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Philadelphia College of Osteopathic Medicine
School of Professional and Applied Psychology
Department of Clinical Psychology

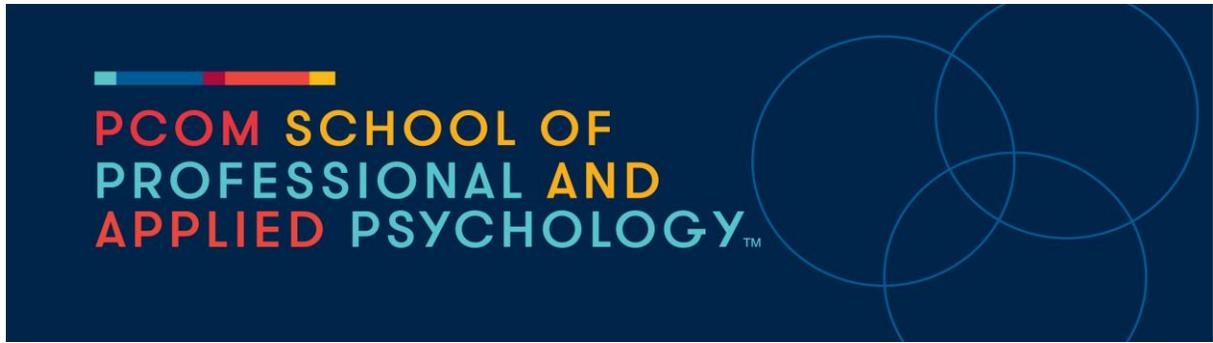
COGNITIVE DISTORTIONS, PARTISAN STRENGTH, AND
AUTHORITARIANISM: EXPLORING POTENTIAL FACTORS CONTRIBUTING
TO
THE CURRENT PARTISAN DIVIDE

By Brooke C. Singer

Submitted in Partial Fulfillment of the Requirement for the Degree of

Doctor of Psychology

January 19th, 2022



DISSERTATION APPROVAL

This is to certify that the thesis presented to us by Brooke Singer

on the 3rd day of June, 2021, in partial fulfillment of the requirements for the degree of

Doctor of Psychology, has been examined and is acceptable in both scholarship and literary quality.

COMMITTEE MEMBERS' SIGNATURES

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Abstract

Over the past two decades, the number of Americans on the extremes of the political spectrum has more than doubled, and politically motivated aggression has increased. In addition, an unprecedented division has emerged between the left and right on fundamental political values and animosity continues to rise. The purpose of this study was to explore factors that potentially contribute to political polarization and animosity in the United States, including authoritarianism, strength of partisan commitment, and distorted thinking. The participants for this study comprised 513 individuals from the general population of the United States recruited from online platforms. Participants completed an online questionnaire that included the Inventory of Cognitive Distortions (ICD), the Left-Wing Authoritarian Scale (LWA Scale) or the Right-Wing Authoritarian Scale (RWA Scale), and the Buss-Perry Aggression Questionnaire (BPAQ), as well as demographic questions. Results indicated that distorted thinking (scores on the ICD) predicted aggression levels; however, partisan strength and authoritarianism did not. Moreover, ANOVA analyses revealed no significant differences in endorsement of the frequency of cognitive distortions among individuals who identified as Moderate, Very Left Wing, and Very Right Wing or between individuals who identified as Independent, Democrat, and Republican. This study furthers the field's understanding of the role that distorted thinking plays in our charged political atmosphere and provides insight into how the field might work to reduce political tension through targeting distorted thinking in the general population.

Key words: cognitive distortions, ICD, partisanship, extremism, authoritarianism, aggression

Chapter 1: Introduction

Statement of the Problem

Over the past two decades, the number of Americans on the extremes of the political spectrum has more than doubled, while the percentage of individuals in the center of the distribution (moderates) has decreased (Pew Research Center, 2014). This shift entails most Democrats moving to the left (more liberal) and most Republicans moving to the right (more conservative), with less overlap between the parties. In addition, the political values of Democrats and Republicans are now further apart ideologically than at any point in more than two decades, with these divisions deepest among those who identify as most engaged in the political process (Pew Research Center, 2014). According to Hetherington and Weiler (2009), *authoritarianism* has become one of the main political forces contributing to this divide. The study of authoritarianism began as a means of theorizing about what makes a person prejudiced, dogmatic, and intolerant of others (Adorno et al., 1950). Authoritarianism was first identified in right-wing conservatives, who were characterized by obedience to authority, moral absolutism, prejudice, intolerance, and punitiveness towards dissimilar groups (Adorno et al., 1950). Although the construct of authoritarianism was believed to be more likely to attract political conservatives than political liberals, recent research has shown that it also exists to the left of center on the political spectrum (Conway et al., 2018). Left-wing authoritarianism features the same reliance on simple authority and psychological rigidity as their conservative counterparts (Conway et al., 2018). This construct, however, remains controversial in the fields of social and political psychology.

In addition to a more prominent partisan divide with unprecedented differences on fundamental political values, there has also been a significant increase in negative views

of opposing parties on each extreme of the political spectrum (Pew Research Center, 2017). Negative views of the opposing party have continued to increase; 81% of both Democrats and Republicans view the opposite party in unfavorable terms (Pew Research Center, 2017). A 2019 study by the Pew Research Center found that the share of Republicans who give Democrats a “cold” rating had risen 14% since 2016, and some 57% of Democrats return the antipathy. A majority of Democrats (55%) also endorsed that the Republican Party made them “afraid,” with 49% of Republicans expressing the same fear of the Democratic Party (Pew Research Center, 2017). Moreover, 47% of Democrats and 46% of Republicans harbored anger towards the opposing party, and 58% of Democrats and 57% of Republicans expressed a mutual frustration (Pew Research Center, 2016). As for the perception that the opposition posed a threat, the 2016 study found that 45% of Republicans viewed Democratic policies as a threat, an increase from 37% in 2014. Democrats included in the study mirrored this result; 41% perceived the Republican Party’s policies as a threat, an increase of 10% from 2014. In a more recent national survey, most Democrats (75%) characterized Republicans as more closed-minded than other Americans, which held true for Republicans’ view of Democrats (64%; Pew Research Center, 2020). Both Republicans and GOP-leaning Independents (94%) and Democrats and sympathetic Independents (92%) perceived strong conflicts between the two parties (Pew Research Center, 2020).

Furthermore, research has also revealed an increasing inclination toward violence and aggression against opposing parties. In a 2019 study by Kalmoe and Mason, 15% of Republicans and 20% of Democrats agreed that the country would be better off if large numbers of opposing partisans “just died.” Moreover, 9% of both Democrats and

Republicans agreed that violence would be acceptable if their opponents won the 2020 presidential election (Kalmoe & Mason, 2019). Though these percentages are small, they represent huge numbers of citizens. Violence did ultimately erupt after the 2020 presidential election, in the form of the January 6, 2021 assault on the Capitol. In addition to the acceptance of violence in political disputes, violent acts against out-groups are increasingly prevalent in our society. Studies of Federal Bureau of Investigation data showed that hate crimes rose significantly during the past few years. According to data collected by the FBI, 2019 was the deadliest year for *Domestic Violent Extremism* since the Oklahoma City bombing in 1995 (2020). According to a 2020 Homeland Security Assessment, Domestic Violent Extremists presented the most persistent and lethal threat to the US. Both far-left and far-right attacks hit new peaks in 2020, with the number of far-right incidents surpassing far-left incidents. According to the Center for Strategic and International Studies, more terrorist plots and attacks were reported in 2020 than in any year since they began collecting data (2021). These trends can be explained by the *Ideological Conflict Hypothesis* (ICH), which emphasizes how individual across the political spectrum become prejudice against ideologically dissimilar groups (Brandt et al., 2014).

Another factor potentially contributing to the current political atmosphere in the US is the intensity of partisanship. Partisanship is defined as a deep psychological attachment to a particular party, which may include a latent bias that ensures an individual's support of that party and policies associated with it (Cohen, 2003). Partisanship is evaluated along two dimensions: the strength and the direction of the attachment (Settle et al., 2009). Strong partisanship is often accompanied by disdain for

the political opposition or out-group (Lelkes & Westwood, 2017). According to Huddy and Bankert (2017), persons with strong partisan identification often act as a means of defending or enhancing their party's political position, because their partisan identification becomes internalized to the point that the party's failures feel like personal failures. Strong partisanship has also been associated with increased *cognitive rigidity* (Zmigrod et al., 2020).

Zmigrod et al. (2020) determined that individuals who identify more intensely with a political group or ideology score higher in the underlying psychological trait of mental rigidity across three independent assessments of cognitive flexibility. *Mental rigidity*, also known as cognitive rigidity, has been defined as a lack of flexibility and openness to considering ideas from different perspectives (Zmigrod et al., 2019). Cognitive rigidity also involves a tendency to develop and persevere in a particular cognitive pattern even in situations in which the pattern is no longer effective (Morris & Mansell, 2018). Cognitive rigidity and ideology are explained by two conflicting hypotheses. The *rigidity-of-the right hypothesis* asserts that cognitive rigidity is characteristic of right-wing individuals, which has been the dominant perspective for several decades (Adorno et al., 1950). It is only recently that the *ideological extremity hypothesis*, which suggests that individuals on both political extremes (left/liberals and right/conservatives) are less flexible in their thinking compared to moderates, emerged in the research (Greenberg & Jonas, 2003). Individuals who have the strongest beliefs and affiliations on both the left and right of the political divide have displayed high levels of mental rigidity (Zmigrod et al., 2020). Using multiple neuropsychological tests, Zmigrod et al. (2020) found that individuals who endorsed extreme attachment to either the

Democratic Party or the Republican Party exhibited more mental rigidity and less cognitive flexibility. Regardless of the ideology, deficits in mental processes governing the ability to switch between different concepts and tasks have been linked to the intensity with which individuals attach themselves to political doctrines (Zmigrod et al., 2020). Mental rigidity has also been linked to extreme attitudes in religiosity, nationalism, and willingness to resort to violence (Zmigrod & Robbins, 2018). Individuals with low cognitive flexibility tend to see the world in black-and-white terms, a type of *cognitive distortion* (Zmigrod et al., 2019).

Cognitive distortions were first defined as identifiable errors in thinking that predictably occur when processing information (Beck, 1967). In Aaron Beck's model, cognitive distortions result from a reversion to a "primitive information processing system" that is activated through an interaction with "personal and environmental factors" (Beck & Weishaar, 1990, p. 24). According to cognitive theory, one's biased subjective evaluation of early life experiences shape and maintain fundamental beliefs known as *schemas* (Beck, 1970). Schemas play an important role in how individuals process and assign meaning to stimuli in the environment, and what information in the environment individuals attend to and remember. They also play a role in functional/dysfunctional cognitive, emotional, and behavioral patterns (Beck, 1964). According to *cognitive theory*, cognitive distortions serve to support one's core beliefs and assumptions (Yurica & DiTomasso, 2005). These habitual ways of thinking are reinforced by generalizing, omitting, and distorting stimuli (Yurica & DiTomasso, 2005). Evolutionary theory suggests that cognitive distortions developed as adaptive reactions to perceptions of threats to one's safety or belief system (Burns, 2008; Gilbert, 1998).

According to Beck (1999), perceived threats to the self may perpetuate anger responses as a means of protecting one's concept of self. Cognitive distortions have been shown to predict *internalizing* and *externalizing behavior* (Barriga et al., 2008; Bruno, 2010). Internalizing behavior involves inner distress, such as depressive or anxiety symptoms for an individual; in contrast, externalizing behavior involves outward conflicts with others, such as aggressive, disruptive, or antisocial behaviors (Achenbach & McConaughy, 1997). Externalizing behaviors are more visible, and their consequences are more overt (Dekovic et al., 2004). Self-serving cognitive distortions, including catastrophizing, minimizing, and mislabeling have been shown to be the most significant predictors of externalizing problems (Bruno, 2010). Within the externalizing domain, self-serving distortions have been linked to delinquent and aggressive behavior (Barriga et al., 2008). Latella-Zakhireh (2009) found that the cognitive distortions of magnification, externalization of self-worth, and perfectionism were positively associated with the degree of anger endorsed on the *Mahan and DiTomasso Anger Scale* by a non-clinical population. Moreover, a specific relationship was found between cognitive distortions and manifestations of anger, including tendencies toward argumentativeness (the propensity to argue, with consequent job and relationship problems) and *emotional dyscontrol* (the tendency to lose control as a result of angry feelings or thoughts; Latella-Zakhireh, 2009). Cognitive distortions are a form of rigid thinking or mental rigidity, which have also been linked to a willingness to engage in violence and aggression (Zmigrod & Robbins, 2018).

Purpose of the Study

The rise of ideological polarization, the divergence of political views to ideological extremes, intolerance of competing views, partisan animosity, and violence has made it imperative to investigate factors contributing to our increasingly tense political climate. Although numerous studies have shown that individuals of different political affiliations think differently, a literature review revealed no research investigating the role of cognitive distortions in the context of political party affiliation, ideological partisan strength, and aggression. The purpose of this study was to determine whether a manifest difference exists in the frequency of cognitive distortions by individuals of different political party affiliations and degree of partisan identification, with cognitive distortions operationalized as the total score on the *Inventory of Cognitive Distortions* (ICD). The study specifically examined how the frequency of cognitive distortions differed between participants who identified as more extreme in their ideological partisanship (*Very Left Wing* and *Very Right Wing*) compared to those who identified as *Moderate* in their political partisanship. The study additionally compared different political partisanship regarding their frequency of engagement in cognitive distortions. The construct of authoritarianism was also investigated in the context of political affiliations/ideologies to gain insight into the rise in political animosity in our society. This study explored whether extreme partisan strength, authoritarianism, and frequency of cognitive distortions could predict aggression. Investigating cognitive distortions in the context of political affiliations and ideology may expand the field's understanding of the role that distorted thinking plays in our current political atmosphere. The results of this study will provide the field with further insight into how it might work

to reduce political tension and violence in America's current polarized political environment.

Hypotheses

Hypothesis I: Self-reported authoritarianism (as measured by either the LWA Scale or RWA Scale total score), self-identified partisan strength, and endorsement of frequency of cognitive distortions (as measured by the ICD total score) will predict in a significant and positive way level of aggression (as measured by the BPAQ total score) for both right- and left-wing individuals.

Hypothesis II: Individuals who self-identify as *Very Left Wing* and *Very Right Wing* will endorse significantly higher frequency of cognitive distortions (as measured by the ICD total score) compared to individuals that self-identify as "*Moderates*."

Hypothesis III: A significant difference in endorsed frequency of cognitive distortions (as measured by the ICD total score) will be found between individuals of different political party affiliations (e.g., Republican, Democrat, Independent, Democratic Socialist, Socialist, Communist, Fascist/National Socialists, or Other Party/Affiliation).

Chapter 2: Review of the Literature

Political Ideology in the United States

Ideology has been conceptualized as “the most elusive concept in the whole of social science” (McLellan, 1986, p. 1). The field of social psychology has long struggled to come to a consensus regarding the most accurate definition of ideology (Jost et al., 2009). Erikson and Tedin (2003) defined ideology as “a set of beliefs about the proper order of society and how it can be achieved” (p. 64). It has also been defined as a “shared framework of mental models that groups of individuals possess” that “provides an interpretation of the environment and how that environment should be structured” (Denzau & North, 2000, p.24). Ideology is understood to communicate shared beliefs, values, and opinions of an identifiable group, class, or society (Knight, 2006). Ideologies interpret the world by making assumptions about the current state of affairs and future possibilities (Jost et al., 2009). In the United States, citizens classify themselves along a political spectrum consisting of liberal, moderate, and conservative ideologies also known as “the left,” “the political middle,” and “the right,” respectively (Motyl et al., 2014). Left-wing ideologies are distinguished by their socially progressive viewpoints with values of equality, social justice, and the necessity of government acting to meet the people’s needs at its core (Feldman & Johnston, 2014). Right-wing ideologies are characterized as conservative, promoting traditional values over change (Feldman & Johnston, 2014). Many liberals argue that their political prescriptions enhance individual liberty and promote American values (Heywood, 2012). Conversely, many conservatives argue that their philosophy of small government extends human, social, and civil rights (Heywood, 2012). According to a 2019 study, 55% of Americans held positive views of

liberalism, while 60% held positive views of conservatism (Pew Research Center).

Moderates are generally characterized as steering a centrist course, advocating various aspects of both liberalism and conservatism and capable of leaning right or left on the political spectrum.

Political Affiliations in the United States

In addition to political ideologies, the United States is considered a two-party political system, comprising the Democratic Party and the Republican Party. Although these are the two dominant parties, several “third parties” have risen to popularity in the United States. Though there are a multitude of opinions about what each party represents, for the purposes of the current study each party’s platform is presented verbatim, directly from their official website, without comment on its veracity. In addition, because of obvious limitations, the current study will attempt to be impartial in selection of the most representative passages and direct the reader to the specific party websites for a complete statement of party platforms.

Democratic Party.

According to the Democratic National Committee (2016), the Democratic Party is a left-leaning (liberal) party distinguished by its progressive social positions and belief that “cooperation is better than conflict, unity is better than division, empowerment is better than resentment, and bridges are better than walls” (p.1). According to its platform, the Democratic Party emphasizes raising incomes and “restoring economic security for the middle class...expanding access to affordable housing and protecting/expanding Social Security...promoting competition by stopping corporate concentration...ending systematic inequalities,” and “combating climate change” (pp. 3-11).

According to a June 2020 national survey, 31% of Americans self-identified as Democrats (Gallup, 2020). In a study conducted by the Pew Research Center (2019), Democrats and Democratic-leaning Independents were more likely than Republicans and GOP-leaning Independents to express concern over climate change, economic inequality, and racism. Most Democrats and Democratic-leaning Independents included in the study (47%) identified as liberals, with 15% describing their views as “very liberal” (Pew Research Center, 2019), compared to moderates (38%) and conservatives (14%).

Republican Party.

According to the Republican Party, the GOP is a right-leaning (conservative) party that considers the establishment of a pro-growth tax code “a moral imperative...private investment as a key driver of economic growth and job creation,” and emphasizes the importance of international trade and “free financial markets” (GOP, 2016, pp. 1-3). The Republican Party’s platform asserts that “competitiveness equals jobs,” and that this “equation governs our policies regarding U.S. corporations in the global economy, with private investment as a key driver of economic growth and job creation” (p. 2). According to their political platform, the party “supports the development of all forms of energy that are marketable in the free economy without subsidies including coal, oil, natural gas, nuclear power, and hydropower” because they are the “pathway to an independent energy source” (p. 20).

A 2019 Pew Research Center study found that Republicans were more likely to view crime, illegal immigration, and drug addiction as critical problems that need to be addressed. A June 2020 national survey found that 25% of Americans self-identified as Republican (Gallup, 2020). There are additionally several minor parties that present their

own platforms and candidates for the presidency, although the Democratic and Republican parties have dominated American politics since 1852.

Self-Described Independents.

Political Independents are voters who do not identify as members of any political party. A June 2020 national survey found that 40% of Americans self-identified as Independents (Gallup, 2020). An overwhelming majority of Independents (81%) “lean” toward either the Republican Party or the Democratic Party, despite not identifying with either party (Pew Research Center, 2018). According to a recent Gallup study, 38% of the individuals in their national survey identified as Republicans or Republican-leaning Independents, while 50% identified as Democrats or Democratic-leaning Independents (2020). More Independents describe their political views as moderate (43%) than conservative (29%) or liberal (24%) (Pew Research Center, 2018). Independents who do not lean toward a party have demonstrated a likelihood to hold unfavorable opinions (37%) of both the Democratic and Republican Parties (Pew Research Center, 2018).

Socialist Party USA.

According to the Socialist Party USA, their party stands for “a fundamental transformation of the economy, focusing on production for need, not profit” (2020, p.1). The party additionally advocates for “the right of all workers to organize, for worker control of industry through the democratic organization of the workplace, for the social ownership of the means of production and distribution, and for international solidarity among working people based on common opposition to global capitalism and imperialism” (p. 2). The Socialist Party USA strives to “establish a radical democracy that places people's lives under their own control” within a “classless, feminist, socialist

society free of racism, sexism, homophobia or transphobia, in which people cooperate at work, at home, and in the community” and conceptualizes socialism as “a new social and economic order in which workers and consumers control production and community residents control their neighborhoods, homes, and schools” (p. 11) .

A recent study conducted by the Pew Research Center (2019) found that 73% of Americans agreed that corporations have “too much power.” Research has shown that Americans’ definition of socialism has changed over time. Although many Americans still view socialism as entailing government control of the economy, modified communism, and restrictions on freedoms, an increasing number of Americans now view it as a movement advocating equality (23%, up from 12% in 1949) and government provision of benefits for all (10%, up from 2% in 1949) (Newport, 2018). According to the Pew Research Center, 42% of Americans included in their study expressed positive impressions of socialism (Pew Research Center, 2019). More than eight-in-ten Republicans (84%) held a negative view of socialism, with a 63% majority expressing a very negative view, but nearly two-thirds of Democrats (65%) endorsed a positive view of socialism, with 14% holding a very positive view (Pew Research Center, 2019).

Democratic Socialists of America.

Socialism re-entered the nation’s political discourse over the past several years due to the rise in popularity of avowed Democratic Socialists, such as Bernie Sanders and Alexandria Ocasio-Cortez (Newport, 2018). *Democratic Socialists of America* (DSA) advocate certain socialist ideals through “the democratic process” and define Democratic Socialism as a political movement that believes that the “economy and society should be run democratically to meet public needs for all, not to make profits for a few” (2018,

para. 1). The DSA consider themselves socialists because they reject “an international economic order sustained by private profit, alienated labor, race and gender discrimination, environmental destruction, and brutality and violence in defense of the status quo” and profess to advocate reforms that will “weaken the power of corporations and increase the power of the working people ” (DSA, 2020, para. 4). Democratic Socialists of America currently have approximately 66,000 members, up from 24,000 in 2017 (DSA, ND). According to a 2019 Gallup survey, since 2010, capitalism (51%) and socialism (49%) have settled into roughly equal popularity among young adults. Despite their growing popularity, both Socialists and Democratic Socialists remain underrepresented in research in the U.S.

Communist Party USA.

Communism is another left-wing political philosophy that purports to share many of the underlying principles of socialism and opposes capitalism, which it denounces as “a system by which the U.S. corporations use their economic, political, and military power of the government to exploit workers, pillage the environment, and corrupt governments around the world” (CPUSA, 2014, para 3-5). The CPUSA argues that “the only strategy capable of defeating the extreme right’s implicit and explicit drive toward fascism is the widest possible organized unity of all class and social forces” (p. 41). CPUSA advocates a society “where working people, those who produce all the riches of society, will have political power and will collectively decide priorities for investment and distribution of our nation’s wealth, for education, health care, housing, nutrition, recreation, arts, culture, and science in a clean, non-polluting economy” (CPUSA, 2014,

para. 6; Floyd, 2020, para. 2). As of 2017, membership in the CPUSA was approximately 5,000 (Gomez, 2017).

Each political affiliation listed above share similarities and differences. According to Brandt et al. (2014), those differences prompt people across the political spectrum to vehemently oppose ideologically dissimilar viewpoints; therefore, one would expect such antipathy to exist between members of more dissimilar political affiliations, although this may not always be the case.

National Socialist/Fascist Movements

According to the Antidefamation League (2020), the National Socialist Movement is the largest “far-right neo-Nazi group” of several avowed Nazi organizations in the United States, with an estimated 400 members in 32 states. The party idolizes Adolf Hitler and Nazi Germany. The group identifies 25 points in their party manifesto as means of “fighting for civil rights and self-determination of Whites in America” including a core belief in “promotion of White separation” (The National Socialist Movement, 2020, p. 1). The party demands a National Socialist government through which the nation becomes “one bound together by shared race, culture, and identity” and that “all non-White immigration must be prevented and all non-Whites currently residing in America be required to leave the nation forthwith and return to their land of origin, peacefully or by force” (p. 2). The National Socialist Movement has declared its goal to “be the sole political party of the nation” (p.3).

Antifa.

According to the Antidefamation League, the antifascist protest movement known as *Antifa* gained new prominence in the U.S. after the white supremacist “Unite the

Right” rally in Charlottesville, VA in 2017 (ND). According to the *New York Times*, Antifa is “an organization without a leader, a defined structure, or membership roles” but rather a “movement of activists whose followers share a philosophy of tactics” (Bogel-Burrough & Garcia, 2020, para. 2-3). The movement campaigns against actions viewed “as authoritarian, homophobic, racist, or xenophobic” (Bogel-Burrough & Garcia, 2020, para 5). Antifa is made up of “a loose collection of groups, networks, and individuals who believe in active, aggressive opposition to far right-wing movements” by means of direct confrontation (Antidefamation League, ND, para. 2). Most Antifa members derive from the “anarchist movement or from the far left,” though since the 2016 presidential election, some people with more mainstream political backgrounds began to join their ranks (Antidefamation League, ND, para. 2).

Other Party Affiliations.

Other third-party political affiliations that may be endorsed in the “Other Party/Affiliation” option in the current study include members of the *Independent American Party*, the *Libertarian Party*, the *Green Party*, and the *Constitution Party*. A concise survey of these parties follows.

The Independent American Party states that their mission is to “promote respect for life, liberty, and property; strong traditional families; patriotism; and individual, state and national sovereignty, with a strong reliance on the Declaration of Independence and allegiance to the Constitution of the United States of America” (IAP, 2016, para. 2).

The Libertarian Party platform states that they “hold that all individuals have the right to exercise sole dominion over their own lives and have the right to live in whatever manner they choose, so long as they do not forcibly interfere with the equal right of

others to live in whatever manner they choose” (p.1). They also advocate a radically limited size and scope of government (Libertarian National Committee, 2018, p.1).

The Green Party platform proposes a “vision of our common good that is advanced through independent politics free from the control of corporations and big money, and through a democratic structure and process that empowers and reaches across lines of division to bring together our combined strengths as a people,” and “ecological and economic sustainability, balancing the interests of a regulated market economy and community-based economics with effective care for the Great Economy in which we are embedded: the ecosystems of the Earth” (The Green National Committee, 2019, p. 4).

The Constitution Party platform aims to “restore American jurisprudence to its Biblical foundations and to limit the federal government to its Constitutional boundaries” (The Constitution Party, 2012, p.1).

Political Polarization

The U.S. is home to more political parties than any other country in the world. Over the past two decades, there has been a significant rise in political polarization, a growing inflexibility of positions and attitudes, and a divergence of political beliefs to ideological extremes (Pew Research Center, 2014). According to a 2014 survey conducted by the Pew Research Center, the number of Americans on the extremes of the political spectrum has more than doubled, as the percentage of individuals in the center of the distribution (moderates) has continued to decrease. This shift represents most Democrats moving to the left (more liberal) and most Republicans moving to the right (more conservative), with less overlap between the parties (Pew Research Center, 2014). In this study, approximately 92% of Republicans fell to the right of the median (an

increase from 64% in 1994), while 94% of Democrats fell to the left of the median, an increase from 70% in 1994 (Pew Research Center, 2014). In addition, the study found that most Republicans and Democrats were further apart ideologically than at any point in more than two decades, and these divisions were the deepest among those who identified as being more engaged in the political process (Pew Research Center, 2014). Conservatives and liberals have declared largely different views on issues related to the environment/climate change, immigration, gun control, race, sexual orientation, gender equality, national security, and healthcare (Pew Research Center, 2017). A national survey conducted by the Pew Research Center tracked 10 measures of political values since 1994 and determined that the average partisan gap on these political values increased from 15 to 36 percentage points (2017). From 2013 to 2015 alone, the partisan gap in political values increased by three points to 36 points, which is considered a modest increase over a 2-year period; however, the cumulative percentages are a substantial difference from 1994 (Pew Research Center, 2017). In 2009, a 19-point gap separated the views of Democrats and Republicans on racial discrimination; by 2017, that gap had increased to 50 points (Pew Research Center, 2017). In a more recent study conducted by the Pew Research Center, the average partisan gap was 39 percentage points across 30 political values encompassing positions on guns, race, immigration, foreign policy, and other issues (2019). An individual's identification with a particular party and ideology based on shared values often becomes a part of their social identity.

Social Identity Theory.

For the current study, various individuals were included from different political ideologies and party affiliations. In this circumstance, *Social Identity Theory* (SIT)

became a valuable means to address the ways in which an individual's self-concept is influenced by group memberships, such as political partisanship (Tajfel et al., 1971; Turner & Tajfel, 1986). Social Identity Theory, first developed by Henri Tajfel and colleagues, holds that individuals derive their self-concept from knowledge of their membership in a particular social group (Tajfel, 1978; Tajfel & Turner, 1979). Social identities are believed to exert the most influence when individuals consider their membership as central to their overall self-concept and feel strong emotional ties to the group (Tajfel, 1978). The theory claims that after individuals internalize their membership in a group, they attempt to maximize differences between the group with whom they identify (in-group) and an opposition group (out-group) (Tajfel, 1978; Tajfel & Turner, 1979; Turner & Tajfel, 1986). The SIT also postulates that members of an in-group often seek negative aspects of an out-group in order to enhance their group self-image (Tajfel, 1978). The first stage of the SIT is *social categorization*, which includes categorizing people by using heuristics, or mental shortcuts, to better understand the social environment (Tajfel & Turner, 1979). Through categorizing in this way, individuals define appropriate behaviors or norms for each group (Tajfel & Turner, 1979). Hogg et al. (2007) note that "group identification may be a particularly efficient and immediate way to reduce or fend off uncertainty" (p. 136). Through strong group identification, one can acquire consensual validation and prototypes (heuristics) that define who one is and what one should value (Hogg et al., 2007). These heuristics help to make fast and simplistic decisions, which reduce uncertainty that can promote anxiety (e.g., "we" are like this, "they" are like that) (Hogg et al., 2007). The use of mental shortcuts to classify and categorize people can, however, result in one overlooking

relevant individualized information and instead relying on an available heuristic that promotes stereotyped and distorted thinking about out-groups (Bigler & Clark, 2014). Heuristics, though helpful in some circumstances to make sense of one's environment, can also contribute to stereotypical and prejudicial thinking (Bigler & Clark, 2014).

The next stage in SIT is known as *social identification*, a stage in which an individual adopts the identity of a group by self-categorizing as part of a particular social group (Tajfel & Turner, 1979). Once categorized into a group, in-group identification, intergroup differentiation, and perceptual and attitudinal biases result in the third stage known as *social comparison* (Tajfel et al., 1971). Individuals' identities become intricately linked to the group to which they believe they belong, and their social identity motivates them to adopt attitudes and behaviors that positively distinguish their in-group from others (Brewer, 2002). In-group cohesion is also motivated by other basic needs, including those for inclusiveness, distinctiveness, and certainty, which collectively reduce anxiety and provide a sense of predictability in an uncertain world (Leonardelli et al., 2010). Members of ideological groups are motivated to maintain group norms, perspectives, and interests, as group membership becomes a part of their identity (Devine, 2015). *Group-status threat*, defined as the degree of threat or imposition an out-group is perceived to pose to the in-group, may arise when the perceived competence and/or integrity of the in-group is in some way devalued by an out-group (Tajfel & Turner, 1979). Other constructs stemming from the SIT are the *Ideological Conflict Hypothesis* and the *Political Group Conflict Hypothesis*. According to the Ideological Conflict Hypothesis, individuals across the political spectrum are prejudiced against ideologically dissimilar targets or out-groups. In this hypothesis out-group values are

perceived to be inconsistent/in conflict with an individual's own group, and therefore they tend to engage in a variety of strategies to maintain their group's worldview by distancing themselves from people who do not share their moral or political convictions (Brandt et al., 2014). The Political Group Conflict Hypothesis emphasizes that perceived ideological differences in moral foundations often derive from in-group versus out-group categorization rather than actual differences in moral foundations (Brandt et al., 2014). Membership in a political group or ideology is otherwise known as political partisanship.

Political Partisanship.

Political partisanship continues to be the dividing line in the American public's political attitudes, surpassing differences in age, race and ethnicity, gender, educational attainment, religious affiliation, and other factors (Pew Research Center, 2019). Political partisanship has been defined as the political orientation of citizens who stand with a party; that orientation is psychological regarding identification with the party and behavioral in the actions of voting and partaking in party activities (Muirhead & Rosenblum, 2006). Partisanship is also considered a deep psychological attachment to a particular party, which may include latent biases that motivate an individual to maintain support for a particular party and the policies of the party's platform (Cohen, 2003). Central themes associated with partisanship include a sense of commitment and loyalty to the party's values and goals, a sense of community and solidarity fostered by acting together for a common cause, and an ability to advance one's cause with civility (Efthymiou, 2017; Muirhead, 2014). According to Settle et al. (2009), partisanship is evaluated along two dimensions, namely the strength of partisan attachment and the direction of the attachment. Strong partisanship often comes with disdain for the political

opposition or out-group, also known as *affect polarization* (Lelkes & Westwood, 2017). Affect polarization in combination with the inherently competitive nature of partisanship have been linked to prejudicial behavior (Lelkes & Westwood, 2017).

Partisanship has demonstrated a strong influence on political behavior. According to a meta-analysis that synthesized a total of 182 effects of perceived injustice, efficacy, and identity on collective action, a strong partisanship was associated with collective action and related forms of group-based political activity (Van Zomeren et al., 2008). In this study, collective action was defined as “the attitudinal support for protest as well as the protest intentions or behaviors of members of a social group that are directed at removing the perceived underlying causes of the group’s disadvantage or problem” (Van Zomeren et al., 2008, p. 512). Most of the studies included in the meta-analysis relied on proxies for collective action, such as attitudes toward collective action (supporting or opposing collective action) and professed intentions to engage in collective action (Van Zomeren et al., 2008). Individuals with strong partisan identification have been shown to act as a means of defending or enhancing their party’s political position, as their partisan identity becomes internalized to the degree that the group’s failures are perceived as personal failures (Huddy & Bankert, 2017). Hostility has been demonstrated to emerge when strong emotions, such as fear, are attached to the out-group, compounding a powerful identification with an in-group (Mackie et al., 2000). According to Mason and Kalmoe (2019), after aggressiveness, “partisan identity strength,” as measured by a 7-point scale ranging from *strong Democrat* to *strong Republican*, is the second most predictive factor in endorsing violence. Partisanship has been shown to intensify over the course of a person’s lifetime, as a result of individuals having more opportunity to become active in their community and to

socialize with groups (Campbell et al., 1960). The *expressive* model of partisanship postulates that partisans become motivated to defend their party's positions, which often results in biased processing of information that generates attitude stability and buttresses political beliefs (Huddy et al., 2015). According to Westfall et al. (2015), individuals with stronger partisan identification as Democrat or Republican also tend to perceive greater polarization between the parties.

Social identifications, such as political partisanship, have demonstrated the capacity to produce in-group favoritism and out-group derogation in attitudes, perceptions, and behaviors when those groups are in competition (Hewstone et al., 2002). Individuals who identify strongly with a group (Democrat or Republican) have additionally been found to feel emotions more intensely than less committed individuals in response to threat and reassurance (Combs et al., 2009). In four studies using undergraduate populations, participants gave their emotional reactions to news articles describing misfortunes happening to others (e.g., poor economic news and house foreclosures; Combs et al., 2009). When reverses befell political opponents of the party with which they strongly identified, participants experienced *schadenfreude*, pleasure or lack of empathy in reaction to those misfortunes (Combs et al., 2009). Overall, party affiliation and the intensity of in-group identification have proven to accurately predict whether these events produced *schadenfreude* (Combs et al., 2009). Kalmoe and Mason (2019) also found that partisan identity strength was a significant positive predictor for political hostility toward opponents regarding all three components of lethal partisanship. *Lethal partisanship* includes *moral disengagement* (rationalizing harm to opponents), *partisan schadenfreude*, and partisan violence (Kalmoe & Mason, 2019). Moral

disengagement involves making extremely rigid judgements that dehumanize and blame out-groups, while minimizing or misrepresenting the extent of the harm done (Kalmoe & Mason, 2019). Moral disengagement has been shown to be significantly more associated with partisan strength than the other two components of lethal partisanship (Kalmoe & Mason, 2019).

Associations have also been identified between partisan strength and anger reactivity to threat (Huddy et al., 2015; van Zomeren et al., 2008). Huddy et al. (2015) had required respondents to read an experimentally altered blog entry from actual political blogs that promised electoral victory or warned of electoral defeat for the respondent's party. After reading the blog entry, respondents were asked to answer six questions about the intensity of the emotions that they may have felt while reading it: angry, hostile, disgusted (anger), hopeful, proud, and enthusiastic. The intensity of those feelings was rated on a 4-point Likert scale (*a great deal, some, a little, not at all*) (Huddy et al., 2015). Results indicated that participants with strong partisan identification displayed more anger than those with weaker partisan identification at the prospect of electoral loss (Huddy et al., 2015). A parallel result was discovered among French-speaking students at the Catholic University of Louvain in Belgium (Yzerbyt et al., 2003). For half of the participants, written instructions made very explicit that the study aimed at comparing the opinions of students and those of professors, making their identification as a student more salient. For the other half of the participants, the instructions unambiguously indicated that the study aimed at comparing the opinions of the students at UCL with students at other universities and they were explicitly asked to indicate the university they attended. Moreover, a national newspaper had recently

published an article about a new mandate requiring third- and fourth-year students at another university to speak English (Yzerbyt et al., 2003). Emotional reactions of anger and associated offensive action tendencies were prevalent when participants came to regard the victims (those required to speak English) and themselves as part of the same group, and when they strongly identified with this group (Yzerbyt et al., 2003). Overall, the study concluded that participants facing a context in which the distinct memberships of themselves and the victims were emphasized reported feeling more anger than any other emotion. Additionally, the study concluded that the impact of an emotional event is more pronounced among high identifiers than among low identifiers only when a common membership is made salient by the categorization context. Group-based anger also demonstrated the capacity to increase commitment to political action, such as opposing government intentions to redress past wrongs against out-groups (Leach et al., 2007). In this study, group actions included willingness to help organize a demonstration, send a letter of protest to the government/media, and vote for a political candidate who shares their view (Leach et al., 2007). One aspect of political partisanship that is particularly important to this study is *partisan bias*.

Partisan bias

As previously noted, survey data have indicated growing ideological opposition between partisans of the two major parties over the last two decades (Pew Research Center, 2014). One explanation for this increased political polarization is partisan bias, a general tendency for people to think or act in ways that unwittingly benefit their own political group or present their ideological beliefs in a more favorable light (Ditto et al., 2019). According to Lilienfeld et al. (2009), the bias most pivotal to ideological

extremism and inter- and intragroup conflict is *confirmation bias*. This form of bias entails the tendency to seek out information that affirms the views of an individual's identification and to avoid information that may challenge those views (Abramowitz & Sauders, 2008). Confirmation bias can lead those individuals to draw distorted conclusions (*cognitions*) regarding evidence that runs counter to the views of the individual and their party (Lilienfeld et al., 2009). Although confirmation bias in milder forms is common in everyday life, extreme forms of this bias can contribute to ideological certainty, ideological fanaticism, and the irrefutable authority of one's opinion (Calhoun, 2004). Confirmation bias is predicted by *belief superiority*, which has demonstrated its prominence among extremists on both ends of the political spectrum (Toner et al., 2013). According to Toner et al. (2013), those who identify as "very liberal" are just as likely to believe in the superiority of their views on a range of topics, such as healthcare, abortion, immigration, taxes, affirmative action, and the use of torture on suspected terrorists, as those who identify as "very conservative." Regarding the concept of partisan bias, two competing hypotheses have come to the fore: The *asymmetry hypothesis* predicts greater partisan bias in conservatives than in liberals, and the *symmetry hypothesis* predicts equal levels of partisan bias in liberals and conservatives (Ditto et al., 2019). In a meta-analysis including 51 experimental studies and 18,000 participants, the symmetry hypothesis garnered stronger support, with no differences found between liberals and conservatives in mean levels of biases across different methodological variations and political topics (Ditto et al., 2019). Moreover, van Prooijen and Krouwel (2017) found that compared to moderates, both left- and right-wing Dutch extremists, as measured on a 10-point ideological scale from 1 (*very left wing*) to 10 (*very*

right wing), displayed strong *dogmatic intolerance*, a tendency to reject and consider inferior any ideological belief that differs from their own. Another cognitive bias associated with partisan bias is *naive realism*, the tendency to believe that the world is exactly as one sees it (Ross & Ward, 1996). Naive realism is considered a significant contributor to ideological extremism and a barrier to reconciling tension between in-groups and out-groups. (Lilienfield et al., 2009). *Cognitive Dissonance Theory* explains how these cognitive biases are perpetuated within groups.

Cognitive Dissonance Theory

Festinger's Cognitive Dissonance Theory (1957) claims that individuals have an inner drive to share attitudes and behavior in harmony and to avoid disharmony (dissonance). Individuals wish to reduce or avoid *cognitive dissonance*, a state characterized by inconsistent thoughts, beliefs, or attitudes (Festinger, 1957). Experiencing this state of inconsistency results in tension, or uncomfortable psychological arousal, which can be resolved by changing beliefs or behaviors so that they are more consistent (Festinger, 1957). For example, individuals prefer and seek out pro-attitudinal over counter-attitudinal information through engaging in selective exposure (Metzger et al., 2015; Stroud, 2010). In the context of political ideology, Cognitive Dissonance Theory emphasizes that people experience positive feelings when presented with information that confirms thoughts, beliefs, and decisions about their group and avoid information that may induce cognitive dissonance (Frimer et al., 2017).

Liberals and conservatives have displayed similar aversions to learning about the views of ideological opponents, anticipating that exposure to opposing views might induce cognitive dissonance and damage their relationship with the individual holding

differing views (Frimer et al., 2017). Frimer et al. (2017) found that in a sample of 202 Americans, two-thirds of the participants in their study passed up the chance to win extra money to avoid hearing from the opposing side on topics including same-sex marriage, elections, marijuana legalization, climate change, guns, and abortion. Conversely, by reinforcing their partisan beliefs through viewing clips that conveyed parallel beliefs, individuals consolidated their ideological positions, making them more resistant to counter-attitudinal information (Levendusky, 2013).

This tendency toward confirmation bias is particularly evident in individuals exhibiting extreme partisanship (Levendusky, 2013). Congruent with cognitive dissonance theory and confirmation bias, the definition of *partisan bias* includes the tendency to evaluate otherwise neutral information more favorably when it supports one's political beliefs or allegiances than when the same neutral information challenges those beliefs or allegiances (Ditto et al., 2019). Research has demonstrated that individuals with partisan bias have an implicit preference for policies proposed by a member of their political in-group, regardless of whether the policies' content accords with their ideology (Cohen, 2003). Overall, since 2006 partisan selective exposure has increased across the political spectrum in relation to current trends in political polarization (Rodriguez et al., 2017; Stroud, 2010). Rodriguez et al. (2017) found that Republicans engaged in more partisan selective exposure to homogenous media over time than their Democratic counterparts ($M_{diff} = 0.129$, $t(14476) = 5.90$, Cohen's $d = 0.111$), with individuals identifying as *very conservative* displaying a steeper increase in partisan selective exposure than any other group. *Very Conservative* respondents exhibited significantly greater levels of selective exposure than all other groups, including *Liberal*

($M_{diff} = .343$, $t(4913) = 7.37$, Cohen's $d = .270$) and *Very Liberal* participants ($M_{diff} = .292$, $t(2668) = 5.19$, Cohen's $d = .230$). However, persons identifying as *conservative* exhibited lower levels of selective exposure than all other groups (Rodriguez et al., 2017). According to Lavine et al. (2005), in the presence of threat, individuals scoring high in authoritarianism as measured by the *RWA Scale* were significantly more interested in exposure to uniformly pro-attitudinal arguments, and significantly less interested in balanced two-sided arguments. In a study using data from the National Annenberg Election Survey, results indicated that over time, partisans' selective exposure to media leads to greater polarization (Stroud, 2010)

System Justification Theory

System Justification Theory builds upon the cognitive dissonance framework. It emphasizes that an individual will justify a social system in order to retain a positive image of that system and will attempt to maintain the status quo because the individual plays a role in perpetuating that system (Jost et al., 2004). The theory argues that people are actively motivated to justify social, political, and economic arrangements to which they belong to maintain a positive perception of the group and their role within it (Jost et al., 2004). System Justification Theory operates as a powerful motive, because it satisfies fundamental social and psychological needs for consistency, certainty, and meaning (Jost & van der Toorn, 2012). It also satisfies existential needs to manage threat and anxiety, as well as relational needs to create a shared reality with others (Jost & van der Toorn, 2012). This theory is particularly relevant when investigating individuals who identify strongly with a particular ideological group to justify their rigidity, which maintains in-group norms and legitimizes behaviors towards out-groups (Jost & van der Toorn, 2012).

In addition to cognitive dissonance theory and system justification theory, the media has played a significant role in explaining and perpetuating group bias.

The Role of the Media

Traditional media

Communication media employ an array of technological processes that facilitate communication between the sender of a message and the recipient of that message (Croteau & Hoynes, 2019). Traditional communication media include television, film, newspaper, radio, books, and magazines (Croteau & Hoynes, 2019). The media play a significant role in how individuals acquire information, form political opinions, and debate positions. In general, information that is most easily retrieved from memory tends to most exert influence on judgements, opinions, and decisions (Iyengar, 1990). As a vehicle for public discourse, the media often influences salient issues, sets agendas, and controls representation (Bail, 2012). According to the availability heuristic, information that is most frequently or most recently viewed in the media is more accessible information for individuals (Iyengar, 1990). Many studies have highlighted the influence that exposure to different forms of media can have on attitudes towards one's own and other groups (Arendt & Temple, 2015; Meeusen & Jacobs, 2015; Park et al., 2007; Lee, 2007; Vergeer et al., 2000). For example, using an *Implicit Attitudes Test* (IAT) to measure implicit attitudes, and a feeling thermometer asking participants whether participants felt general coolness/negativity or warmth/positivity toward African Americans to measure explicit attitudes, Arendt and Temple (2015) found that increased exposure to stereotyped television news altered both implicit and explicit attitudes. Regarding implicit attitudes, local television news had a small but significant effect of on

the negativity of implicit attitudes (Arendt & Temple, 2015). Moreover, stereotyped news coverage affected explicit attitudes, albeit to a small degree, through its impact on implicit attitudes ($r = 0.003$, $p = .025$; Arendt & Temple, 2015). Vergeer et al. (2000) similarly found that exposure to newspapers characterized by negative reporting about crime perpetrated by ethnic minorities led readers to perceive ethnic minorities as a greater threat.

Research has also shown that on television news, a negative tone of voice in references to minorities (e.g., LGBT, Jews, Eastern Europeans, and North Africans) was associated with greater prejudice by those watching the program, while a positive tone was associated with less prejudice (Meeusen & Jacobs, 2015). Non-white ethnic minorities, such as African Americans, Asians, and Latinos are often misrepresented and negatively depicted in the media (Greenberg, 2000; Jakubowicz, 2003). Park et al. (2007) provided evidence for the malleability of automatic stereotypes and prejudice. According to Park et al. (2007), implicit and explicit anti-Arab prejudice were moderated when participants were exposed to positive and negative information about Arab Muslims prior to an IAT task. Ramasubramanian (2007) additionally found that a combination of an audience-centered approach that explicitly instructs audiences to be critical media consumers prior to exposure and message-centered approaches involving stereotype debunking and counter-stereotypical news stories can reduce the influence of racial stereotypes activated by news stories.

New Media

According to Graber and Dunaway (2018), the expansion of cable television in the 1980s and of the Internet in the 2000s opened more options for media consumers than

ever before. In this age of “new media,” more people are seeking political information online and through social media, with these trends only accelerating as mobile access to the internet continues to grow and improve. In 2015, 99 out of 110 major news outlets had more mobile web visitors than desktop web visitors, and mobile use has only continued to increase over time (Lu & Holcomb, 2016).

Despite the potential for social media to enable people to consume more heterogeneous sources of information about current events, the tendency to form social network ties with those who are similar, or *homophily*, can lead to social media having an even more polarizing effect (McPherson et al., 2001). Though social media provides a plethora of options for obtaining heterogeneous information, individuals have been shown to be more likely to read stories that affirm their existing views than stories that oppose their views (Bakshy et al., 2015). This tendency can result in media *partisan echo chambers*, a phenomenon in which individuals are exposed only to information from like-minded individuals that reinforce existing perspectives and foster confirmation biases (Garrett, 2009). Excessive use of the internet for social networking, searching for information, and using online media have been found to be associated with more frequent distorted thinking, as measured by the *Inventory of Cognitive Distortions* (Morris, 2011). In a behavior-tracking study comprising 727 participants from two partisan online news sites, participants consistently sought out information in support of their own opinions, while exhibiting an aversion to opinion-challenging information, as measured by not endorsing interest and opting not to read dissonant articles (Garrett, 2009). This tendency conforms with Festinger’s (1957) *cognitive dissonance* theory, in which people experience positive feelings when presented with information that confirms that their

decisions/beliefs are correct. Based on principles of social learning theory and operant conditioning, this reinforcement is likely to increase further engagement in selective exposure behavior.

While the internet was initially perceived to be a source of easily accessible information, it is increasingly used as a means of promoting biased narratives labeled *fake news* (Tornberg, 2018). According to Silverman and Singer-Vine (2016), 75% of Americans are likely to be deceived by fake news, information deliberately created to misinform readers (Allcott & Gentzkow, 2017). Individuals who rely on superficial information processing, quite common in political cognition as noted above, are most vulnerable to the effects of fake news (Metzger et al., 2010). *Motivated social cognition*, a social phenomenon explaining the influence of motives on various thought processes, such as memory, information processing, reasoning, judgment, and decision making, is also believed to be a factor contributing to the effects fake news has on political partisanship (Lewandowsky et al., 2013). *Partisan-motivated reasoning* refers to the greater likelihood of accepting information that is consistent with one's attitudes and ideologies as strong and convincing, and the corresponding likelihood of rejecting contradictory information as weak or invalid (Lewandowsky et al., 2013). Both Democrats and Republicans are disposed to evaluate information as more credible when it comes from sources that share the same ideology (Hayes et al., 2018). A recent study conducted by the Pew Research Center found that highly engaged partisans are extremely polarized in their confidence in news sources (2020).

According to Pew Research Center (2020), in the past five years partisan polarization in the use and trust of media has continued to grow. Republicans distrusted

20 of the 30 sources included in the study, while Democrats expressed trust in 22 of the 30 sources (Pew Research Center, 2020). Democrats and Independents who lean Democratic saw most of the sources as credible and relied on them to a far greater degree than Republicans, according to the survey of 12,043 Americans (Pew Research Center, 2020). Republicans chose only seven outlets that generated more trust than distrust, including Fox News and the talk radio programs of hosts Sean Hannity and Rush Limbaugh (Pew Research Center, 2020). For Democrats, the numbers were reversed, with most Democrats distrusting only eight outlets, including Fox News (77%) and Limbaugh (55%) (Pew Research Center, 2020). A comparison to a 2014 study indicated that Republican's distrust has intensified in the last five years for 15 sources, most notably CNN, *The Washington Post*, and *The New York Times* (Pew Research Center, 2020). Republicans in the study displayed less trust in news sources and were also the least inclined to consult these sources (Pew Research Center, 2020). In the study, 65% of Republicans and Republican-leaning Independents trusted Fox News as their sole source of news, in what the Pew Research Center termed "The Fox News phenomenon" (2020). In a study of a community sample of 214 individuals, Republicans and other participants who relied on Fox News as their main source of news were more Islamophobic, operationalized as a score on the *Perceived Islamophobia Scale*, than Democrats, Liberalarians, individuals who relied on CNN, and individuals who relied on a news source other than Fox News (Ghuman, 2015). Moreover, about one-fifth of those of both Republicans and Democrats inhabited an isolated media bubble in which they received political news in a given week *only* from outlets used predominantly by people who aligned with them politically (Pew Research Center, 2020). Relying on one source of

political information/news serves to increase distorted thinking; having only one source of information reinforces pre-existing beliefs and denies access to alternative perspectives on the news. According to a 2018 Pew Research Center study, Democrats and Democratic-leaning Independents (17%) were more likely to change their views based on social media content compared to Republicans and Republican-leaning Independents (9%). In general, this selective exposure to like-minded content has increased attitude extremity and polarization (Stroud, 2010).

Exacerbation of Animosity.

In addition to a more unyielding partisan divide than ever recorded before, with new peaks of opposition on fundamental political values, a significant increase has emerged in mutually negative views of the opposition at both ends of the political spectrum, with 81% of Democrats and Republicans perceiving the other party in unfavorable ways (Pew Research Center, 2017). A 2019 study found that the share of Republicans who give Democrats a *cold* rating has risen 14% since 2016, with 57% of Democrats reciprocating, up from 41% (Pew Research Center, 2019). In a 2016 Pew Research Center study, more than half of Democrats (55%) endorsed that the Republican Party makes them “afraid,” with 49% of Republicans endorsing the same fear of the Democratic Party. In addition, 47% of Democrats and 46% of Republicans expressed anger, and 58% of Democrats and 57% of Republicans endorsed frustration towards their counterparts (Pew Research Center, 2016). Regarding perceptions of threat, 45% of Republicans viewed Democratic policies as a threat, an increase of 8% from 2014 (Pew Research Center, 2016); 41% of Democrats perceived Republican policies as a threat, an increase of 10% from 2014 (Pew Research Center, 2016). Furthermore, most Democrats

characterized Republicans as being more closed-minded than other Americans (75%), with the same holding true for Republicans regarding Democrats (64%; Pew Research Center, 2016). Most Republicans in the 2016 study expressed a belief that Democrats are more unpatriotic (63%) and immoral (55%) than other Americans, while most Democrats (70%) perceived Republicans as more immoral (35%), lazy (18%), and dishonest (42%) than other Americans (Pew Research Center, 2016). Roughly half of the Republicans included in the survey (52%) viewed Democrats as closed-minded, immoral (47%), lazy (46%), and dishonest (45%). This rise in negative attitudes, intolerance of out-groups, and outright animosity continues to increase at concerning rates. *Social Dominance Theory* proposes an explanation for the trend in animosity.

Social Dominance Theory

The Social Dominance Theory argues that intergroup oppression, discrimination, and prejudice are how human societies organize themselves as group-based hierarchies (Sidanius & Pratto, 1999). One reason that group-based dominance hierarchies are stable is that they legitimize ideologies and help to coordinate beliefs, actions, and institutional practices that maintain hierarchy (Sidanius & Pratto, 1999). Group-based social hierarchies consist of three discrete stratification systems, including an age system, in which middle-aged individuals hold the most power, a gender or patriarchal system, in which men hold more power, and an arbitrary-set system, which involves socially constructed categories that are hierarchically arranged (Van Lange et al., 2012). Social dominance orientation is a construct that stems from this theory (Pratto et al., 1994). The construct measures a general attitudinal orientation toward intergroup relations that expresses the goal of establishing and maintaining in-group dominance, power, and

superiority (Pratto et al., 1994). Social dominance orientation is an important measure, because it shows that people's general feelings about social inequality can predict their beliefs about whether their own group should dominate other groups (e.g., nationalism) and their endorsement of specific social policies such as capital punishment (Pratto et al., 1994). This construct has demonstrated a correlation with deeper prejudice against outgroups and right-wing authoritarianism (Sidanius & Pratto, 1999).

Right-Wing Authoritarianism.

The study of authoritarianism stems back to World War II, when social psychologists undertook to explain the seemingly blind obedience to authority that led to the war and the Holocaust. Their goal was to theorize about how people became prejudiced, dogmatic, and intolerant of others (Zmigrod, 2020). Adorno et al. (1950) was the first to describe the concept of an *Authoritarian Personality* (AP) in an attempt to explain how antisemitism gained popularity in Europe before and during the Holocaust. Adorno and his colleagues used various psychological scales as a means of trying to explain racism, including the *Adorno F-Scale*, a means of measuring fascist tendencies (Adorno et al., 1950). According to Adorno et al. (1950), elements of the AP are blind allegiance to conventional beliefs about what is right and wrong, respect for and submission to an identified authority, a belief that aggression is warranted against those who do not subscribe to conventional thinking (outgroups), and a negative view of people in general. Additional elements of the AP include a need for strong leadership that displays uncompromising power, a belief in simple answers, a resistance to creative ideas that are perceived as dangerous, a tendency to project feelings of inadequacy, rage, and fear onto an outgroup, and a preoccupation with violence and sex (Adorno et al., 1950).

Authoritarianism demands a strict adherence to hierarchy and dominance over subordinates (Adorno et al., 1950; Altemeyer, 1996; Stenner, 2009). According to Adorno et al. (1950), authoritarians also tend to view the world in rigid, black-and-white, absolutist terms (e.g., good or evil); which is a type of cognitive distortion. For many years, authoritarianism was believed to be more strongly associated with individuals who identified as conservative.

Right-wing Authoritarianism (RWA) was introduced by Robert Altemeyer (1981), based on Adorno's AP. Altemeyer's research found that only three of the original nine elements of Adorno's AP correlated as key predictors of prejudice, racism, and right-wing extremism (1981). The components found to predict prejudice, racism, and right-wing extremism were *authoritarian submission*, *authoritarian aggression*, and *authoritarian conventionalism* (Altemeyer, 1981). Authoritarian submission entails submission to authorities who are perceived as legitimately established in society (Adorno et al., 1950). Authoritarian aggressiveness entails aggression directed against individuals perceived as threats by those authorities (Adorno et al., 1950). Lastly, authoritarian conventionalism is the tendency to accept and obey social conventions and the rules of authorities (Adorno et al., 1950). Altemeyer (1981) additionally found associations between right-wing authoritarianism and faulty reasoning, hostility towards out-groups, and blindness to one's personal failings. Altemeyer argues that those who score high in right-wing authoritarianism using his *RWA Scale* "see the world as a dangerous place" and that fear appears to "instigate aggression" (1998). Those scoring high in right wing authoritarianism also demonstrated an inclination to view the world and diverse "others" as threatening (Duckitt & Sibley, 2016). According to Dunwoody

and Plane (2019), ideology and partisanship are moderately correlated with authoritarianism, with those who are more conservative and more strongly Republican being more likely to score higher in authoritarianism as measured by the RWA Scale.

Following Adorno, researchers have continued to offer numerous competing theories of authoritarianism over the last several decades. According to Rokeach (1960), authoritarianism is not specific to political conservatives, and instead conceptualized the AP as an identifiable species of general cognitive rigidity that occurs in the face of ideological threat, which he termed *dogmatism*. In contrast, Stenner (2009) argued that authoritarianism reflects an intolerance of difference and/or a need for social uniformity that manifests in response to disruption of social norms. He asserted that the construct of authoritarianism is a “principal determinant of intolerance of difference across time and space, and domain,” which includes “all cultures and every aspect including racial, political, and moral intolerance” (Stenner, 2009, p. 142). Overall, agreement has evolved concerning some core aspects of the construct of authoritarianism; however, differences persist regarding how this construct manifests across the left and right (Costello et al., 2020). Although right-wing authoritarianism is more widely accepted, in recent years *left-wing authoritarianism* has been a topic of discussion in the fields of social and political psychology.

Left-Wing Authoritarianism.

Left-wing authoritarianism (LWA) is the idea that liberals engage in the same reliance on simple authority and psychological rigidity as their conservative counterparts (Conway et al., 2018). A growing body of research has identified core markers of authoritarianism in both the left and right, notably dogmatism, cognitive rigidity,

prejudice, and lethal partisanship (Costello et al., 2020; Ditto et al., 2019; Kalmoe & Mason, 2019; Zmigrod et al., 2020). This psychological portrait of authoritarianism is largely interchangeable with conservatism, although researchers continue to minimize the existence and importance of LWA (Costello et al., 2020). Many in the field of social psychology contend that LWA does not exist, and that concepts such as authoritarianism and dogmatism do not consistently apply to individuals who identify as left of the political center (Altemeyer, 1998; Jost et al., 2003; Stone, 1980).

For instance, Altemeyer (1996) claimed that he was unable to find the presence of LWA, because “if there ever were any, most of them dried up and have blown away... You don't have to be much of a weatherman to know which way the wind has been blowing for the past 25 years” (p. 229). However, Conway (2020) suggested that continued skepticism of LWA is partially “due to very reasonable concerns over the double-barreled nature of LWA measurement” (slide 27). Because LWA measures ideology and authoritarianism simultaneously, some researchers have argued that it is difficult to know whether effects are due to ideology or authoritarianism (Conway, 2020). Conway (2020) claimed that “the nature of the construct is inherently double-barreled”; if you are measuring LWA, you are measuring people who are left-wing and authoritarian and if you are measuring RWA, you are measuring people who are right-wing and authoritarian (slide 30-31). In consequence, Conway (2020) argued that authoritarianism itself is domain-specific, in that authoritarians likely “submit to a specific set of authority figures while excluding or denouncing others” (slide 32). Compared to the construct of RWA, there is significantly less research on LWA, with only 635 returns on Google

Scholar compared to 12,700 for right-wing authoritarianism (e.g., Conway et al. 2018; Costello et al., 2020).

Until recently, the construct of authoritarianism was more likely to be detected in right-wing conservatives than left-wing liberals due to the construction of measures; however, more recent research maintains that individuals identifying on the left of the political spectrum are also likely to hold authoritarian beliefs. For instance, Costello et al. (2020) cite such examples of left-wing authoritarianism as, “the Stalinist Soviet Union, the Kim dynasty’s totalitarian rule of North Korea, perhaps even the French Reign of Terror” (Ezrow & Frangz, 2011, in Costello et al., 2020, p. 11). This more recent research posits that the earlier studies failed to detect LWA, and that problems with methodology likely explain these false-negative findings (Conway et al., 2018; Costello et al., 2020; Van Hiel et al., 2006). For example, one serious methodological problem identified in earlier research was that definitions of authoritarianism generally operationalized and conflated authoritarian beliefs almost exclusively with right-wing beliefs, without reciprocally including left-wing authoritarian beliefs that might explain the authoritarian character of the left-leaning regimes cited above.

For instance, the right-wing desire to preserve the current power/governmental structures and the left-wing desire to overthrow the current democratically elected power/governmental structure are both thought to evince anti-democratic authoritarianism. This is the case because both groups hope to accomplish their political goals independent of, or even in opposition to results of democratic elections. Because the original studies accurately measured these authoritarian tendencies on the right but failed to assess them on the left meant that the operational definitions were biased to the

right and created a self-fulfilling prophecy, finding RWA and failing to find LWA in their samples. The failure to define authoritarian tendencies on the left meant that it could not be measured, leading to results of limited validity and, perhaps, false negatives (Costello et al., 2020).

Using the LWA Scale for Flemish samples, Van Hiel et al. (2006), was able to find evidence of LWA in extreme leftists, though like other researchers, they struggled to find evidence of LWA in ordinary populations. Van Hiel et al. (2006) concluded that despite the construct of LWA being more difficult to find compared to RWA, authoritarianism was detectable in individuals who identified on the extreme left of the political spectrum. Using the *Left-Wing Authoritarian Scale*, adapted to parallel Altemeyer's (1998) Right-Wing Authoritarian Scale, Conway et al. (2018) concluded that the political left was just as likely to be prejudiced, dogmatic, and extreme as their political right counterparts (RWA: $r = .59$, LWA, $r = .50$). The measure was specifically designed by Conway et al. (2018) to capture LWA in ordinary samples in the U.S. The original sample consisted of 475 undergraduate students from the University of Montana and 298 participants recruited from Amazon Mechanical Turk. After sorting participants into conservatives and liberals, Conway et al. (2018) found that the highest scores for authoritarianism were for liberals using the LWA Scale. In arguing for the *symmetry hypothesis* regarding authoritarianism, Conway (2020) explained that symmetry does not (necessarily) mean that liberals and conservatives will have proportionally equal numbers of authoritarians. He instead argued that "symmetry means that we can consistently identify people on both the right and left that are truly authoritarian." Conway et al. (2020) has since conducted twelve studies including over 8,000 participants in the U.S.

and over 66,000 participants worldwide that indicated LWA was a viable construct that can predict real-world phenomena using the LWA Scale. The studies found that both liberal and conservative Americans claimed knowledge of left-wing authoritarians from personal experience and that both liberals and conservatives considered the LWA Scale as a valid measure of authoritarianism (Conway et al., 2020). Conway et al. (2020) also found that the LWA scale consistently predicted threat sensitivity, restrictive communication norms, negative ratings of minority groups, and dogmatism.

According to Costello et al. (2020) there has been a “blind spot” for the construct of LWA and previous measures of LWA were insufficient in that they either mirrored the tripartite conceptualization (*submission, general aggressiveness, and conventionalism*) of the authoritarianism of the RWA scale or were developed to be ideologically neutral by eliminating conservative and religious content from the RWA Scale without properly understanding LWA characteristics. This conceptualization stems back to the seminal work of Adorno et al. (1950), who established the authoritarian personality to explain the psychological appeal of the far-right ideology of fascism, with the original focus on explaining the rise of Nazi Germany, the Holocaust, and fascists’ seemingly blind obedience to authority. Adorno’s conceptualization has been attacked as flawed in its original conceptualization of authoritarianism; it gathered data on RWA and developed a measure to detect RWA and RWA only, which was labeled authoritarianism. Politically authoritarian conservatism is characterized as favoring absolutist forms of government and weaponizing the present dominant hierarchy but favoring absolutist forms of government yet believing that the present dominant hierarchy should be overthrown, if

necessary, by violent, undemocratic means, are among left-wing characteristics excluded from Adorno's conceptualization of authoritarianism (Costello et al., 2020).

Altemeyer (1996) modified Adorno's theory by conceptualizing LWA as authoritarianism in individuals who oppose established hierarchies of moral and practical authority. He provided the first published measure of LWA, entitled the Left-Wing Authoritarianism Scale paralleling RWA dimensions, including LWA submission (a high degree of submission to authorities who are dedicated to overthrowing the established authorities), LWA aggression (general aggressiveness directed to established authorities or individuals that support the established authorities), and LWA conventionalism (a high degree of adherence to the forms of behavior perceived to be advocated by the revolutionary authorities; Altemeyer, 1996). Altemeyer concluded that he had "yet to find a single 'socialist/Communist type' who scores highly (in absolute terms) on the [left-wing authoritarianism] Scale" (Altemeyer, 1998, p.71). He argued that LWA was non-existent after finding that subjects rarely scored above the midpoint of the scale (Altemeyer, 1996). Costello et al. (2020), however, argued that "there is little reason to consider the scale's midpoint meaningful." According to Costello et al. (2020), individuals who score highly on the LWA scale "would score well below the midpoint on a scale marked by levels of extreme item difficulty" (p. 11). Costello et al. (2020) further explained that Altemeyer's RWA Scale is "far less extreme in comparison" to the items on his LWA Scale, which would explain why many scored below the midpoint. For example, item 12 on Altemeyer's LWA Scale reads "the members of the Establishment deserve to be dealt with harshly, without mercy, when they are finally overthrown," while the RWA scale reads "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” (Altemeyer, 1996). Conway (2020) similarly argues that to score high on Altemeyer’s LWA Scale, you would “basically agree to join a militia designed to overthrow the government,” and to score high on his RWA scale, the implications are far less extreme. Conway (2020) argued that Altemeyer (1996) “basically stacked the decks against LWA” by not including items parallel to his RWA scale. Concerning the Conway et al. (2018)’s LWA Scale, Costello et al. (2020) acknowledged that the measure “offers preliminary evidence that LWA may be present in US samples.” However, because it directly parallels Altemeyer’s RWA Scale, it “does not allow for the possibility that the tripartite conceptualization of authoritarianism is insufficient for capturing LWA” (p. 12).

Costello et al. (2020) sought to account for the possibility that previous conceptualizations of LWA and RWA overlooked key aspects of authoritarianism. Regarding measures that have been developed to be ideologically neutral, Costello et al. (2020) proposed that without first developing an independent measure of LWA that contrasts with RWA, LWA cannot be reliably measured, much less compared to RWA quantitatively. Conway et al. (2018) also argued that value-neutral measurements can contain loaded responses that predetermine a conclusion. In light of such objections, Costello et al. (2020) argued for a ground-up reconceptualization of LWA, starting with an expansive view of the concept that drew upon a systematic empirical exploration, rather than previously used deductive methods (Costello et al., 2020). Investigating 65 criteria-related variables across five community samples, Costello et al. (2020) found shared traits in left- and right-wing authoritarianism including social conformity,

prejudice towards out-groups, willingness to accept group authority to coerce behavior, cognitive rigidity, aggression, and punitive action against perceived threats. Other shared traits of an emphasis on hierarchy and moral absolutism were found in both left- and right-wing authoritarians (Costello et al., 2020).

Costello et al. (2020) defined conventionalism in this context as “the rejection of traditional values, a moral absolutism concerning progressive values, and concomitant dismissal of conservatives as inherently immoral” (p. 36). So defined, conventionalism is a source of authoritarianism on the political left. Antihierarchical aggression, defined as “a belief that those currently in power should be punished, the established order should be overthrown, and extreme actions such as political violence are justifiable” was identified as another characteristic of left-wing authoritarians (p. 36). RWA was more strongly related than LWA to cognitive rigidity, as measured by the *Objectivism Scale*, and resistance to openness, as measured by the *HEXACO Personality Inventory*. Emotionality, as measured by the *HEXACO Personality Inventory*, was higher for LWA than RWA. These personality findings are similar *NEO-PI-R* results, ascribing lower openness to conservatives and higher neuroticism (emotionality) to liberals.

Studies on authoritarianism in formerly communist societies are limited, dated, and have inconsistent findings. Larsen et al. (1993) found that in some former communist states (e.g., Bulgaria and Hungary), respondents scored higher on authoritarianism, as measured by the 18-item Authoritarian Scale of Adorno et al. (1950) than did samples from the United States. Also using Adorno’s Authoritarian Scale, McFarland et al. (1992) and Altemeyer (1996) found that participants from the Soviet Union were, on average, less authoritarian than Americans from selected states, specifically Kentucky and New

Mexico. Altemeyer (1996) found that authoritarians from Moscow and from the United States harbored similar nationalistic attitudes, illustrating that authoritarianism is not necessarily tied to the specific conservative ideologies found in the West. Although national identification often confers benefits, how people identify with their nation has important consequences for intergroup relations (Osborne et al., 2017). Nationalism reflects a people's belief in the superiority of their nation and a desire for its dominance in the international community (Rothi et al., 1989). According to Osborne et al. (2017), RWA as measured by Altemeyer's RWA Scale had positive cross-lagged effects on nationalism as measured by Kosterman and Feshbach's (1989) patriotism/nationalism questionnaire administered to a New Zealand population ($B = 0.114$, 95%; $CI = [0.080, 0.146]$; $p < .001$). The finding that RWA was positively associated with national identity corroborated recent work demonstrating that RWA captures people's motivation for in-group cohesion and support for prevailing social norms, or at least the association of the two constructs (Osborne et al., 2017).

Conway et al. (2015) observed that the same processes that create authoritarianism in right-wing individuals also exist in left-wing individuals to an equal degree if researchers ask the appropriate questions. Conway et al. (2020) later found that individuals who score high on the LWA scale possess the traits associated with models of authoritarianism (while controlling for political ideology). LWA is positively related to threat sensitivity across multiple domains, including general ecological threats. High-LWA persons demonstrated more support for restrictive political correctness norms and more domain-specific dogmatism and strength of attitude (Conway et al., 2020). According to Hetherington and Weiler (2009), authoritarianism has become the main

political force driving political polarization; therefore, investigating authoritarianism in the context of political partisanship is crucial to better understanding our current political atmosphere. Political intolerance of opposing ideologies mediated by perceived threats appears in individuals scoring high both in left and right-wing authoritarianism (Crawford & Pilanski, 2012). The *Ideological Conflict Hypothesis* postulates that people across the political spectrum are prejudiced against ideologically dissimilar target groups (Brandt et al., 2014). Stemming from this hypothesis, research has found multiple ways in which individuals with different political party affiliations and ideologies differ in personality traits, neuroanatomy, perceptions of threat, and cognitive styles.

Differences Observed in Persons with Opposing Political Affiliations/Ideologies

Personality traits.

Much of the literature on personality and politics relies on the *Big Five* or *Five Factor Model*. The Big Five factors or personality traits comprise openness to experience, conscientiousness, extroversion, agreeableness, and neuroticism (Costa & McCrae, 1992). According to Gerber et al. (2012), personality traits substantially affect which party individuals affiliate with, as well as the strength of their affiliation. A complicated relationship exists between personality traits, political party affiliations, and ideologies.

Individuals with relatively high levels of openness are considered more imaginative, curious, open to new ideas, and willing to re-evaluate values (Costa & McCrae, 1992; Widiger & Costa, 2013). Individuals scoring high in openness have also proven to be more curious, imaginative, emotional, and empathic when compared to closed-minded individuals (Cosme et al., 2010). It should be noted that extreme levels of openness are associated with personality disorders (histrionic, borderline, schizotypal,

and narcissistic) and in the most extreme example, even schizophrenia (Widiger & Costa, 2013). Persons who score relatively low in openness tend to be more practical, rigid, and to value authority and traditions (Costa & McCrae, 1992). Pathologically low levels of openness are associated with other personality disorders, including obsessive-compulsive, avoidant, schizoid, and paranoid (Widiger & Costa, 2013). In the political realm, the openness trait has been positively associated with preferences for left-wing parties (Barbaranelli et al., 2007; Vecchione et al., 2011). Mondak and Halperin (2008) additionally found that individuals scoring higher on measures of openness are more likely to identify as Democrats.

Persons who score high for the trait of conscientiousness tend to be orderly, self-disciplined, and strive for achievement (Costa & McCrae, 1992). Conscientiousness has been positively associated with preferences for right-wing or conservative parties (Baker et al., 2015; Barbaranelli et al., 2007; Vecchione et al., 2011). Mondak and Halperin (2008) found that those scoring high for conscientiousness are more likely to identify as Republican and vote for Republican candidates. Previous research also indicated that individuals scoring high for conscientiousness have stronger party identification owing to the trait's associated characteristics of organization, control, motivation, reliability, industriousness, ambition, and patterns of compliance, as well as preferences for structure and order (Costa & McCrae, 1992; Gerber et al., 2012; Widiger & Costa, 2013). High levels of aspects of conscientiousness have been associated with obsessive-compulsive personality disorder (Widiger & Costa, 2013). Low levels of aspects of conscientiousness have been associated with antisocial personality disorder, borderline personality disorder,

histrionic personality disorder, dependent personality disorder, and Attention-Deficit/Hyperactivity Disorder (APA, 2013; Widiger & Costa, 2013).

Individuals scoring high in extroversion tend to be social, active, action oriented, outgoing, optimistic, and seek fun and excitement (Costa & McCrae, 1992; Widiger & Costa, 2013). Extroversion has been related to preferences for right-wing parties (Barbaranelli et al., 2007; Vecchione et al., 2011). The assertiveness and activity rooted in the trait of extroversion is associated with an intention to remain loyal to their political party; therefore, individuals with high levels of extroversion are more likely to consistently identify as a partisan of a particular group (Farc & Sagarin, 2008; Gerber et al., 2012).

According to Costa and McCrae (1992), the personality trait of agreeableness refers to individuals who display modest, sympathetic, and altruistic behavior that is prosocial and cooperative. Members of left-wing parties have been found to have higher levels of agreeableness than their right-wing counterparts (Barbaranelli et al., 2007).

The personality trait of neuroticism is the most highly researched of all the Five Factor traits. Neuroticism is related to the tendency to experience instability, frustration-intolerance, anxiety, anger, and sadness (Costa & McCrae, 1992; Widiger & Costa, 2013). Facets of neuroticism are associated with virtually every personality disorder, apart from schizoid and most clinical syndromes (Widiger & Costa, 2013). Neuroticism has been consistently associated with left-wing ideologies (Sibley et al., 2012).

According to a meta-analysis including 73 studies from 10 different countries, there is a weak, albeit reliable, negative correlation between neuroticism and political conservatism (Sibley et al., 2012).

Extroverts and open-minded individuals have been found to be most likely to identify strongly and stably with a political party (Baker et al., 2015). In addition to evident personality differences in individuals with different political ideologies and party affiliations, a great deal of research has highlighted neurological differences.

Neurological Differences.

Although political partisanship is often believed to result from environmental influences, studies now implicate biological factors related to the establishment of political orientation and partisan affiliation. Neuroimaging studies have indicated differences in the *amygdala*, *insula*, and *anterior cingulate cortex (ACC)* in individuals with differing political ideologies (Amodio et al., 2007; Fowler & Schreiber, 2008; Kanai et al., 2011; Schreiber et al., 2013; van der Plas et al., 2010). For instance, in a study examining the relationship between self-reported political attitudes to gray matter volume using structural MRI, liberalism was found to be associated with increased gray matter volume in the ACC, and conservatism was associated with increased volume in the right amygdala (Kanai et al., 2011). The anterior cingulate cortex has many functions, including error detection, conflict monitoring, cognitive control, evaluating competing choices, as well as other important cognitive functions, such as attention (Kanai et al., 2011). In addition, the ACC is consistent with sensitivity for processing signals of potential change and for altering a habitual response pattern (Amodio et al., 2007; Kanai et al., 2011). The right amygdala is bilaterally sensitive to emotional salience, such as fear and increased processing of potential threats (van der Plas et al., 2010).

In another study, Schreiber et al. (2013) examined brain function in liberals and conservatives by matching publicly available voter records to 82 subjects who performed

a risk-taking task (*Risky-Gains task*) while in an fMRI, and found that Democratic participants had significantly greater activity in the left insula, a region associated with social and self-awareness, however, Republican participants had greater activity in the right amygdala, which is associated with the body's fight-or-flight reactivity system. In this study, the researchers were able to accurately predict the political affiliation of participants based on their brain activity with 82.9% accuracy, using a receiver-operator characteristic curve and a stepwise linear discriminant function analysis with partisanship as the dependent measure and the activation patterns in the areas that differed across Democrats and Republicans as independent measures (Schreiber et al., 2013). A meta-analysis of 27,011 studies using various measures of cognitive abilities revealed a small effect size of $r = -.20$ (CI 95%: $-.23$ to $-.17$; based on 67 studies, $N = 84,017$) for the relationship between lower cognitive ability and right-wing ideological attitudes and higher scores on measures of prejudice; however, participants with more extensive cognitive resources were more likely to embrace left-wing beliefs and to score lower on measures of prejudice, small effect size of $r = -.19$ (CI 95%: $-.23$ to $-.16$; based on 23 studies, $N = 27,011$; Onraet et al., 2015). These neurological differences prompt differing perceptions of threat, which result in differing reactivity between individuals with different political ideologies and affiliations.

Perception of threat and aggression.

Both humans and animals are said to have evolved to automatically scan their environments for potential threats to increase survivability (Herrmann, 2013). *Out-group threat*, perceiving others who are not part of our group as a threat, is believed to be automatically encoded as part of an individual's out-group schema (Herrmann, 2013).

According to a recent study conducted by the Pew Research Center, 45% of Republicans viewed Democratic policies as a threat, an increase from 37% in 2014 (2019). Moreover, 41% of Democrats perceived Republican policies as a threat, an increase of 10% from 2014 (Pew Research Center, 2019). Research has also found that individuals scoring high in authoritarianism tend to view the world and diverse “others” as threatening (Duckitt & Sibley, 2016).

Several studies have found differences in reactivity to threat between individuals endorsing different political affiliations and ideologies (Jost et al., 2003; Kanai et al., 2011; Vigil, 2010). A meta-analysis conducted by Jost et al. (2003) including 88 samples from 12 countries concluded that political conservatism is partially motivated by the management of uncertainty and threat. Moreover, Vigil (2010) found that in a sample of 838 college students, self-reported conservative “Republican sympathizers” displayed heightened threat reactivity compared to liberal “Democrat sympathizers,” when presented with a facial expression discrimination task. Subjects were asked to identify if the face was expressing joy, sadness, or surprise, which were coded as non-threat, or anger, fear, or disgust, which were coded as threat (Vigil, 2010). Individuals who sympathized with the Republican Party had a lower threshold ($M = 1.39$, $SD = .15$) for registering threatening stimuli from ambiguous social information compared to individuals who identified as sympathizers of the Democratic Party ($M = 1.36$, $SD = .15$, $d = -.20$; Vigil, 2010). Vigil concluded that the self-reported Republican orientation is therefore associated with more basic or lower cognitive perceptual biases for detecting threat, and that the Democrat orientation may be associated with higher threshold perceptual biases for detecting threat (Vigil, 2010).

Fear and aggression have also been demonstrated to predict conservatism (Altemeyer, 1998); however, according to the *reactive-liberals hypothesis*, liberals are inclined toward reactive conservatism as a defense against threats (Nail et al., 2009). After Nail et al. (2008) experimentally induced threat, liberal participants were more likely to endorse conservative positions, implying that conservative social cognition may be a defensive reaction against feelings of personal vulnerability. According to Dunwoody and Plane (2019), perceptions of out-group threat likely influence support for certain policies and tendencies to target out-groups. The *Justification-Suppression Model* postulates that perceptions of out-group threat often act as a justification for the expression of prejudiced behavior (Crandall & Eshleman, 2003). A meta-analysis conducted by Jost et al. (2003) found that self-reported conservatives tend to respond to threatening situations, such as exposure to out-groups, with more aggression than their self-reported liberal counterparts. In general, when faced with ambiguous stimuli, conservatives have perceived threatening, aggression-laden situations more frequently than liberals (Kanai et al., 2011). Threats and uncertainties have been shown to increase extremity of ideological commitment (McGregor et al., 2013).

Cognitive style.

In addition to personality, neurological, and threat perception differences, research has noted evident differences in cognitive styles for persons of differing political party identifications. Eichmeier and Stenhouse (2019) investigated the link between party identification and several cognitive styles that are associated with open-minded thinking and found that open-minded and rational cognitive styles were associated with Democrats, while dogmatic cognitive styles were associated with Republicans. In a meta-

analysis investigating the relationship between right-wing attitudes and objective measures of cognitive style on a set of 124 unique samples, intolerance of ambiguity and cognitive ability yielded relationships of moderate strength with right-wing attitudes (Van Hiel et al., 2016). Jost (2017) additionally found that liberals generally score higher than conservatives on measures of integrative complexity, cognitive reflection, need for cognition, and uncertainty tolerance. In the same study, conservatives scored higher than liberals on measures of personal need for order and structure, cognitive closure, intolerance of ambiguity, *cognitive rigidity*, and dogmatism (Jost, 2017). These findings are consistent with research showing that conscientiousness is positively associated with preferences for right-wing or conservative parties, and openness is positively associated with preferences for left-wing parties (Baker et al., 2015; Barbaranelli et al. 2007; Vecchione et al., 2011). Overall, cognitive differences have been observed between persons with differing political affiliations and ideologies. The cognitive style most relevant to this study is cognitive rigidity.

Cognitive Rigidity/Flexibility and Political Affiliations

Defining cognitive rigidity and flexibility.

Cognitive flexibility is defined as the ability to adapt to novel or changing environments and the capacity to switch between modes of thinking (Cools & Robbins, 2004). Cognitive flexibility can also be understood as the ability to easily switch perspectives as one obtains new knowledge about a topic (Diamond, 2006). Kashdan and Rottenburg (2010) conceptualized cognitive flexibility as the ability of individuals to disengage from their cognitive or behavioral patterns of response if the initial pattern of response is no longer effective in a particular situation. Cognitive flexibility, measured

with objective behavioral assessments, has been found to predict intellectual humility, a character virtue that allows individuals to recognize their potential fallibility when forming and revising attitudes (Zmigrod et al., 2019). An individual with deficits in cognitive flexibility would, therefore, persist with previously established rules or behavioral patterns even when maladaptive or after encountering information that contradicts those rules and patterns (Schultz & Searleman, 2002). Cognitive rigidity is the opposite of cognitive flexibility, in that it is the tendency to persevere in a particular cognitive pattern even in situations where the pattern is no longer effective (Morris & Mansell, 2018). Cognitive rigidity exhibits a psychological preference for clarity and certainty (Jost et al., 2003; Rokeach, 1960). It also involves a lack of open-mindedness, a refusal to consider ideas from different perspectives, and an inability to modify concepts and attitudes once they have been developed to withstand criticism (Stewin, 1983). According to Kasdan and Rottenberg (2010), the absence of cognitive flexibility often denotes psychopathology for diagnoses such as depression, anxiety, schizophrenia, and attention deficit hyperactivity disorder. The idea that those who are more dogmatic and prejudiced are more psychologically inflexible stems back to the 1950s, when Adorno first conceptualized the Authoritarian Personality (Zmigrod, 2020). Prejudice is believed to be intricately intertwined with deeply rooted mental rigidity (Rokeach, 1954). An ideologically rigid mind is inflexible in its reaction to ambiguity and change (Zmigrod, 2020). Two opposing hypotheses regarding cognitive rigidity and political identity hypotheses are proposed in the literature: the *rigidity-of-the-right hypothesis* and the *ideological extremity hypothesis*.

Rigidity-of-the-Right Hypothesis.

The rigidity-of-the-right hypothesis suggests that conservatives perceive the world in a more rigid, less flexible manner than their liberal counterparts due to feelings of uncertainty and fear that promote resistance towards change (van Prooijen et al., 2015). The early work of Adorno et al. (1950) identified relationships between cognitive style (rigidity and intolerance of ambiguity) and right-wing attitudes. According to a meta-analysis conducted by Jost et al. (2003) that examined studies conducted in various countries including the U.S., Italy, Germany, Sweden, Israel, and England, conservatives have displayed more structured and persistent cognitive styles as indicated by higher average scores on psychological measures of personal needs for order, structure, and closure compared to their liberal counterparts (Jost et al., 2003). Their liberal counterparts were conversely found to be more receptive to informational complexity and ambiguity. Jost et al. (2003) also found moderate-to-strong effect sizes concerning the relationship between self-report measures of conservative cognitive style and right-wing attitudes. Conversely, a follow-up meta-analysis that focused on behavioral measures of cognitive style conducted by Van Hiel, Onraet, and De Pauw (2010) found weak-to-moderate relationships between cognitive style variables, such as rigidity and intolerance of ambiguity, and right-wing attitudes. Right-wing attitudes measured by the RWA Scale have been shown to partially mediate the relationship between cognitive rigidity and conservatism (Crowson et al., 2010). Self-reported scales concerning cognitive styles have yielded stronger relationships with right-wing attitudes compared to behavioral measures (Van Hiel, Onraet, Crowson, & Roets, 2016). Other research has indicated that a conservative political orientation may be associated with other rigid concepts, such as dogmatism, intolerance, and authoritarianism (Greenberg & Jonas, 2003). Moreover,

Onraet, Van Hiel, Roets, and Cornelis (2011) found increased closed-mindedness among people scoring highly on right-wing attitudes using self-report measures. The rigidity-of-the-right hypothesis has been supported by several studies highlighting relationships between conservatism and cognitive rigidity (Adorno, 1950; Jost et al., 2003; Van Hiel et al., 2016; and Van Hiel et al., 2010). Jost et al. (2003) noted that although rigidity of the left does occur, it is less common and harder to identify than rigidity of the right.

Ideological Extremity Hypothesis.

The ideological extremity hypothesis, also known as the rigidity-of-the-extreme hypothesis, asserts that individuals at *both* political extremes (left/liberals and right/conservatives) are less flexible in their thinking compared to moderates (Greenberg & Jonas, 2003). The hypothesis argues that political extremism is underpinned by cognitive rigidity that facilitates rigidity of attitudes (Zmigrod et al., 2019). Theories of political extremism often emphasize the rigid nature of ideological beliefs at both political extremes, including black-and-white thinking that categorizes the world as positive or negative, good or bad, based on political affiliation (van Prooijen et al., 2015). According to van Prooijen and Krouwel (2019), individuals become radicalized and adhere to extreme ideologies as a result of psychological distress that promotes a sense of meaninglessness and anxious uncertainty. Political extremists on both ends of the political spectrum have reported greater anxiety about their economic future (van Prooijen et al., 2015). Feelings of distress prompt individuals to seek clarity, and extremist belief systems provide meaning through straightforward and simplistic assumptions that make the world appear less complex and more comprehensible (Kruglanski et al., 2006). As a result of anxious uncertainty, distress, and fear, individuals

tend to compensate through strong ideological convictions (McGregor, Prentice, & Nash, 2013). In a study of 700 U.S citizens, Zmigrod et al., (2020) found that partisan extremity was correlated with lower levels of cognitive flexibility regardless of political orientation, across three independent assessments of cognitive flexibility (*Remote Associates Test*, *Alternative Uses Test*, and the *Wisconsin Card Sorting Test*). Political extremes of both the left and the right have also displayed a greater conviction of the correctness of their political beliefs compared to moderates (Toner et al., 2013). Belief superiority has predicted a tendency to select information that reaffirms those beliefs (confirmation bias) (Hall & Raimi, 2018). In addition, individuals with more extreme attitudes have the capacity to project the extremity of their partisan attitudes onto others and perceive greater polarization than do individuals with less extreme attitudes (Van Broven et al., 2012). Political extremists at both ends of the political spectrum have been shown to experience more rigidly negative emotions about politics compared to moderates (van Prooijen et al., 2015). Extremists also have been shown to view the world in more simplistic terms (Lammers et al., 2017) and perceived solutions to crises to be simpler than moderates (Krouwel et al., 2018). Jost et al. (2003) argued that both hypotheses (rigidity-of-the-right and the ideological extremity hypothesis) are not mutually exclusive, and although rigidity of the left does exist, it is less common than rigidity of the right. Cognitive rigidity in thinking processes has been identified as one of the characteristics of ethnocentric thinking (Rokeach, 1948). According to Frenkel-Brunswik (1949), individuals who are intolerant of ambiguity tend to “resort to black-white solutions, to arrive at premature closure as to evaluative aspects, often at the neglect of

reality” (p. 115). This intolerance and tendency towards rigid and distorted thinking (cognitive distortions) are believed to have roots at perceptual and cognitive levels.

Theory of Cognitive Distortions

According to cognitive theory, one’s subjectively biased evaluation of early life experiences shapes and maintains fundamental beliefs known as *schemas* (Beck, 1970). Schemas involve perceptions of the self, the world, and the future, and may be positive and adaptive or dysfunctional (Beck & Weishaar, 1990). Schemas help individuals to direct, filter, encode, and assess new situations as they are experienced (Beck, 1976). They also play an important role in how individuals process and assign meaning to stimuli in the environment, what information in the environment individuals attend to and remember, and functional/dysfunctional cognitive, emotional, and behavioral patterns (Beck, 1964). These fundamental beliefs develop into habitual ways of thinking that support core beliefs and assumptions (Beck et al., 1979). *Schema modality* exists on a continuum from flexible to rigid (Beck & Freeman, 1990). Individuals tend to use a filter to identify information in situations that confirms their schemas and ignore evidence that challenges them. According to Young et al., (2003), the predominant coping strategies for individuals with maladaptive schemas include overcompensation, avoidance, and surrender.

Cognitive distortions.

Cognitive distortions were first defined as identifiable errors in thinking that occur when processing information (Beck, 1967). This information processing, which predictably results in errors in thinking, occurs quickly, involuntarily, and in a biased manner (Beck, 1995). Aaron Beck, the founder of *Cognitive Behavior Therapy*, first

observed distorted thinking while treating individuals with depression (Beck, 1967). He recognized that negative cognitions in his patients were often automatic and outside conscious control (Beck, 1967). Cognitive distortions are now understood to be biased evaluations of early experiences that shape and maintain fundamental beliefs known as schemas (Beck, 1964). Beck defined schemas as cognitive structures that aid in screening, coding, molding, and evaluating data in the world into thoughts and cognitions (Beck, 1964). Beck's schema theory maintained that these core beliefs and the content of the schema are responsible for cognitive, emotional, and behavioral interactions that may be adaptive or dysfunctional (Beck, 1976).

Beck (1967) identified six cognitive errors in thinking: (1) arbitrary inference; (2) absolutistic or dichotomous thinking; (3) magnification and minimization; (4) overgeneralization; (5) personalization; and (6) selective abstraction. Burns (1999) expanded the list of cognitive errors, listing a total of ten cognitive distortions. According to Burns, these cognitive distortions comprised: (1) all-or-nothing thinking; (2) discounting the positive; (3) emotional reasoning; (4) jumping to conclusions; (5) labeling; (6) magnification or minimization; (7) mental filter; (8) overgeneralization; (9) personalization; (10) "should" statements. Several years later, Freeman and DeWolf (1992) and Freeman and Oster (1992) identified three more cognitive distortions: (1) comparison; (2) externalization of self-worth; (3) perfectionism (See Definition of Terms).

Cognitive distortions are understood to play a pivotal role in the maintenance of emotional disorders and personality disorders (Beck & Freedman, 1990; Rosenfield, 2004). According to Beck's cognitive model, all common psychological disturbances

involve dysfunctional thinking related to the *cognitive triad*, including automatic and spontaneous negative thoughts about the self, the world, and the future (Beck & Beck, 2011). Cognitive distortions become habitual patterns of thinking that are triggered by certain stimuli and supported by underlying beliefs established through past experiences (Beck & Beck, 2011). These intermediate beliefs consist of conditional assumptions, core beliefs, and rules included in Beck's (1996) cognitive case conceptualization. Core beliefs are related to one's self-concept and maladaptive views of others (Beck, 1996). Cognitive distortions may prevent individuals from testing their perceptions and thoughts, which can consequently perpetuate their dysfunctional system, including cognitions, behaviors, and emotions. When dysfunctional thinking is not tested, cognitive distortions are often maintained in an individual's belief system through confirmation bias.

Function of cognitive distortions.

According to cognitive theory, cognitive distortions support one's core beliefs and assumptions (Yurica & DiTomasso, 2005). These habitual ways of thinking are supported by generalizing, omitting, and distorting stimuli (Yurica & DiTomasso, 2005). Evolutionary theory indicates that cognitive distortions developed as adaptive reactions in response to perceptions of threats to one's safety or belief system (Burns, 2008; Gilbert, 1998). According to Burns (2008), human beings have two types of thought, automatic and rational. *Automatic thought (system 1)* occurs effortlessly and quickly, largely influenced by emotional responses that prompt individuals to act; *rational thought (system 2)* is a more effortful, logical, and thoroughly considered type of thinking (Burns, 2008). System 1 produces shortcuts called heuristics that allow individuals to function

rapidly. Heuristics, however, can result in flawed thinking, or cognitive distortions (Burns, 2008). Cognitive distortions act as mental shortcuts to aid in human survival (Gilbert, 1998). Regarding the cognitive distortion of selective abstraction, Gilbert (1998) postulated that this distortion arises because of attentional bias for negative information. The distortion is believed to function as a means of detecting and attending to threats quickly and efficiently to avoid a negative situation (Gilbert, 1998). *Dichotomous thinking*, also known as all-or-nothing thinking, is believed to function as a means of making quick judgements about whether a threat exists that requires a response (Gilbert, 1998). *Arbitrary interference* is considered adaptive because it allows individuals to reduce the number of perceptions, interpretations, and choices in emergencies and act more quickly. *Emotional reasoning* relies on emotions to interpret a situation to make quick decisions, saving both time and mental effort (Gilbert, 1998). The cognitive distortion, *disqualifying the positives*, is considered adaptive, because minimizing one's abilities may protect one from unrealistic expectations and demands by others (Gilbert, 1998). Gilbert (1998) proposed that social comparison is adaptive because it enables people to fit in with the dominant group, to understand how to be socially successful, and to recognize who in society is superior/inferior (Gilbert, 1998). Lastly, *personalization*, known as self-blame, is believed to be adaptive by presenting a reductive illusion of control over random threatening events (Gilbert, 1998).

Definition of Terms

Arbitrary Inference / Jumping to Conclusions: unwarranted connections between ideas that are unrelated or drawing a negative conclusion in the absence of evidence to support that conclusion (Persons, 1989, Beck et al., 1979).

Dichotomous Thinking / Black-or-White Thinking: viewing all experiences as falling into one of two categories (e.g., positive or negative), so if an individual's performance falls short, they view themselves as a total failure (Beck et al., 1979; Burns, 1980, 1989, 1999; Persons, 1989).

Catastrophizing: A process of evaluation, in which a person believes the worst possible outcome did or will occur (Burns, 1980, 1989, 1999).

Comparison: An individual's propensity for negative self-comparison to others, resulting in the conclusion that he or she is worse off than or inferior to others (Freeman & DeWolf, 1992; Freeman & Oster, 1992).

Discounting the Positive: An individual's habit of discounting or minimizing positive experiences, insisting that these lack meaning for some spurious reason (Burns, 1980, 1989, 1999).

Emotional Reasoning: The assumption that negative emotions reflect the actual situation (e.g., someone feels something, therefore it must be true) (Burns, 1980, 1989, 1999).

Externalization of Self-Worth: An individual's developing and sustaining self-worth is based on how the external world views him or her (Freeman & DeWolf, 1992; Freeman & Oster, 1992).

Fortuneteller Error: A situation in which an individual anticipates a negative outcome, and this anticipation convinces him or her that the prediction is an already established fact (Burns, 1980).

Labeling: An individual adopts a negative or derogatory name instead of describing his or her error (Burns, 1980, 1989, 1999).

Magnification: Referred to as the “binocular effect” by Burns (1980, 1989, 1999), magnification involves an individual exaggerating the importance or consequence of some positive or negative thing, such as personal traits, events, or situations.

Mind Reading: Refers to an individual arbitrarily concluding that someone is reacting negatively to him or her without any evidence (Burns, 1980).

Minimization: A situation in which an individual discounts or diminishes the importance of something until it seems insignificant (Beck et al., 1979).

Mislabeling: The description of an event with words that are inaccurate and carry heavy emotional weight (Burns, 1980, 1989, 1999).

Overgeneralization: The process of formulating assumptions or rules based on a single negative event and applying these rules to unrelated situations, creating a never-ending pattern of defeat (Beck et al., 1979; Burns, 1980, 1989, 1999).

Perfectionism: The condition in which someone constantly strives to meet some internal or external standard of perfection without considering whether those standards are reasonable (Freeman & DeWolf, 1992; Freeman & Oster, 1992).

Personalization: An individual regards him- or herself as the cause of or responsible for a negative occurrence when no evidence supports that conclusion (Beck et al., 1979; Burns, 1980, 1989, 1999; Persons, 1989).

Selective Abstraction / Mental Filter: A situation in which an individual focuses on a single negative aspect of a situation, inflating the importance of that

negative detail but ignoring possible positive aspects, thereby interpreting the entire situation in a negative context (Persons, 1989, Beck et al., 1979). Mental filter is similar to selective abstraction, because it refers to identifying a single negative detail and dwelling on it exclusively, darkening an individual's view of all reality (Burns, 1980, 1989, 1999).

Should Statements: An individual's internal expectations or demands on him- or herself, without contemplating whether these expectations are reasonable or commensurate with his or her abilities, often leading to feelings of guilt, anger, and frustration (Burns, 1980, 1989, 1999).

Cognitive distortions and aggression.

As previously discussed, cognitive distortions develop as adaptive reactions in response to perceptions of threat to one's safety or belief system (Gilbert, 1998) and have demonstrated an influence on negative psychological and physical health risk behaviors (Uhl, 2007). In response to perceptions of threat, individuals protect themselves from being dominated, controlled, devalued, or rejected by being watchful for potential threat intrusions on personal interests and beliefs in order to ultimately protect their self-concept (Latella-Zakhireh, 2009). Beliefs and assumptions influence perception of every situation; however, faulty cognitions (distortions) and inaccurate attributions can create vicious cycles that exacerbate anger and aggression (Latella-Zakhireh, 2009). Beck's (1999) anger sequence posits that perception of threats to self may perpetuate anger responses as a means of protecting an individual's self-concept. This sequence starts with the initial threat triggering feelings of loss or fear that are distressing to an individual (Beck, 1999). This distress prompts an individual to reactively project blame and anger

toward the source of the perceived threat (Beck, 1999). According to Beck's *hostility sequence*, hostile behavior is provoked by a combination of destructive interpersonal behaviors in combination with distorted thinking (Beck, 1999). Latella-Zakhireh (2009) found that cognitive distortions related to magnification, externalization of self-worth, and perfectionism as measured by the ICD, showed a positive relationship to the degree of anger endorsed on the *Mahan and DiTomasso Anger Scale* by a non-clinical population. A strong relationship emerged between cognitive distortions and components of anger, including tendencies toward argumentativeness and loss of emotional control (Latella-Zakhireh, 2009).

Biased perceptions resulting from cognitive distortions can cause individuals to react internally or externally. Cognitive distortions have specifically predicted both internalizing and externalizing problems (Barriga et al., 2008; Bruno, 2010). Internalizing problems involve inner distress for an individual, such as symptoms of depression or anxiety. Externalizing behaviors manifest as conflicts with others, such as aggressive, disruptive, or antisocial behaviors (Achenbach & McConaughy, 1997). Externalizing behaviors and aggression are more visible, and the consequences more overt (Dekovic et al., 2004). According to Oostermeijer et al. (2017), aggression comprises both proactive and reactive elements. Research has demonstrated a link between cognitive distortions and proactive aggression (Oostermeijer et al., 2017). Reactive aggression is typically related to blaming others and assuming the worst, and proactive aggression is related to self-centeredness and minimizing/mislabeling (Oostermeijer et al., 2017). Cognitive distortions are categorized as either self-serving or self-debasing (Barriga et al., 2008). Self-serving cognitive distortions are associated with externalizing behaviors; self-

debasement cognitive distortions are associated with internalizing behaviors (Barriga et al., 2008; Bruno, 2010). Self-serving distortions serve to protect an individual from negative self-concept involving self-blame (Barriga et al., 2008). Examples of distortions that fall under the category of self-serving distortions would include *assuming the worst* and *minimizing/mislabeling*. Self-debasement distortions are distortions that inaccurately degrade the self in either direct or indirect ways (Barriga et al., 2008). Examples of self-debasement distortions include personalizing, catastrophizing, overgeneralizing, and self-abstraction (Barriga et al., 2008). In a study conducted by Wallinius, Johansson, Larden and Dernevik (2011), self-serving cognitive distortions as measured by the *How I Think Questionnaire* were moderately to highly correlated with self-reported antisocial behavior during both childhood and adulthood among the adults. *Aggression Replacement Training* has helped individuals recognize internal cues for aggression, which lowered levels of both cognitive distortions and antisocial behaviors, implying a relationship between the two constructs (Gundersen & Svartdal, 2006). In summation, cognitive distortions are forms of rigid thinking that have been linked to anger and aggression.

Historical Considerations

In the last year, several historic events occurred that have affected Americans individually and in relation to political partisanship including the 2020 presidential election, the Covid-19 pandemic, protests/riots related to political conflicts (e.g., the attack on the Capitol on January 6, 2021), and social/racial conflicts (e.g., the killing of George Floyd). These events have only intensified the nation's political divide and likely played a role in the current study. A month before the 2020 presidential election, roughly eight-in-ten registered voters on both sides of the political spectrum claimed that their

differences with the opposition were about core American values, and roughly nine-in-ten in both camps worried that a victory by the other would lead to “lasting harm” to the United States (Pew Research Center, 2020). In addition to politically charged distress, a recent Pew Research Center study (2020) found that 21% of Americans included in their national survey reported experiencing high levels of psychological distress, including nearly 28% of individuals who agreed that the COVID-19 outbreak changed their lives in “a major way.”

After the 2020 presidential election, a Pew Research Center study (2021) reported that 40% of Trump voters included in their national survey (n : 5,360), endorsed a belief that Trump “definitely” won, and another 36% believed that he “probably” won the election, despite losing both the popular and electoral vote by decisive margins. In the Pew Research Center survey, older, less educated, and more conservative Trump supporters were among the most likely to assert that Trump won the election (Pew Research Center, 2021). Regarding the recent Capitol riot, majorities in both parties (95% of Democrats and 79% of Republicans, including Independents leaning to each party) endorsed that it was at least *somewhat important* that federal law enforcement agencies find and prosecute those responsible for the attack on the Capitol, with Democrats more intense in their views on this matter (Pew Research Center, 2021). According to the Pew Research Center survey (2021), 86% of Democrats and Independents who lean toward the Democratic Party considered finding and prosecuting rioters as *very important*, compared to only half of Republicans and voters leaning Republican. Democrats and Democratic-leaning Independents (73%) also considered right-wing extremism to be a major problem, while a similar share of Republicans and voters leaning Republican

(76%) claimed the same about left-wing extremism (Pew Research Center, 2021). In addition, 31% of Democrats endorsed left-wing extremism as a major problem, and 29% of Republicans endorsed the same about right-wing extremism (Pew Research Center, 2021). About a month after former President Donald Trump was acquitted in his second impeachment trial which focused on his conduct leading up to the attack on the U.S. Capitol, just over half of Americans (52%) included in a national survey reported believing former president Trump's conduct was wrong, and that he should have been convicted by the Senate. Nearly two-thirds of Republicans and GOP-leaners (65%) believed that former president Trump's conduct was not wrong, and that he should not have been impeached by the House of Representatives. Only 11% of Republicans endorsed that his conduct was wrong, and he should have been convicted by the Senate (Pew Research Center, 2021). Conversely, an overwhelming majority of Democrats and Democratic-leaning voters (87%) believed that former president Trump's conduct was wrong, and that the Senate should have convicted him (Pew Research Center, 2021). Divisions have also become evident within the GOP, with 37% of conservative Republicans asserting that the Republican Party should censure or expel officeholders who criticize former president Trump, compared to about half (52%) of more moderate Republicans (Pew Research Center, 2021). Conservative Republicans were even less tolerant of elected Republicans who voted to impeach or convict former president Trump, with only 26% believing that the party should be *very* or *somewhat* tolerant of those who did this, but 52% of more moderate Republicans stated that these officials should be accepted by the party (Pew Research Center, 2021).

The 2020 COVID-19 pandemic has also revealed how pervasive the divide in American politics is compared to other nations, with the outbreak proving to be a central issue in the election. According to an October 2020 national poll, 82% of Joe Biden supporters endorsed the outbreak as *very important* to their presidential vote, compared to just 24% for Trump supporters (Pew Research Center, 2020). According to a Pew Research Center study, 76% of Republicans, including Independents who lean to the party, felt the U.S. had done a good job dealing with the coronavirus outbreak, compared with just 29% of respondents who did not identify with the Republican Party. Moreover, 77% of Americans said the country was now more divided than before the outbreak. Democrats and Republicans have differed over views of mask wearing, contact tracing, how well public health officials are dealing with the crisis, whether to get a vaccine once one was available, and whether life will remain changed in a major way after the pandemic (Pew Research Center, 2020). Regarding the COVID-19 pandemic and authoritarianism, RWA and LWA were found to independently and positively predict Americans' acceptance of 11 authoritarian policies and practices intended to mitigate the effects of the COVID-19 pandemic (Manson, 2020). Conway et al., (2020) found that LWA bore a significant positive relation to *Perceived COVID Threat*, as measured by six items concerning how threatened or worried they were about COVID-19 (e.g., "Thinking about the coronavirus makes me feel threatened") above and beyond political ideology.

Amid mass shootings in the U.S., gun policies continue to be divisive, with 81% of Democrats and Democratic-leaning Independents believing there should be stricter gun laws, in contrast to just 20% of Republicans (Pew Research Center, 2020). In addition, amid protests regarding police shootings of individuals from minority populations, a Pew

Research Center study (2020) found that 87% of Republicans and Republican-leaning Independents and about 71% Democrats and Democratic-leaning Independents concurred with the statements that they had a *fair amount* or a *great deal* of confidence in police officers to act in the best interests of the public. A wide division, however, existed between black and white Democrats in their confidence in police officers, with 78% of white Democrats agreeing that they had at least a *fair amount* of confidence in officers to act in the public's best interests while just 54% of black Democrats endorsed the same statement (Pew Research Center, 2020). Social protests have also risen since the George Floyd shooting. Among the public overall, 68% agreed that it is very important for the country that people are free to peacefully protest, which is down from 74% two years ago. In this case, the decline has come entirely from Republicans, with 53% of Republicans and Republican-leaning Independents agreeing that it is very important for the country that people are free to peacefully protest, down from 64% two years ago.

Gaps in the Research

A search of online databases *Scopus*, *PsychArticles*, *PsychInfo*, *EBSCO*, *ERIC*, and *GoogleScholar* investigating cognitive rigidity among extreme political partisans and moderates revealed no research into cognitive rigidity in the form of cognitive distortions in individuals with different political party affiliations or varying degrees of ideological commitment. Previous research has largely utilized objective measures of cognitive rigidity, such as the RAT, AUT, or WCST, or subjective measures of cognitive rigidity focusing on dogmatism, intolerance of ambiguity, or a need for cognitive closure. No research to date has investigated the debate between the rigidity-of-the-right and the ideological extremity hypothesis by using measures of cognitive distortions as an

indicator of cognitive rigidity, despite cognitive distortions being a form of rigid thinking. In addition, cognitive distortions have been investigated in many clinical and nonclinical populations; however, they have not been studied in different political parties or ideologies. Furthermore, little research has attempted to include political affiliations that have become more prominent in the last decade in the United States (e.g., Socialists and Communists) and has largely been limited in its scope of investigating liberal versus conservative and Democrat versus Republican.

Current Study

Although numerous studies have demonstrated that individuals with different political affiliations differ in cognitive styles, a search of the professional databases disclosed no investigation of the relationship between the cognitive behavioral conceptualization of cognitive distortions and political affiliation, ideology, or partisan strength. In consequence, the purpose of this study was to determine whether there is a significant difference in the frequency of cognitive distortions in individuals with differing political party affiliations and partisan ideological strength commitments. The study specifically intended to investigate whether there is a significant difference in the frequency of cognitive distortions endorsed between individuals who identified as more extreme in their ideological partisanship (very left wing and very right wing) compared to those who identified as moderate. This study also attempted to explore political affiliations that are less commonly included in research conducted in the United States, such as National Socialists, Democratic Socialists, Socialists, and Communists regarding their acknowledged frequency of cognitive distortions. Lastly, this study investigated the potential influence of authoritarianism, partisan strength, and frequency of cognitive

distortions has on a tendency toward aggression. Lilienfeld et al. (2009) argued that "debiasing" people and reducing errors in thinking could be "among psychology's most enduring legacies to the promotion of human welfare" (p. 391). Debiasing errors in thinking might also reduce ideological extremism, as well as inter-and intragroup conflict (Lilienfeld et al., 2009). Some success has already been observed in the use of the technique of *perspective-taking* to reduce out-group stereotypes (Galinsky & Ku, 2004). Other studies affirmed that basic education about cognitive biases can decrease an individual's tendency to fall victim to certain errors in thinking (Evans et al., 1994). This study will add to the field's understanding of the role cognitive distortions play in the context of political affiliation, political extremism, and violence. Moreover, this study provides guidance for future research on ways to reduce political polarization and resultant violence. In summary, the results of this study are intended to provide insight into potential factors that can be targeted to reduce tension in our dichotomized political atmosphere.

Chapter 3: Methods

Research Design

This study used a quantitative, cross-sectional design to investigate relationships between frequency of cognitive distortions, authoritarianism, political party affiliations, ideological partisan strengths, and aggression.

Participants

Data were collected from 513 adult participants who were recruited via online platforms including Facebook, Instagram, Reddit, and Researchmatch. Participants' data were included if the participant was between the ages of 18 and 85, conversant in English, and a resident of the United States. The rationale for including only individuals 18 years and older was that the study hoped to assess attitudes of U.S. voters, and the minimum legal voting age in the U.S. is 18 years old. In addition, the measures used in the study were normed on individuals 18 years and older, with an upper age limit of 85 years old. Respondents were excluded from the study if they did not meet inclusion criteria or did not complete measures in their entirety. Participants were limited to individuals with internet access because the study was conducted entirely online via REDCap, a widely accepted, secure web application on which to administer measures.

Screening and Recruitment

Demographic information was collected, including such relevant background information as age, gender, ethnicity, socioeconomic status, highest level of education, news networks watched, political ideology, and political affiliation.

Participants were recruited via online platforms including Facebook, Reddit, Instagram, and Researchmatch.org as a means of collecting a sizable sample that would

be representative of the general population. A recruitment flyer was posted on these sites after PCOM IRB approval, which outlined the study, identified the principal and responsible investigators, stated that participation was voluntary, offered the inducement of a chance to win one of four \$50 Amazon gift cards, and a link to study measures. Respondents reviewed a document outlining informed consent and answered inclusion and exclusion items prior to starting the questionnaire to determine if they were appropriate for the study. If respondents did not meet inclusion criteria, they were so notified and thanked for their interest in participating. All respondents deemed eligible for the study were directed to the online REDCap questionnaire, starting with demographic information. Online recruitment was used because it is a cost-effective and a convenient means of recruiting participants in a timely and efficient manner. As of 2019, nine-in-ten U.S. adults reported they use online internet services, 81% acknowledged owning a smartphone, and 72% stated that they use social media (Pew Research Center, 2019). That final item was pertinent, because more than half of all adults in the U.S. (52%) reported using Facebook to get their news (Pew Research Center, 2019).

According to Best and Krueger (2004), data collected from internet-based samples can efficiently allow researchers to acquire data using multiple measures from diverse pools of possible participants. This study additionally used snowball sampling, a form of convenience sampling in which participants of the study are asked to recruit additional participants from their acquaintances. Nonprobability samples, such as those established from snowball sampling, often result in samples representative of the general population. Snowball sampling has proven both cost effective and efficient in gathering

large groups of participants in a short time (Browne, 2005). Despite these advantages, snowball sampling has limitations. The potential for sampling bias is a risk, because the procedure is contingent on participants passing the study on to their acquaintances. Despite such limitations, this sort of nonprobability sampling is widely accepted in the existing literature and has demonstrated its sufficiency when investigating relationships between variables (Cozby, 2007).

Measures

Demographic Questionnaire

Participants were asked to answer several demographic questions, including items on age, race, gender, religion, socioeconomic status, highest level of education, level of participation in recent protests, perspectives on/membership in activist/extremist groups, and news outlets watched, listened to, or read.

Political Ideology

Participants were asked to identify their political ideology on a 5-point Likert scale adapted from the 10-point scale used by van Prooijen et al. (2015), with the following anchors: 5 = *Very Right Wing* to 1 = *Very Left Wing*, with a *Moderate* midpoint. Those who identified as *Moderates* were directed to another screen asking them to self-describe as leaning either to the right or left of the political spectrum.

Political Party/Group Affiliation and Partisan Strength

Participants were provided with a list of common party affiliations in the U.S. The item read: “Generally speaking, do you think of yourself as: Republican, Democrat, Independent, Democratic Socialist, Socialist, Communist, Fascist/National Socialist or Other Party?” The “Other Party” option allowed participants to write in any political

party affiliation that may not have been included in the list. This method of assessing political affiliation was adapted from Zmigrod et al. (2019). To measure political party commitment, participants responded to the following prompt: “To what degree do you identify with the political party you indicated above?” Participants were then asked to indicate the strength of their political party partisanship on a 4-point Likert scale (1 = *minimal party identification* to 4 = *very strong party identification*).

Right-Wing Authoritarian Scale

Robert Altemeyer’s RWA Scale (Altemeyer, 1998) was first proposed in 1981 and remains the most widely used measure of right-wing authoritarianism (Conway et al., 2018). The scale assesses beliefs and attitudes concerning submission to authority, aggression against noncompliers with authority, and adherence to social conventions that are sanctioned by authority (Altemeyer, 1996, 1998). Right-wing authoritarian scale scores correlated with measures of right-wing economic outlook ($r = 0.62$), nationalism, ($r = 0.66$), ethnocentrism ($r = 0.71$), antiabortion ($r = 0.60$), and anti-equality and anti-freedom attitudes ($r = 0.84$) (Altemeyer, 1998). Three of the *Attitudes Toward Violence Scale* subscales (war, penal code violence, and corporal punishment) also correlated significantly with scores on the RWA Scale (Benjamin, 2006). According to a recent study conducted by Dunwoody and Plane (2019), despite criticisms and limitations, the RWA scale remains a powerful tool for understanding contemporary U.S. political attitudes. An empirical study by Conway et al. (2018) reported that 79% of the scales from recent research that measured RWA used a version based on Altemeyer’s scale.

The RWA Scale includes 20 items in which participants select on a 7-point Likert scale the degree to which they agree with a statement (1= *disagree completely* to 7 =

agree completely; Altemeyer, 1998). Total scores range from 20 to 140. Higher scores indicate higher right-wing authoritarianism. According to Crouse and Stalker (2007), Altemeyer's RWA Scale "provides a widely accepted operational definition of how strongly a person holds right-wing authoritarian beliefs" (p. 25). The RWA scale has good reliability with coefficient alpha typically measuring between 0.85 and 0.94.

Left Wing Authoritarian Scale

The Left-Wing Authoritarian Scale (LWA Scale; Conway et al., 2018) was developed in 2018 and designed to parallel Robert Altemeyer's (1996) RWA Scale. Conway et al. (2018) directly rewrote the RWA Scale items so that they would refer to liberal-left authorities and norms. The measure was normed using 475 undergraduates at the University of Montana and 298 Mechanical Turk participants. The LWA scale includes 20 statements to which participants respond on a 7-point Likert scale expressing their level of agreement with the statement (1 = *I disagree completely* to 7 = *I agree completely*). Interitem reliability for the scale was deemed satisfactory ($\alpha = .84$). The measure has shown significant correlations with liberalism, when liberalism was operationalized as responses on a 9-point standard bipolar scale anchored by liberal/conservative and Democratic/Republican used in prior research (e.g., Conway et al., 2012; $\alpha = .86$; Conway et al., 2018). The LWA scale has also shown significant correlations with prejudice, operationalized as a version of McConahay's (1986) *Modern Racism Scale* adapted to religious minorities ($r = .73$; Conway et al., 2018). The LWA scale was also positively correlated with the environmental-dogmatism scale ($r[149] = .41, p < .001$) and with the strength of participants' beliefs about climate change ($r[150] = .32, p < .001$). These relationships paralleled similar relationships between RWA and

dogmatism, prejudice, and strength of ideological commitment. In this study, measurements of the strength of commitments were not available for all participants, therefore, Conway et al. (2018) computed overall measurements both with and without commitment strength. According to Conway et al. (2018), in the measurement that excluded partisan commitment strength, the effect size for LWA and this overall measurement ($r[181] = .75, p < .001$) were roughly the same as that for RWA ($r[298] = .70, p < .001$; Fisher's z comparing the two correlations = 1.11, $p < .05$). A similar result emerged for the measurement that included commitment strength, with the effect size for LWA ($r[178] = .70, p < .001$), nearly identical to that of RWA ($r[172] = .73, p < .001$). Conway, Zubrod, Chan, and McFarland (2020) also found that both liberal and conservative participants rated the LWA scale as measuring authoritarianism, and that the scale consistently predicted threat sensitivity, restrictive communication norms, negative ratings of minority groups, and dogmatism.

Inventory of Cognitive Distortions (ICD)

The Inventory of Cognitive Distortions (Yurica, 2002) is a psychometrically validated self-report instrument that was first developed as 120 self-report statements representing 17 types of cognitive distortion (DiTomasso & Yurica, 2011; Yurica, 2002). The principal investigation and development of the ICD used a sample of 188 patients from two separate outpatient clinics. The sample included 66 participants who were used as a control group. The original 120 statements related to distorted thinking were evaluated by three experts in the field, and for an item to be selected for the inventory, unanimous independent agreement was required and achieved to ensure content validity. As a result of factor analyses, 69 items written in short sentences that measured 11

cognitive distortions were retained to comprise the ICD. The items of the ICD are scored on a 5-point Likert scale, with anchors ranging from 1 = *Never* to 5 = *Always* in terms of frequency. Scores on the ICD can range from 69 to 345, with higher scores indicating a greater frequency of cognitive distortions.

The ICD provides a total score of cognitive distortions, in addition to a score for each subscale for individual cognitive distortions. Yurica's (2002) study found high test-retest reliability for total scores ($r = .98$) and internal reliability ($r = .998$). Concurrent validity total scores on the ICD correlated significantly with other accepted measures of distorted thinking and psychopathology, such as the *Dysfunctional Attitudes Scale* ($r = .70$) and the *Beck Depression Inventory* (BDI; $r = .70$; Yurica, 2002). Roberts (2015) also found that the ICD correlated significantly with the Perceived Stress Scale (PSS; $r = .63$).

The ICD was factor-analyzed to measure a total of 11 cognitive distortions. Brief descriptions of these distortions follow. *Arbitrary Inference*, also known as jumping to conclusions, involves making unwarranted connections between unrelated ideas or drawing negative conclusions in the absence of evidence supporting that conclusion (Beck et al., 1979). Comparison refers to the tendency to compare oneself to others in an inferior light (Freeman & DeWolf, 1992). Emotional reasoning entails the assumption that one's emotional state reflects reality (Burns, 1999). Externalization of self-worth refers to establishing and maintaining self-worth based on how an individual perceives people in the external world view her or him (Freeman & DeWolf, 1992; Freeman & Oster, 1992). Fortune-telling describes an individual's anticipation of a (generally) negative outcome, and this anticipation convinces him or her that the predicted outcome is already established fact (Burns, 1999). Magnification, also known as the binocular

effect, refers to the tendency of individuals to exaggerate the importance or consequence of some positive or negative personal trait, events, or situation (Burns, 1999). Mind reading denotes the tendency to arbitrarily conclude that others are reacting in a certain way, usually negatively, without any evidence (Burns, 1999). Minimization describes arbitrarily discounting the importance of events to the point that they seem insignificant (Beck et al., 1979). Labeling refers to attaching a negative name to oneself or others (Burns, 1999). Perfectionism involves constantly striving to live up to some unobtainable internal or external standard of perfection (Freeman & DeWolf, 1992).

The ICD has been used with both clinical and nonclinical populations. DiTomasso and Yurica (2011) found positive correlations between cognitive distortions and anxiety and depressive symptoms in a clinical population. Rosenfield (2004) investigated the relationship between psychological disorders and cognitive distortions using the ICD. Participants who met the criteria for *DSM-IV-TR* clinical syndromes and personality disorders endorsed more frequent cognitive distortions. According to Rosenfield (2004), approximately half of the variance for the severity and number of psychological disorders was attributable to frequency of cognitive distortions. Strohmeier (2013) additionally found a direct positive relationship between the severity of adult ADHD, as determined by the *Brown Attention Deficit Disorder Scale* (BADDSS; Brown, 1996), and the frequency of cognitive distortions by administering the ICD to an outpatient adult population ($r = .487, p = .006$). However, after accounting for anxiety, depression, and personality pathology, specifically neuroticism, in adult outpatients, Serine (2016) found that the ICD no longer manifested a relationship with ADHD severity, indicating that the comorbidities accounted for cognitive distortions, but not adult ADHD.

Despite the ICD being first validated using a clinical population, it has since been validated in non-clinical populations. For example, the ICD has been used in several community samples recruited from online platforms, fitness centers, churches, community organizations, and healthcare centers (Latella-Zakhireh, 2009; Roberts, 2015; Shook, 2010; Uhl, 2007). Using a community sample, the ICD displayed strong internal reliability consistency ($\alpha = .97$) with each subscale's Cronbach's alphas in the range of .47 to .94 (Roberts, 2015). Weaker internal consistency was found in Emotional Reasoning and Decision Making (Roberts, 2015). The ICD also displayed good convergent validity in non-clinical populations based on a comparison with the *Dysfunctional Attitudes Scale* ($r = .7$; Roberts, 2015). Roberts (2015) found that cognitive distortions as measured by the ICD were able to predict levels of perceived stress in a community sample. Using the ICD in a community sample, Roberts (2015) also determined that on average, females endorsed significantly greater levels of cognitive distortions compared to males, $t(472) = -2.75, p = .006$, Cohen's $d = -0.30$. On average, females ($M = 176.18, SD = 33.12$) displayed a statistically greater level of distorted thinking than males ($M = 166.26, SD = 32.31$; Roberts, 2015). Depending on a participant's age, significant differences were found for participant's total level of cognitive distortions as measured by the ICD, $F(2, 471) = 8.50, p < .001$, with a large effect size ($\eta^2 = 0.35$) for the relationship between age and level of cognitive distortions. Participants in the 18-29 age range ($M = 179.82, SD = 32.99$) reported a significantly greater frequency of cognitive distortions than participants in the 41-85 age range ($M = 164.98, SD = 31.86$), and the effect size for this relationship was moderate (Cohen's $d = 0.46$; Roberts, 2015). No significant differences were found between participants' total

level of cognitive distortions as measured by the ICD and participants' level of education, ($F [3, 270] = 0.51, p = .68$; Roberts, 2015).

The ICD has also served to investigate the relationship between cognitive distortions and negative psychological and health risk behaviors (Shook, 2010; Uhl, 2007). Furthermore, in a community sample consisting of participants recruited from churches and other community organizations, Latella-Zakhireh (2009) discovered that cognitive distortions related to magnification, externalization of self-worth, and perfectionism showed a significant positive relationship to components of anger measured by the *Mahan and DiTomasso Anger Scale*, including tendencies toward argumentativeness (the propensity to argue, with consequent job and relationship problems) and emotional control (the tendency to lose control as a result of angry feelings or thoughts; Latella-Zakhireh, 2009).

Buss-Perry Aggression Questionnaire

The *Buss-Perry Aggression Questionnaire* (BPAQ; Buss & Perry, 1992) is considered the gold standard for measuring aggression (Gerevich et al., 2007). The instrument shares some items from the *Buss-Durkee Hostility Inventory* (Buss, & Durkee, 1957). The BPAQ originally included 52 items that were normed on 406 college students (Buss & Perry, 1992). After a factor analysis excluded 23 items, 29 items remained that comprise the final version of the BPAQ (Buss & Perry, 1992). This measure has been adapted into shorter versions and validated in various countries. The measure has been validated for use in the general population (Gerevich et al., 2007). In completing the BPAQ, respondents rank 29 statements on how characteristic they are on a 5-point Likert scale, from 1 = *Extremely uncharacteristic* to 5 = *Extremely*

characteristic (Buss & Perry, 1992). The questionnaire evaluates several components of the construct of aggression, including anger (physiological arousal and preparation for aggression), verbal aggression, physical aggression, and hostility (feelings of ill will and injustice).

Internal consistency of the four factors and the total score range between .72 and .89 (Buss & Perry, 1992). Regarding test-retest reliability, group indices have ranged from .72 to .8 (Buss & Perry, 1992). A more recent study found test-retest reliability for each subscale as follows: Physical Aggression (.8), Verbal Aggression (.76), Anger (.72), and Hostility (.72; Archer & Webb, 2006). This instrument's internal consistency for each factor was determined as follows: Physical Aggression (.85), Verbal Aggression (.72), Anger (.83), and Hostility (.77), with Cronbach's alpha for all items at .89 (Archer & Webb, 2006). Buss and Perry (1992) found that the aggression scale positively related to measures of impulsiveness and competitiveness. According to Harris (1997), the BPAQ has moderate to high internal consistencies and is stable over seven months of testing. Harris (1997) determined that the BPAQ scales were positively related to other measures of aggression, including aggression items on the *Morey Personality Assessment Inventory* (1991), the *Olweus Lack of Frustration Scale* (1986), and the *Gladue Aggression Inventory* (1991). A study by Archer and Webb (2006) used a population of 307 university students to examine the relationship between the BPAQ and an act-based aggression measure by assessing how frequently participants engaged in any of 25 direct and indirect acts of aggression in the last two years. The study found that all four scales were at least moderately related to behavioral measures of direct and indirect aggression directed against partners and same-sex others. The strongest associations occurred

between acts of direct aggression against same-sex others and the BPAQ physical and verbal scales ($r = .60$ and $.53$, respectively; Archer & Webb, 2006). The subscale of hostility was most strongly related to act-based measures of indirect aggression ($r = .53$; Archer & Webb, 2006). Archer and Webb (2006) concluded that the associations provided evidence for the convergent validity of measuring aggression by trait and act-based measures.

Procedure

Having met inclusion criteria, participants first completed a demographic questionnaire including questions about age, gender, race, religion, socioeconomic status, highest level of education, political ideology, party affiliation, level of participation in recent protests, perspectives on/membership in activist/extremist groups, and news outlets watched. Individuals who identified as moderate were asked to indicate whether they leaned left or right in order to direct them to the appropriate authoritarian measure (either the LWA or RWA Scale). In addition to completing the LWA or RWA Scale, participants also completed the BPAQ and ICD. All participants responded to the measures in the same order (Demographic questionnaire, either LWA or RWA Scale, ICD, and BPAQ). This was intentional, so that the political measures could prime participants to think politically when completing the ICD and BPAQ. After completing the questionnaire, a separate tab offered participants the option of providing an email address for the opportunity to win one of four gift cards. At the conclusion of the study, participants were thanked for taking part and asked to forward the study link to acquaintances to facilitate snowball sampling.

Chapter 4: Results

Statistical analyses were computed via SPSS 27 to examine if self-reported authoritarianism, strength of partisan commitment, and frequency of cognitive distortions predicted endorsement of levels of aggression. In addition, the present study aimed to determine if individuals that self-identified as “Very Right Wing” and “Very Left Wing” reported significantly higher frequency of cognitive distortions compared to individuals who self-identified as “Moderates.” This study also aimed to determine if a significant difference existed in endorsed frequency of cognitive distortions between individuals from different political party affiliations.

Statistical Analyses

The variables of interest were analyzed by means of SPSS 27. For the power analysis, the effect size was set at .15, which is considered a medium effect size. The significance level was set at .05, and the power level was set at .80. This analysis determined that 360 participants were needed. This inferential/observational, cross-sectional study intended to examine relationships between political party affiliations, political ideologies, strength of partisan commitment, frequency of cognitive distortions, authoritarianism, and aggression.

Demographic Analysis

Demographically, the sample consisted of 134 males, 369 females, eight individuals who identified as nonbinary, and two who preferred not to answer ($N = 513$). Regarding age, 35.1% of the population identified as age 25-44, with adequate representation of other ages ranging from 18 to 85. Of the participants, 86% identified as Caucasian, 3.7% Black or African American, 1.4% Latino or Hispanic, 2.9%

Asian/Pacific Islander, .6% Native American, 2.9% Multi-ethnic, and 2.5% Other. As evinced by the demographic statistics, the sample was not as diverse as researchers had hoped. Regarding political view/ideology, 12.9% identified as *Very Left Wing*, 29% as *Left Wing*, 14.8% as *Slightly Left Wing*, 25% as *Moderate*, 6.2% as *Slightly Right Wing*, 9.2% as *Right Wing*, and 2.7% as *Very Right Wing*. Concerning party identification, 38.8% identified as *Democrat*, 16.6% as *Republican*, 27.9% as *Independent*, 9.4% as *Democratic Socialist*, 1.8% as *Socialist*, 1.6% as *Communist*, .2% as a *National Socialist/Fascist*, and 3.9% as *Other Party/Affiliation*. Complete demographic results appear in Table 1.

Table 1

Demographic Breakdown of Sample

Range	Age	Ethnicity		Political Party		Political Ideology/View	
	Percentage	Ethnicity	Percentage	Party	Percentage	Ideology/View	Percentage
18-24	7.2	Caucasian	86.0	Democrat	38.8	<i>Very Left Wing</i>	12.9
25-44	35.1	Black or African American	3.7	Republican	16.6	<i>Left Wing</i>	29.0
45-54	14.6	Latino or Hispanic	1.4	Independent	27.9	<i>Slightly Left Wing</i>	14.8
55-64	21.4	Asian/Pacific Islander	2.9	Democratic Socialist	9.4	<i>Moderate</i>	25.1
65-74	16.4	Native American	.6	Socialist	1.8	<i>Slightly Right Wing</i>	6.2
75 or older	5.3	Multi-ethnic	2.9	Communist	1.6	<i>Right Wing</i>	9.2
		Other	2.5	National Socialist/Fascist	.2	<i>Very Right Wing</i>	2.7
				Other Party/Affiliation	3.9		

Hypothesis I.

To determine if self-reported authoritarianism, strength of partisan commitment, and frequency of cognitive distortions predicted levels of endorsement of the use of aggression for both right- and left-wing individuals, two multiple regressions were conducted. The multiple regression analyses designated authoritarianism (operationalized as LWA and RWA Scale scores, respectively), partisan strength, and frequency of cognitive distortions (ICD Total) as the predictor variables and aggression (Total BPAQ score) as the criterion variable. The first multiple regression examined individuals who identified as liberal (*Left Wing*) who had completed the LWA Scale. The second multiple regression assessed this relationship for individuals who identified as conservative (*Right Wing*) and had completed the RWA Scale.

Tests of assumptions for multiple linear regression were conducted, including normality, linearity, homoscedasticity, and multicollinearity. The Durbin-Watson statistic was equal to 1.99 for the first regression and 2.14 for the second regression, which implied the absence of autocorrelation. The collinearity diagnostics revealed that for each of the predictor variables, there was no evidence of multicollinearity.

The regression analysis for those individuals who identified as *Left Wing* was found to be statistically significant, ($F [1, 369] = 147.07, p = .000$), indicating that the combination of these predictors made a significant contribution to the prediction of aggression, as shown in Table 3. The coefficient of determination ($R^2 = .285$) indicated that approximately 28.5% of the variance in scores on the aggression measure was associated with the combination of predictor variables (cognitive distortions, partisan strength, and authoritarianism). An examination of each individual predictor variable

revealed that only total scores on the ICD (i.e., frequency of cognitive distortions) made a significant contribution to the variability in levels of aggression.

The regression analysis for those individuals who identified as *Right Wing* was also statistically significant, ($F [3, 138] = 30.71, p = .000$), indicating that the combination of these predictors made a significant contribution to the prediction of aggression. Table 4 illustrates that the coefficient of determination, ($R^2 = .400$), indicated that approximately 40.0% of the variance observed in level of aggression was associated with this combination of predictor variables (authoritarianism, partisan strength, and reported frequency of cognitive distortions). An examination of each of the individual predictor variables revealed that just as was the case with *Left-Wing* individuals, only their score on the ICD made a significant contribution to the variability of the level of aggression. Therefore, in both *Left-* and *Right-Wing* individuals the frequency of cognitive distortions was found to predict aggression level, however, authoritarianism and partisan commitment strength did not. In addition, frequency of cognitive distortions was found to be more predictive of aggression for individuals who identified as *Right Wing* ($F [3, 138] = 30.71, p = .000; R^2 = .400$) than for individuals who identified as *Left Wing* ($F [1, 369] = 147.07, p = .000; R^2 = .285$). Tables 2, 3, 4, 5, 6, and 7 illustrate these findings in full.

Table 2

Summary of Multiple Regression Predictor Variables to Dependent Variable for Left-Wing Individuals

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.534 ^a	.285	.283	13.27754	1.988

Table 3

Regression Analysis with Predictor Variables to the Dependent Variable for Left-Wing Individuals

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25926.522	1	25926.522	147.065	.000*
	Residual	65052.115	369	176.293		
	Total	90978.636	370			

Note. The regression analysis for those individuals who identified as *Left Wing* was found to be statistically significant (as indicated by an asterisk), indicating that the combination of these predictors made a significant contribution to the prediction of aggression.

Table 4
Coefficients of Predictor Variables to the Dependent Variable for Left-Wing Individuals

Model		Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.
		B	Std. Error	Beta		
1	1 (Constant)	38.240	5.686		6.725	.000*
	Authoritarianism	.264	.986	.013	.267	.789
	Frequency of Cognitive Distortions	.201	.017	.535	12.051	.000*
	Partisan Strength	.374	.720	.024	.520	.604

Note. Only total scores on the ICD (i.e., frequency of cognitive distortions) made a significant contribution to the variability in levels of aggression at a significance level (.000) marked with an asterisk.

Table 5
Summary of Multiple Regression of Predictor Variables to Dependent Variable for Right-Wing Individuals

Model	<i>R</i>	<i>R</i> Square	Adjusted Square	Std. Error of the Estimate	Durbin-Watson
1	.633 ^a	.400	.387	13.26673	2.139

Table 6
Regression Analysis with Predictor Variables to the Dependent Variable for Right-Wing Individuals

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16214.861	3	5404.954	30.709	.000*
	Residual	24288.857	138	176.006		
	Total	40503.718	141			

Note. The regression analysis for those individuals who identified as *Right Wing* was found to be statistically significant (as indicated by an asterisk), indicating that the combination of these predictors made a significant contribution to the prediction of aggression.

Table 7
Coefficients of Predictor Variables to the Dependent Variable for Right-Wing Individuals

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	39.198	6.113		6.413	.000*
Frequency of Cognitive Distortions	.263	.028	.629	9.509	.000*
Authoritarianism	.697	1.117	.049	.624	.534
Partisan Strength	-.781	1.308	-.047	-.597	.551

Note. A further examination of all predictor variables indicated that only score on the ICD made a significant contribution to the variability of level of aggression (as indicated by an asterisk)

Hypothesis II.

To examine strength of partisan commitment and to determine if individuals who self-identify as *Very Left Wing* and *Very Right Wing* would report significantly higher frequency of cognitive distortions as measured by the ICD compared to individuals who

self-identify as *Moderates*, a one-way analysis of variance (ANOVA) was conducted ($N = 209$).

Normality is an assumption associated with a one-way ANOVA that requires each sample be taken from a normally distributed population (Field, 2009). The normality assumption was met using descriptive statistics (M , SD , skewness, kurtosis), as shown in Table 7. The assumption of independence was also met, as the observations were random, and the samples were taken from populations independent of each other (Field, 2009). Concerning homogeneity of variance, Levene's Test of Homogeneity was nonsignificant ($p = .145$), which assumes that the variances of the distributions in the populations are about equal. Results of the one-way ANOVA revealed that there were no significant differences in frequency of endorsement of cognitive distortions: .05 level, $F(2, 206) = 2.45$, $p = .089$.

Table 8
ANOVA of Very Left Wing, Very Right Wing, or Moderate Individuals & Frequency of Cognitive Distortions

					95% Confidence Interval for Mean			
	N	M	SD	Std. Error	Lower Bound	Upper Bound	Skewness	Kurtosis
Very Left	66	97.1818	49.81841	6.13222	84.9349	109.4287	.555	.138
Moderate	129	82.7829	40.56225	3.57131	75.7165	89.8494	.368	-.278
Very Right	14	93.0000	42.80726	11.44072	68.2838	117.7162	.325	-.901
Total	209	88.0144	44.13522	3.05290	81.9958	94.0329		

Table 9
ANOVA of Very Left Wing, Very Right Wing, and Moderate Individuals & Frequency of Cognitive Distortions

	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig.
Between Groups	9425.216	2	4712.608	2.453	.089
Within Groups	395741.741	206	1921.076		
Total	405166.957	208			

Hypothesis III.

To determine if there is a significant difference in endorsed frequency of cognitive distortions as measured by the ICD between individuals of different political party affiliations ($N = 427$), a one-way ANOVA was conducted. Political affiliation was operationalized by a self-report item asking participants to select the political party they identified with most. However, due to the insufficient number of participants self-identifying as Democratic Socialists ($n = 48$), Socialists ($n = 9$), Communists ($n = 8$), or Fascist/National Socialist ($n = 1$), these political groups were ineligible for inclusion in the analysis. As a result, the ANOVA proceeded using 427 individuals who self-identified as Democrats, Republicans, and Independents. Tests of assumptions for normality and independence of observations were met, and Levene's Test of Homogeneity of variances was nonsignificant ($p = .93$). Results (displayed in Table 10) revealed there were no significant differences in frequency of cognitive distortions between participants who identified as Democrat, Republican, or Independent at the ($p < .05$ level, $F(2, 424) = .61, p = .542$).

Table 10
Democrats, Republicans, and Independents in One-Way ANOVA of Potential Differences in Frequency of Cognitive Distortion

	<i>N</i>	<i>M</i>	<i>SD</i>	Std. Error	95% Confidence Interval for Mean		Skewness	Kurtosis
					Lower Bound	Upper Bound		
<i>Democrat</i>	199	85.6884	42.05700	2.98134	79.8092	91.5677	.463	.250
<i>Republican</i>	85	80.9529	39.31888	4.26473	72.4721	89.4338	.367	-.688
<i>Independent</i>	143	87.0769	41.22799	3.44766	80.2616	93.8923	.129	-.433
Total	427	85.2108	41.21201	1.99439	81.2907	89.1308		

Table 11
One-Way ANOVA Comparing Democrats, Republicans, and Independents in Frequency of Cognitive Distortions

	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig.
Between Groups	2084.381	2	1042.191	.613	.542
Within Groups	721446.649	424	1701.525		
Total	723531.030	426			

In relation to Hypothesis I, for both *Left-* and *Right-Wing* individuals, only endorsement of the frequency of cognitive distortions was statistically significant in predicting aggression levels operationalized as scores on the Buss-Perry Aggression Questionnaire. Partisan ideological strength and authoritarianism were not predictive of aggression. Concerning Hypothesis II, no significant difference emerged in frequency of cognitive distortions between individuals who identified as *Very Left Wing*, *Very Right*

Wing, and *Moderate*. For Hypothesis III, no significant differences appeared in endorsement of the frequency of cognitive distortions between individuals who identified as *Democrat*, *Republican*, and *Independent*.

Chapter 5: Discussion

The recent exacerbation of political polarization, accompanied by divergence of political positions to ideological extremes, intolerance of competing views, partisan animosity, and violence has made investigation of factors contributing to our increasingly tense political climate imperative. Although numerous studies have demonstrated that individuals with different political affiliations and ideologies think differently, a literature review revealed no research investigating the role of cognitive distortion in relation to political party affiliation, partisan commitment strength, authoritarianism, and aggression. The results of this study provide new insight into different political affiliations and the relation of partisan ideological strength to the self-reported frequency of cognitive distortions. The study also contributes to research into the two competing hypotheses regarding the concept of partisan bias, lending support to the symmetry hypothesis, which predicts equal levels of partisan bias in the form of cognitive distortions in both liberals and conservatives (Ditto et al., 2019). Moreover, the results of this study provide information that expands the field's understanding of the thought patterns of political populations and how aggression relates to our current tense political climate. Overall, this study's insights and implications add to the field's understanding of potential factors contributing to political polarization and animosity.

Findings and Implications of the Study

Hypothesis I. The current study revealed that the acknowledgement of frequency of cognitive distortions (total score on ICD) predicted aggression, as operationalized as the total score on the BPAQ, for left- and right-wing individual. However, authoritarianism, independent of left- or right-wing predilection (judged from total score

on LWA Scale or RWA Scale) and strength of partisan ideological identification did not predict aggression.

The positive association of cognitive distortion with aggression level is consistent with prior research, which found a strong relationship between cognitive distortions and components of anger as measured by the Mahan and DiTomasso Anger Scale, including tendencies toward argumentativeness (the propensity to argue, with consequent job and relationship problems) and emotional dyscontrol (the tendency to lose control as a result of angry feelings or thoughts (Latella-Zakhireh, 2009). The findings are also consistent with research that linked cognitive rigidity to willingness to condone violence and aggression (Zmigrod & Robbins, 2018).

This finding is additionally corroborated by Beck's anger sequence (1999), and evolutionary perspectives that posit cognitive distortions as developing from adaptive reactions to threats into perpetuated anger responses as a means of protecting concepts of self from others perceived as threats. This is relevant in the context of current trends in political polarization in the United States, which show increased perceptions of threat by individuals of different groups that likely contribute to the development of cognitive distortions and result in increased aggression.

In contrast, the finding that authoritarianism was not predictive of heightened aggression levels was surprising, due to the extensive research on aggression as one of the three clusters that comprise authoritarianism, along with submission and conventionalism (Adorno et al., 1950; Altemeyer, 1981). This finding instead appears consistent with Duckitt's claim (1989) that authoritarianism should be conceptualized in terms of individuals' identification with their own social group, as an attitude of

uncritical submission to authority which, under certain circumstances, is expressed as intolerant attitudes towards deviant groups. In that sense, aggression could be better understood as a possible consequence of authoritarianism rather than one of its components (Passini, 2008). Another potential rationale for this finding could be that the priming effect of participants answering questions about authoritarian perspectives prior to completing the aggression measure was insufficient to dispose the participants to answer candidly about their aggressive tendencies in their interactions with political out-groups. According to Duckitt (1989), who proposed a more social-psychological approach to authoritarianism, authoritarianism operates in a group context (Duckitt, 1989). Perhaps if the directions of the Buss-Perry Questionnaire included the instruction to imagine someone who is from the participant's least favorite political group, the results would have been different. Participants would be primed to approach the aggression items in the context of their identified in-group and a despised out-group. However, anger and hostility in authoritarian individuals is very domain-specific to out-groups vilified by those individuals' in-group authority figures. Data indicate that people high in LWA are likely to exhibit aggressive behavior (Costello et al., in press) and that people high in LWA are likely to disdain out-groups and support divisive behaviors that could be construed as aggressive (Conway et al., 2020). Nevertheless, on an individual level in which aggression does not target specific out-groups, this did not appear to be the case. Upon further investigation of our samples, however, another potential reason why this study's findings contradicted the original hypothesis concerning right-wing individuals became evident. Total scores on the RWA Scale for the sample ranged from 22 to 133 (mean: 72.83), with most individuals below the midpoint of 100. McWilliams

and Keil (2005) administered the RWA scale to a reasonably representative sample of 1000 Americans and discovered an average score of 72.5, indicating that most of this study's right-wing sample who scored in the average range on the RWA Scale were not considered authoritarian based on those scores. For the LWA Scale, only 39% of the sample fell above the midpoint, and total scores ranged from 51 to 130 (mean: 94.86), with more variability in scores for left-wing participants on the LWA scale. Considering the scores of both the left-wing and right-wing samples, it is believed that not enough individuals scored high in authoritarianism to yield an effect size sufficient to examine authoritarianism's predictive abilities on aggression. The challenge of finding individuals scoring high in authoritarianism for our study was consistent with observations made by Van Hiel et al. (2006), who concluded that although authoritarianism does exist at both ends of the political spectrum, it can be hard to find in the general population, particularly LWA.

The composition of this study's sample likely played a significant role in the finding that strength of partisan commitment was not predictive of aggression levels. Upon further investigation of the population, only 12.9% of participants identified as *Very Left Wing* and only 2.7% identified as *Very Right Wing*. The difficulty in obtaining individuals for this study who identified in these extremes appears consistent with a large-scale national survey study conducted by Hawkins, Yudkin, Juan-Torres, and Dixon (2018) that found very low numbers of individuals fit the definition of far right (6%) and far left (*Progressive Activists*, 8%). Likewise, the vast majority of this study's sample did not fall into either extreme, making it difficult to draw significant conclusions about the results. If the sample had included more individuals who identified as *Very Left*

Wing and *Very Right Wing*, the study may have obtained results similar to those of previous research on strength of partisan commitment and aggression, such as the work of Kalmoe and Mason (2019), who studied lethal partisanship.

In addition to the difficulty of recruiting individuals from either political extreme to participate in research (Campbell, 1957; Yale University, 2020), historical events in the form of the significant political tension that occurred at the time of data collection may have exacerbated the challenges the current study faced. These events included the nationwide civil unrest following the killing of George Floyd and the rancorous 2020 Presidential election and its unprecedented aftermath, culminating in the attack on the U.S. Capitol (Demirjian, 2021; Fisher, 2020; Taylor, 2021). One or more of these events may have prompted individuals on the extremes of the political spectrum to be cautious about participating in an undertaking like the current study, which requested disclosure of personal political beliefs and behaviors related to these events. According to Yale University's Philip Corlett, "historically in times of upheaval, such as the great fire of ancient Rome in 64 C.E. or the 9/11 terrorist attacks, paranoia and conspiratorial thinking increased" (Yale University, 2020). Paranoia and social desirability therefore may also have prompted individuals' reluctance to self-identify with extreme political views, as well as their strength of partisan commitment. In general, it is difficult to persuade individuals on the extremes of the political spectrum to participate in research due to the inherent nature of such radical groups, which deliberately leverage psychological vulnerabilities, such as restricting access to information or circumstances that may challenge ideological beliefs, as well as reinforcing in-group bias towards people outside of their group (Brown et al., 2021).

Hypothesis II. Results of this study's analysis revealed no significant differences in frequency of endorsement of cognitive distortions for participants who identified as *Very Left Wing*, *Very Right Wing*, or *Moderate*. This finding is consistent with the symmetry hypothesis, which predicts equal levels of partisan bias (in this case, cognitive distortions) in liberals and conservatives (Ditto et al., 2019). The finding adds further evidence to a meta-analysis including 51 experimental studies and 18,000 participants, which found strong support found for the symmetry hypothesis, with no differences discovered between liberals and conservatives in mean levels of biases across different methodological variations and political topics (Ditto et al., 2019). Despite this being one potential hypothesis explaining the finding, the limitation of having such small samples of individuals who identified as *Very Left Wing* and *Very Right Wing* could have played a role in this finding. As previously stated, the present study's sample included only 12.9% of participants who identified as *Very Left Wing* and 2.7% who identified as *Very Right Wing*.

Hypothesis III. As previously mentioned, due to an insufficient number of participants identifying as *Democratic Socialists* (48), *Socialists* (9), *Communists* (8), or *Fascist/National Socialists* (1), these political groups could not be included in this study's analysis. As a result, the analysis proceeded with 427 individuals, who self-identified as *Democrats* (199), *Republicans* (85), or *Independents* (143). Results of the analysis revealed no significant differences in endorsement of frequency of cognitive distortions between participants who identified as Democrat, Republican, or Independent. This finding indicates that although research has found differences in cognitive styles and anatomical brain structure in individuals with different political party affiliations

(Amodio et al., 2007; Fowler & Schrieber, 2008; Kanai et al., 2011; Schreiber et al., 2013; van der Plas et al., 2010), when it comes to frequency of cognitive distortions, Democrats, Republicans, and Independents appear to be more similar than different, that is, not statistically significant. The cognitive distortions, operationalized as total ICD scores, have been correlated with psychopathology, including anxiety, depression, and personality disorders. For example, Rosenfield (2004) found that almost 44% of the variance in most *Axis I* and *Axis II* disorders was explained by cognitive distortions. These findings are consistent with the cognitive model of emotional disorders (Alford & Beck, 1997; Beck, 2020; Beck, 1967; Beck et al., 1979), which predicts that dysfunctional cognition correlates with psychopathology.

In addition, Uhl (2007) found that differences in coping styles were associated with cognitive distortions, and the more likely that individuals experienced cognitive distortions, the more likely they were to engage in negative psychological and behavioral risks as defined by the *MBMD*. This research, in combination with the present study, suggests that perhaps Democrats, Republicans, and Independents also engage similar negative psychological and behavioral risks based on their similar endorsements of frequency of cognitive distortions. Despite results not supporting the hypothesis that significant differences would be found in endorsement of frequency of cognitive distortions between participants who identified as Democrat, Republican, or Independent, this finding may offer some hope of resolving the nation's political impasse, in that individuals identifying with the major parties and Independents may have more in common than one might predict. The United States' political atmosphere continues to emphasize differences between political groups, rather than common challenges these

groups face that can be addressed collaboratively, in order to promote a divide/more opposition. It is therefore crucial to identify and address these common challenges in order to combat political polarization and animosity.

Social and Clinical Implications

Overall, this study contributes new information to the field's understanding of the current political climate in the United States. The combined findings that cognitive distortions predict endorsement of aggression and that the frequency of cognitive distortions in Democrats, Republicans, and Independents is not statistically different provides hope. By addressing cognitive distortions that predict aggression in members of different political groups, one might be able to reduce the growing hostility and related aggression between political groups that threatens to destabilize the U.S. (French, 2020). To be specific, an enormous body of empirical evidence proves that distorted thinking is ameliorable. According to Beck's (1987, 1996) cognitive model, biased self-relevant thoughts, evaluations, and beliefs are key contributors to the development and persistence of psychopathological states. Beck et al. (1979) emphasized thought self-monitoring, reality testing, external reattribution, evidence gathering, examining consequences, cost/benefit analysis, generating alternatives, and behavioral assignments as the key interventions for inducing cognitive change. *Cognitive restructuring* refers to a collaborative therapeutic approach in which distressed individuals are taught to identify, evaluate, and modify the faulty thoughts, evaluations, and beliefs that are considered responsible for their psychological disturbance (Burns & Beck, 1978; Dobson & Dozois, 2010; Hollon & Dimidjian, 2009). Cognitive restructuring was first developed as a part of Cognitive Behavioral Therapy for depression, and when applied correctly, the

technique can help individuals learn to stop automatically trusting his or her thoughts as representative of reality and begin testing those thoughts for accuracy (Mills et al., 2008). By teaching individuals of different partisan groups how to identify, evaluate, and modify the faulty thoughts, evaluations, and beliefs that may be causing them to act aggressively towards others, clinicians may, therefore, be able to help reduce political animosity. In addition, clinicians and even teachers can engage individuals in perspective-taking strategies, such as those used by Galinsky & Ku (2004), and psychoeducation about cognitive biases (Evans et al., 1994) to decrease individuals' tendencies to fall victim to certain errors in thinking that may have contributed to the tense political climate across the U.S., such as all-or-nothing thinking, jumping to conclusions, and magnification. Further research that supports the hypothesis that political tension and violence in the United States could be reduced by specifically addressing cognitive distortions related to the endorsement of aggression would be a welcome development.

Limitations

Several limitations of the current study should be noted. First, the sample was recruited online and used a snowball, convenience-sampling method for collecting data, which often results in a nonprobability sample that might limit generalizability of the findings. Participants required access to the internet and needed to be active or know someone who was active on online platforms such as Facebook, Reddit, Researchmatch, or Instagram to access to the REDCap questionnaire. Certain populations who lacked internet access or did not visit the online platforms used for recruiting may have been unintentionally excluded from participation. Moreover, the percentage of participants who identified as Caucasian in the study was higher than the most recent estimated

percentage of white individuals in the United States in 2019 (86% vs. 76.3%; United States Census Bureau, 2019). In addition, more participants identified as *Left Wing* than *Right Wing*, with 72.3% identifying as left or left leaning and 27.7% identifying as right or right leaning. The sample is not consistent with a national survey conducted by Gallup (2019), in which a higher percentage of individuals identified as right of the political center (37%) than left of the political center (24%). These limitations may also affect external validity.

Another limitation of this study is its reliance on self-report measures. Self-report measures are limited in the fact that they often require a level of introspective self-awareness and may be influenced by such factors as differences in the way participants interpret individual items, *social desirability* (a type of response bias in which respondents endorse an answer that they believe will be viewed more favorably by others), and the participants' affective state while completing the measure (Kazdin, 1998). To reduce the impact of social desirability, participants were assured that their anonymity would be preserved. Despite these limitations, self-report measures continue to be used for various constructs, including those employed by this study, with good reliability and validity (Buss-Perry 1992; Conway et al., 2020; Roberts, 2015).

The use of the LWA Scale, which has been criticized for mirroring the RWA Scale's tripartite conceptualization of authoritarianism, is a potential limitation of the current study (Costello et al., 2020). Criticism notwithstanding, the LWA Scale has been correlated with liberalism, prejudice, and environmental dogmatism, and is one of the few measures that has found evidence for left-wing authoritarianism in the general population (Conway et al., 2018). The final limitation of this study was the fact that the

sample included insufficient numbers of individuals from all the political groups whose beliefs the study originally hoped to investigate (e.g., Communists and Socialists).

Future Directions

Due to the challenges encountered in recruiting participants identifying with some political parties, especially those on the political margins (e.g., Communists) and more extreme partisanship on both sides of the political spectrum, future studies should focus more intently on recruiting individuals from these populations, so that they are better represented in the literature and better understood. The current study sought to identify potential contributing factors to the increased political polarization and animosity in the United States. Cognitive distortions are one factor potentially contributing to aggression in our current political climate; however, this study focused on total scores on the ICD and did not attempt to relate political identification to specific types of cognitive distortions, because the sample was too small to achieve statistical significance. The field may therefore benefit from future studies investigating specific types of cognitive distortions associated with different political affiliations, ideologies, and strength of partisan commitment, in order to learn how to better target those distortions and inform interventions that may help to increase adaptive and accurate cognition, with the goal of reducing aggression.

All the measures included in this study were self-report and may have been influenced by social desirability factors, despite the assurances of anonymity given to participants. Future studies should seek to incorporate other types of measure, such as proxy measures and objective measures, to learn if they provide results similar to this study. Measures that tap into subconscious attitudes that may be associated with different

party affiliations, such as the *Implicit Association Tests*, may be valuable in investigating attitudes of these populations. Future studies might also investigate cognitive distortions in the context of religious partisanship. Other factors that may be helpful to investigate as a means of better understanding the current trend in political polarization and animosity may be level of exposure to discrimination, level of exposure to opposing views, perceived belonging/acceptance, national events (i.e., elections, natural/man-made disasters, and pandemics), and psychopathology.

Furthermore, future studies may also seek to study different interventions to address cognitive distortion related to news consumption. Ramasubramanian (2007) found that a combination of an audience-centered approach that explicitly instructs audiences to be critical media consumers prior to exposure and message-centered approaches that involve debunking stereotypes and counter-stereotyping news stories can counter racial stereotypes activated by news stories. Because of the finding that frequency of cognitive distortions is predictive of aggression levels, future studies may also establish groups involving perspective taking techniques (Galinsky & Ku, 2004) and psychoeducation about cognitive distortions (Evans et al., 1994) for individuals of various political partisanshipes to test whether targeting cognitive distortions can create widespread reduction of political tension in the U.S.

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