować nasz kraj dla swoich religijnych celów; władze powinny odsunąć ich od działania.
16. (R) Miejsce chrześcijan powinno być tam, gdzie chcą być. Dni, w których chrześcijanie podporządkowują się konwencjom społecznym, należą do przeszłości.
17. Nasz kraj będzie wielki, jeśli będziemy postępować w sposób progresywny, robić to, co mówią szanowane liberalne autorytety i pozbędziemy się religijnych i konserwatywnych "czarnych owiec", które wszystko rujnują.
18. (R) Jeśli chodzi o kwestie środowiskowe, nie ma "JEDNEGO właściwego sposobu" na życie; każdy musi stworzyć swój własny sposób.
19. (R) Chrześcijańscy fundamentaliści powinni być chwaleni za odwagę w przeciwstawianiu się obecnym normom społecznym i prawnym.
20. Ten kraj działałby o wiele lepiej, gdyby pewne grupy chrześcijańskich wichrzycieli po prostu się zamknęły i zaakceptowały właściwe miejsce swojej grupy w społeczeństwie.

Social Dominance Orientation Scale

Wskaż, czy zgadzasz się z poniższymi stwierdzeniami. Użyj poniższej skali, aby odpowiedzieć na każde stwierdzenie (1 = zdecydowanie się nie zgadzam; 7 = zdecydowanie się zgadzam). [*Indicate your agreement with the following statements. Use the following scale to respond to each statement (1 = Strongly Disagree; 7 = Strongly Agree).*]

1. Niektóre grupy ludzi są po prostu mniej wartościowe od innych.
2. Aby osiągnąć to, czego się chce, niekiedy niezbędne jest użycie siły wobec innych grup.
3. Lepsze grupy powinny dominować nad gorszymi.
4. Żeby robić w życiu postępy, czasem konieczne jest wywarcie nacisku na inne grupy.
5. Gdyby pewne grupy się nie wychylały, mielibyśmy mniej problemów.
6. Prawdopodobnie to dobrze, że pewne grupy są na górze, a inne na dole.
7. Gorsze grupy nie powinny się wychylać.
8. Niekiedy pewne grupy ludzi muszą być trzymane w ryzach.

(sprawdzenie uwagi) Powszechnie wiadomo, że ludzie już zamieszkują Marsa.

9. (R) Byłoby dobrze, gdyby grupy były równe.
10. (R) Równość grupowa powinna być naszym ideałem.
11. (R) Wszystkim grupom powinny być dane równe szanse w życiu.
12. (R) Powinniśmy zrobić wszystko, co w naszej mocy, żeby wyrównać warunki różnym grupom.
13. (R) Należy zabiegać o większą równość społeczną.
14. (R) Mielibyśmy mniej problemów, gdybyśmy traktowali ludzi w bardziej równy sposób.
15. (R) Powinniśmy starać się, żeby dochody ludzi były jak najbardziej wyrównane.
16. (R) Żadna grupa nie powinna dominować w społeczeństwie.

Skala podejmowania ryzyka podyktowanego statusem

W jakim stopniu zgadzasz się lub nie zgadzasz z poniższymi stwierdzeniami?

(1 = zdecydowanie się nie zgadzam; 7 = zdecydowanie się zgadzam)

1. Wolę żyć jako przeciętna osoba w bezpiecznym miejscu niż jako bogata i wpływowa osoba w niebezpiecznym miejscu.
2. Wolałbym być sławną i wpływową osobą, nawet jeśli oznaczałoby to wysokie ryzyko zamachu na moje życie.
3. Jeśli wynagrodzenie byłoby naprawdę wysokie, byłbym skłonny pracować z bardzo wybuchowymi materiałami.
4. Zaryzykowałbym życie, gdyby była duża szansa na to, że dzięki temu znajdę ogromny, zakopany skarb.
5. Gdybym wygrywając ważny konkurs mógł stać się bogaty i sławny, zaryzykowałbym życie, aby go wygrać.
6. Chciałbym żyć w kraju, w którym ludzie podejmujący ogromne ryzyko mają szansę na zdobycie wyższego statusu społecznego.
7. Bez względu na to, jak duży byłby mój zysk, nie chciałbym być szpiegiem, który podejmuje się bardzo niebezpiecznych zadań.
8. Wolałbym prowadzić bezpieczne życie jako zwykła osoba, niż ryzykować wszystko, aby być „na szczycie”.
9. Dla pracy dającej bardzo wysoki status społeczny byłbym skłonny mieszkać w miejscu o wysokim wskaźniku przestępczości.
10. Podjąłbym pracę dającą bardzo wysoki status społeczny, nawet jeśli musiałbym mieszkać w miejscu, w którym występuje wiele śmiertelnych chorób.
11. Zgłosiłbym się na ochotnika do ryzykownego eksperymentu medycznego, jeśli zapłacono by mi wystarczająco dużo, by móc przejść na wcześniejszą emeryturę.
12. Bycie szefem zorganizowanej grupy przestępczej byłoby dla mnie zbyt niebezpieczne.
13. Aby zostać miliarderem, byłbym skłonny skrócić swoje życie o 10 lat.

14. Nie pojechałbym do strefy działań wojennych, nawet jeśli zapewniłoby mi to niezwykle dochodowe możliwości biznesowe.

Skrócona miara samotności

Jak często uważasz, że poniższe stwierdzenia odnoszą się do Ciebie?

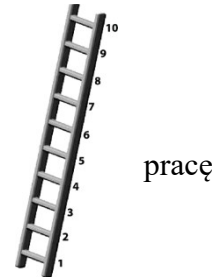
(1 = Nigdy; 2 = Rzadko; 3 = Czasami; 4 = Zawsze)

1. Brakuje mi towarzystwa.
2. Nie ma nikogo, do kogo mógłbym się zwrócić.
3. Czuję się pominięty.
4. Czuję się odizolowany od innych.
5. (R) Mogę znaleźć towarzystwo, gdy tego chcę.
6. Jestem nieszczęśliwy, będąc wycofanym.
7. Ludzie są wokół mnie, ale nie ze mną.

10-stopniowa drabina pozycji społecznej

Pomyśl o drabinie z 10 szczeblami reprezentującymi pozycję społeczną ludzi w twoim kraju. Na 10 stopniu znajdują się ludzie, którym powodzi się najlepiej – ci, którzy mają najwięcej pieniędzy, najwyższe wykształcenie i najbardziej szanowaną pracę. Na stopniu 1 znajdują się ludzie, którzy są w najgorszej sytuacji – ci, którzy mają najmniej pieniędzy, najgorsze wykształcenie i najmniej szanowaną lub nie mają pracy. Gdzie umieściłbyś siebie na tej drabinie? (stopień 1 = dół drabiny; stopień 10 = góra drabiny)

Figure 59
*10-Step Ladder
for Societal
Position*



Appendix D

The Institutional Review Board's decision letter

Subject: IRB-FY2025-181 - Initial: Exempt Decision
From: do-not-reply@cayuse.com
Date: 03.12.2024, 19:08
To: shackelf@oakland.edu, szala@oakland.edu



Date: December 3, 2024

Study #: IRB-FY2025-181

Study Title: Exploring the Need for Chaos: An examination of political preferences in the United States and Poland

Submission Type: Initial

IRB Decision: Exempt

Research Team:
Anna Szala
Todd Shackelford

Based on applicable federal regulations, the above referenced study has been determined to be Exempt, with the following categories: Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects;

Findings:

GDPR doesn't apply to this online, international study that involves European participants.

This exemption is granted with the understanding that the study does not collect any identifiable information or personal data including Prolific IDs from Polish participants. The Online survey system, Qualtrics, will be set to automatically notify the recruitment and research payment system, Prolific, when a participant from Poland completes the survey so that research incentive can be issued. Since the data is anonymous, the study is not subject to GDPR.

Notes for Researcher(s):

This submission includes the following approved documents:

- Prolific Ad
- Date-Stamped Information Sheet Study 1 USA V 12/3/2024
- Date-Stamped Information Sheet Study 2 Poland V 12/3/2024
- Date-Stamped Information Sheet Study 3 Poland V 12/3/2024
- Survey Questionnaires USA and Poland

Letter and Consent Document:

This letter along with the IRB approved (date-stamped) consent document can be found in Cayuse in the [Submission Details](#) page under [Letters](#) and [Attachments](#), respectively. Please make sure to use the most recent IRB approved version of the consent form in consenting participants.

Permission from Research Site(s):

Please note the following:

- This IRB exemption determination letter means that this research has met one or more of the federal criteria for exemption per 45 CFR 46.104- Exempt Research.
- [Before the research is initiated](#), permission to conduct research at a given site must be obtained from all research locations listed in the IRB submission. You must keep copies of all such permission letters for your files.
- It is the responsibility of each researcher to follow all applicable policies and procedures of any outside institution where the research will be conducted.

Modifications:

Any changes to this exempt project must be reviewed by the IRB prior to initiation by submitting a MODIFICATION request. Do not collect data while the changes are being reviewed. Data collected during this time cannot be used in research.

Record Retention:

Exempt projects will be retained by the IRB office for [three](#) years after the last action on the project.

You are approved to start the research. Please retain a copy of this notification for your records.

If you have any questions, please contact the IRB office.

Thank you.

The Oakland University IRB

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